



**2023 ANNUAL GROUNDWATER
MONITORING REPORT**

Plant Arkwright
Ash Pond 1 (AP-1) Landfill
Macon, Georgia

July 31, 2023

Prepared for:

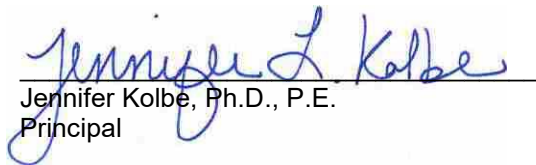


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**2023 Annual Groundwater Monitoring Report
Plant Arkwright Ash Pond 1 Landfill**

CERTIFICATION STATEMENT

This 2023 Annual Groundwater Monitoring Report, Plant Arkwright, Ash Pond 1 Landfill has been prepared in compliance with the Interim Groundwater Monitoring Plan submitted to the Georgia Environmental Protection Division on September 24, 2021. Plant Arkwright AP-1 Landfill closed according to Solid Waste Management Tracking Number 011-030D(LI) since July 30, 2010. This report was prepared by a qualified groundwater scientist or engineer with Stantec Consulting Services, Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management 391-3-4-.01.


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7/27/2023
Date


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7/27/2023
Date



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Executive Summary

This summary was prepared by Stantec Consulting Services Inc. (Stantec) on behalf of Georgia Power. The *2023 Annual Groundwater Monitoring Report* provides the status of the groundwater monitoring program from July 2022 through June 2023 at Georgia Power Company (Georgia Power) former Plant Arkwright Ash Pond 1 (AP-1) Landfill.

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 31-acre AP-1 Landfill is located south of the former plant area and is bordered by the Ocmulgee River, Beaverdam Creek, and a Norfolk Southern Railroad line. 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-1 Landfill received a closure certificate on July 30, 2010, under Solid Waste Permit Number 011-030D(LI). AP-1 Landfill is currently in post-closure care.

A coal combustion residuals (CCR) unit solid waste handling permit application, dated November 2018, was submitted to the Georgia Environmental Protection Division (GA EPD) pursuant to the requirements of Georgia Administrative Code Rule 391-3-4-.10. The Groundwater Monitoring Plan, Revision 1, is a minor modification to Solid Waste Permit Number 011-030D(LI) and an interim plan, as requested by GA EPD on March 23, 2021, to be used until the new CCR unit solid waste handling permit is issued and a permanent groundwater monitoring network is established for AP-1 Landfill. Monitoring and reporting utilizing the existing interim groundwater monitoring network will be conducted on a semi-annual basis in accordance with the Groundwater Monitoring Plan until CCR removal activities require the interim monitoring wells to be abandoned. The current interim groundwater monitoring well network at the Site consists of two upgradient wells (AP1GWA-1 and AP1GWA-2) and 11 downgradient wells (AP1PZ-1 through AP1PZ-11). Groundwater monitoring at AP-1 Landfill has been initiated in order to meet GA EPD requirements. A minor modification was submitted to EPD on June 15, 2023 for the abandonment of AP1PZ-6 and removal of AP1PZ-6 from the groundwater monitoring network in support of initial construction.

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

Georgia Power will continue semi-annual groundwater monitoring and reporting at the Site. Reports will be provided to GA EPD semi-annually.



Acronyms / Abbreviations

40 CFR	Title 40 Code of Federal Regulations
AP-1	Ash Pond 1
CCR	Coal Combustion Residuals
DO	Dissolved Oxygen
GA EPD	Georgia Environmental Protection Division
mg/L	Milligrams per Liter
NELAP	National Environmental Laboratory Accreditation Program
NTU	Nephelometric Turbidity Units
ORP	Oxidation-Reduction Potential
Pace	Pace Analytical Services, LLC
PWR	Partially Weathered Rock
QA/QC	Quality Assurance/Quality Control
Site	Former Plant Arkwright Ash Pond 1 Landfill Site
US EPA	United States Environmental Protection Agency



1.0 Introduction

This *2023 Annual Groundwater Monitoring Report* has been prepared to document groundwater monitoring activities conducted at the Georgia Power Company (Georgia Power) former Plant Arkwright Ash Pond-1 (AP-1) Landfill Site (Site).

Groundwater monitoring and reporting for Plant Arkwright AP-1 Landfill are performed in accordance with the Interim Groundwater Monitoring Plan, Revision 1 (Jacobs, 2021), submitted to Georgia Environmental Protection Division (GA EPD) on September 24, 2021. This interim plan is a minor modification to Solid Waste Permit Number 011-030D(LI), as requested by GA EPD on March 23, 2021. Groundwater monitoring at the Site will be conducted in accordance with this Groundwater Monitoring Plan until the new coal combustion residuals (CCR) unit solid waste handling permit is issued and a permanent groundwater monitoring network is established for AP-1 Landfill. This 2023 annual report documents the activities completed between August 2022 and July 2023. Two groundwater monitoring events were conducted during this monitoring period in August-September 2022, and January-February 2023.

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 31-acre AP-1 Landfill is located south of the former plant area and is bordered by the Ocmulgee River, Beaverdam Creek, and a Norfolk Southern Railroad line (Figure 2). When in operation, the coal-fired Plant Arkwright power plant consisted of four 40-megawatt units. In the years before retirement, the plant was used primarily to provide peaking power and operated approximately 40 to 60 days per year. Plant Arkwright was retired in 2002 and decommissioned in 2003.

AP-1 Landfill was constructed prior to 1958 and was closed with two feet of soil cover and vegetation in 1990. Regrading and stabilization of the riverbank and creek bank occurred in two phases in 2004 and 2007. Additionally, the slopes and top of AP-1 Landfill were regraded by relocating CCR and placing additional cover soil (Jacobs, 2018).

AP-1 Landfill received a Closure Certificate on July 30, 2010, under Solid Waste Permit Number 011-030D(LI) and is currently in post-closure care. Because the unit ceased receiving waste prior to October 19, 2015, the AP-1 Landfill is exempt from the requirements in Title 40 Code of Federal Regulations (40 CFR) Part 257 Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, as specified in 40 CFR §257.50 (d) and (e). As such, a CCR unit solid waste handling permit application package for the AP-1 Landfill was submitted to GA EPD in November 2018 and is currently under review.

1.2 Regional Geology & Hydrogeologic Setting

The geology and hydrogeology of the Plant Arkwright site are summarized below. The Site is located along the southern edge of the Washington Slope District (the District) within the Piedmont Physiographic Province (Clark and Zisa, 1976). The District is characterized by a gently undulating surface, which



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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).

1.2.1 SITE GEOLOGY

The general geology beneath AP-1 Landfill consists of alluvial sands of varying grain sizes, with minor lenses of clay. More consolidated sediments include fine to medium sandy silt to silty sand, which is underlain by a silty sand saprolite. Boring logs indicated overburden thickness ranging from 22 to 62 feet, overlying a thin layer (5 to 10 feet) of partially weathered rock (PWR). The underlying bedrock consists of quartzofeldspathic gneiss, hornblende gneiss, and schist (Jacobs, 2021).

1.2.2 SITE HYDROGEOLOGY

The uppermost aquifer at AP-1 Landfill 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 PWR 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. Based on gauging of the currently installed interim monitoring wells, the potentiometric surface elevation ranges from approximately 323 to 290 feet referenced to North American Vertical Datum of 1988 (19 to 57 feet below ground surface, respectively) in the northern and southern portions of the Site. The interim wells were installed to evaluate the uppermost occurrence of groundwater at the Site and from the monitoring network for AP-1 Landfill (Figure 2).



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Slug testing data from the Site reflect a range of hydraulic conductivities from 10^{-6} to 10^{-3} centimeters per second in the water table (overburden) hydrostratigraphic unit (Jacobs, 2021). Groundwater level gauging data from the Site show stable water level trends and the potentiometric surface maps depict groundwater flowing to the south, southeast, and northeast, in the direction of the Ocmulgee River and Beaverdam Creek (Figures 3 and 4).

1.3 Groundwater Monitoring Network

Georgia Power installed a temporary groundwater monitoring network within the uppermost aquifer at the Site. 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 access constraints and safety concerns, downgradient wells at AP-1 Landfill were installed through CCR and will be removed during the closure by removal of the unit. A permanent groundwater monitoring network will be established following closure as noted in the 2018 CCR permit application.



2.0 Groundwater Monitoring Activities

The following describes monitoring-related activities performed between August 2022 and July 2023. Samples were collected from each of the wells in the monitoring network depicted in Figure 2. In accordance with 40 CFR § 257.93, Table 2 presents a summary of the groundwater sampling events completed for AP-1 Landfill during this monitoring period. Well AP1PZ-3 was damaged on February 2, 2023, and could not be accessed for sample collection during the February 2023 sampling event. The well was repaired on February 28, 2023, and sampled on June 13, 2023.

Due to construction activities at the Site, groundwater sampling for the Fall of 2023 was completed for monitoring well AP1PZ-6 on June 13, 2023 for the AP-1 Landfill. The remaining AP-1 Landfill monitoring wells will be sampled in October 2023. Laboratory data and reporting for these sampling events will be provided in the semiannual Groundwater Monitoring Report in February 2024.

2.1 Monitoring Well Installation and Maintenance

Monitoring wells are inspected semi-annually to determine if repairs or corrective actions are necessary to meet the requirements of the Georgia Water Well Standards Act (O.C.G.A. § 12-5-134(5)(d)(vii)). In August-September 2022 and January-February 2023, the monitoring wells were inspected. Well AP1PZ-3 was identified as damaged in February 2023 as described in the well inspection form provided in Appendix A and the well could not be sampled. The well was repaired and was later resampled (Appendix A). There was no need for corrective actions for the other wells at AP1 during this reporting period. Piezometer AP1PZ-6 was proposed for abandonment in a minor modification of Solid Waste Permit Number 011-030D(LI) on June 15, 2023 (Stantec 2023a) in preparation for Southpoint construction activities at Ash Pond 1 (Stantec 2023b). AP1PZ-6 was abandoned on June 20 and 21, 2023 and a well abandonment report can be found in Appendix B.

2.2 Additional Surface Water Sampling

Due to the close proximity of Beaverdam Creek and the Ocmulgee River in the downgradient direction, Georgia Power proactively collected surface water samples. Surface water samples were collected from four locations along the Ocmulgee River and two locations along Beaverdam Creek in August 2022 and February 2023, as depicted in Figure 2. Surface water samples were collected in accordance with U.S. Environmental Protection Agency (US EPA) Region 4 *Science and Ecosystem Support Division Operating Procedures for Surface Water Sampling* (SESDPROC-201-R4, December 16, 2016).

Surface water samples were analyzed for the full suites of 40 CFR Part 257 Appendix III and Appendix IV constituents, with the exception of BC-0.3 in August 2022 for which radium was not collected or analyzed. Previously sampled OR+1.0 was not sampled due to unsafe access conditions in the Ocmulgee River. Surface water samples were also submitted for analysis of total alkalinity, bicarbonate alkalinity, magnesium, potassium, and sodium.



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2.0 Groundwater Monitoring Activities

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 2022 and 2023 sampling events are provided in Appendix B. Georgia Power will continue collecting the surface water samples semi-annually during interim groundwater monitoring.



3.0 Sample Methodology & Analyses

The semi-annual groundwater sampling events completed in August-September 2022 and January-February 2023 for AP-1 Landfill include sampling for the constituents listed in 40 CFR Part 257 Appendix III and Appendix IV. Groundwater analytical data and chain-of-custody records are located in Appendix B. The following sections describe methods used to conduct groundwater monitoring at the Site.

3.1 Groundwater Elevation Measurements and Flow Direction

Prior to each sampling event, the static groundwater levels were measured in each piezometer at AP-1 Landfill. The water level indicator was properly decontaminated between each piezometer. Groundwater elevations are summarized in Table 3. The recorded groundwater levels were used to determine the groundwater elevations in each piezometer and develop potentiometric surface contour maps (Figures 3 and 4). Review of the figures indicates that the apparent groundwater flow direction in the uppermost aquifer is to the east, southeast, and northeast, in the direction of the Ocmulgee River and Beaverdam Creek. This groundwater flow pattern is consistent with historical groundwater flow patterns.

3.2 Groundwater Gradient and Flow Velocity

The groundwater flow velocity at AP-1 Landfill was calculated using a derivation of Darcy's Law. Specifically,

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

Where:

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

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

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

n_e = Effective porosity (unitless)

The general groundwater flow velocities were calculated for AP-1 Landfill based on hydraulic gradients, average hydraulic conductivity based on previous slug test data, and an estimated effective porosity of 0.20 for silty-sand (based on a review of several sources, including Driscoll, 1986; US EPA, we1989; Freeze and Cherry 1979). The general groundwater flow velocity values based on August 30, 2022 and January 30, 2023 are presented in Table 4. The results for groundwater flow velocities ranged from 0.002 feet/day in the southern portion of the Site to 0.272 feet/day in the northeastern portion of the Site (0.7 and 99.1 feet/year, respectively) on August 30, 2022 and January 30, 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 September 2022, and 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. 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 40 CFR Part 257 Appendix III and Appendix IV constituents. 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. Tables 5A and 5B summarize the groundwater analytical results for September 2022 and February 2023, respectively, and the corresponding formal analytical reports are in Appendix B.

The August 2022 and February 2023 surface water samples were also analyzed for 40 CFR Part 257 Appendix III and Appendix IV constituents. Laboratory analyses of the surface water samples were performed by Pace, which is also a NELAP accredited laboratory. Tables 6A and 6B summarize the surface water analytical results for August 2022 and February 2023, respectively, 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 events 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 Tables 5A, 5B, 6A and 6B provide concentrations from the August-September 2022 and January-February 2023 groundwater 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 Groundwater and Surface Water Results

The analytical data for the 40 CFR Part 257 Appendix III and IV constituents for the September 2022 and February 2023 groundwater monitoring events and for the August 2022 and February 2023 surface water sampling events, are summarized in Tables 5A and 5B and Tables 6A and 6B, respectively. The complete laboratory and field data sheets are included in Appendix B.



5.0 Monitoring Program Status

The AP-1 Landfill is currently in post-closure care. Groundwater monitoring has been initiated at the request of GA EPD. Georgia Power will continue routine groundwater monitoring and reporting at the Site. Reports will be submitted to the GA EPD semi-annually.



6.0 Conclusions & Future Actions

This *2023 Annual Groundwater Monitoring Report* was prepared to fulfill the requirements of the Interim Groundwater Monitoring Plan (Jacobs, 2021). Due to construction activities at the Site, groundwater sampling for the Fall of 2023 was completed for monitoring well AP1PZ-6 on June 13, 2023, for the AP-1 Landfill. The remaining AP-1 Landfill monitoring wells will be sampled in October 2023. Laboratory data and reporting for these sampling events will be provided in the semiannual Groundwater Monitoring Report in February 2024. The next semi-annual sampling event is scheduled for October 2023. The October 2023 semi-annual monitoring event will include sampling and analysis of the full suites of 40 CFR Part 257 Appendix III and IV constituents.



7.0 References

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TABLES



TABLE 1
SUMMARY OF PIEZOMETER CONSTRUCTION
Georgia Power Company - Plant Arkwright
AP-1 Landfill
Macon, Georgia

Well	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Top of Casing Elevation (feet NAVD88) ⁽²⁾	Ground Surface Elevation (feet NAVD88) ⁽²⁾	Top of Screen Elevation (feet NAVD88) ⁽³⁾	Bottom of Screen Elevation (feet NAVD88) ⁽³⁾	Screen Length (feet)	Groundwater Zone Screened	Hydraulic Location
AP1GWA-1	4/20/2018	1066048.91	2439462.98	345.44	342.28	318.6	308.6	10.0	Overburden/ Bedrock	Upgradient
AP1GWA-2	4/20/2018	1065095.10	2439623.37	341.42	338.55	320.9	310.9	10.0	Overburden/ Bedrock	Upgradient
AP1PZ-1	5/1/2021	1062799.79	2440164.34	338.97	335.92	261.9	251.9	10.0	Overburden/ Bedrock	Downgradient
AP1PZ-2	5/2/2021	1062573.21	2440300.14	339.58	336.64	287.5	277.5	10.0	Bedrock	Downgradient
AP1PZ-3	5/4/2021	1062286.28	2440387.36	338.57	335.50	281.7	271.7	10.0	Overburden/ Bedrock	Downgradient
AP1PZ-4	5/11/2021	1061989.86	2440520.65	338.36	334.98	281.4	271.4	10.0	Overburden	Downgradient
AP1PZ-5	5/13/2021	1061645.61	2440599.18	339.81	336.61	283.1	273.1	10.0	Overburden	Downgradient
AP1PZ-6	5/13/2021	1061273.40	2440714.78	347.56	344.25	285.4	275.4	10.0	Overburden/PWR	Downgradient
AP1PZ-7	5/15/2021	1061483.62	2440573.47	340.91	337.56	273.7	263.7	10.0	Overburden	Downgradient
AP1PZ-8	5/16/2021	1061721.72	2440362.39	338.31	334.94	282.7	272.7	10.0	Overburden/PWR	Downgradient
AP1PZ-9	5/17/2021	1062083.33	2440187.59	337.62	334.14	291.4	281.4	10.0	Bedrock	Downgradient
AP1PZ-10	5/19/2021	1062334.74	2440116.05	338.38	335.07	292.4	282.4	10.0	Bedrock	Downgradient
AP1PZ-11	5/26/2021	1062615.94	2440044.48	338.98	335.78	276.2	266.2	10.0	Overburden	Downgradient

Notes:

1. Horizontal locations were referenced to Georgia State Plane West, North American Datum of 1983 (NAD 83).
2. Elevations are feet referenced to North American Vertical Datum of 1988 (NAVD 88).
3. Screen elevations were calculated using total depth and length of bottom sump.
4. PWR indicates Partially Weathered Rock.

TABLE 2
GROUNDWATER SAMPLING EVENTS SUMMARY
Georgia Power Company - Plant Arkwright
AP-1 Landfill
Macon, Georgia

Well ID	Hydraulic Location	Summary of Sampling Event		
		September 7-8, 2022	February 1-2, 2023	June 13, 2023
Purpose of Sampling Event		Monitoring	Monitoring	Monitoring
AP-1 LANDFILL INTERIM MONITORING WELL NETWORK				
AP1GWA-1	Upgradient	X	X	
AP1GWA-2	Upgradient	X	X	
AP1PZ-1	Downgradient	X	X	
AP1PZ-2	Downgradient	X	X	
AP1PZ-3	Downgradient	X	--	X
AP1PZ-4	Downgradient	X	X	
AP1PZ-5	Downgradient	X	X	
AP1PZ-6	Downgradient	X	X	
AP1PZ-7	Downgradient	X	X	
AP1PZ-8	Downgradient	X	X	
AP1PZ-9	Downgradient	X	X	
AP1PZ-10	Downgradient	X	X	
AP1PZ-11	Downgradient	X	X	

Notes:

X - Indicates well sampled during event

-- AP1PZ-3 not sampled during February 1-2, 2023, sampling event due to damaged well stick-up.

TABLE 3
SUMMARY OF GROUNDWATER ELEVATIONS
Georgia Power Company - Plant Arkwright
AP-1 Landfill
Macon, Georgia

Well ID	Top of Casing Elevation (feet NAVD88) ⁽¹⁾	Depth to Water (feet below TOC) ⁽²⁾	Groundwater Elevation (feet NAVD88) ⁽¹⁾	Depth to Water (feet below TOC) ⁽²⁾	Groundwater Elevation (feet NAVD88) ⁽¹⁾
		8/30/2022		1/30/2023	
Measurement Date					
AP1GWA-1	345.44	24.95	320.49	23.52	321.92
AP1GWA-2	341.42	18.65	322.77	17.90	323.52
AP1PZ-1	338.97	44.97	294.00	43.46	295.51
AP1PZ-2	339.58	42.16	297.42	42.40	297.18
AP1PZ-3	338.57	43.43	295.14	43.20	295.37
AP1PZ-4	338.36	47.17	291.19	45.33	293.03
AP1PZ-5	339.81	49.05	290.76	47.21	292.60
AP1PZ-6	347.56	57.30	290.26	55.19	292.37
AP1PZ-7	340.91	50.51	290.40	48.55	292.36
AP1PZ-8	338.31	46.94	291.37	45.26	293.05
AP1PZ-9	337.62	41.40	296.22	40.98	296.64
AP1PZ-10	338.38	34.95	303.43	37.51	300.87
AP1PZ-11	338.98	34.95	304.03	37.96	301.02

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
AP-1 Landfill
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	AP1PZ-8 to AP1PZ-6	291.37	290.26	1.11	575	0.002	0.31	0.2	0.003	1.1
	AP1PZ-11 to AP1PZ-1	304.03	294.00	10.03	222	0.045	1.20	0.2	0.272	99.1
January 30, 2023	AP1PZ-8 to AP1PZ-6	293.05	292.37	0.68	575	0.001	0.31	0.2	0.002	0.7
	AP1PZ-11 to AP1PZ-1	301.02	295.51	5.51	222	0.025	1.20	0.2	0.149	54.4

Notes:

1. The geometric mean of the in-situ hydraulic conductivity (K) slug test values for AP1PZ-8 and AP1PZ-6 used for AP1PZ-8 to AP1PZ-6 calculation; the slug test K value for AP1PZ-11 used for the AP1PZ-11 to AP1PZ-1 calculation.
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 5A
ANALYTICAL DATA SUMMARY - GROUNDWATER, SEPTEMBER 2022
Georgia Power Company - Plant Arkwright
AP-1 Landfill
Macon, Georgia

Substance	Well ID													
	AP1GWA-1	AP1GWA-2	AP1PZ-1	AP1PZ-2	AP1PZ-3	AP1PZ-4	AP1PZ-5	AP1PZ-6	AP1PZ-7	AP1PZ-8	AP1PZ-9	AP1PZ-10	AP1PZ-11	
	9/7/2022	9/7/2022	9/7/2022	9/8/2022	9/7/2022	9/7/2022	9/8/2022	9/7/2022	9/7/2022	9/7/2022	9/7/2022	9/7/2022	9/8/2022	
APPENDIX III	Boron	0.109	0.0210	0.336	0.413	1.51	3.72	7.44	7.29	2.46	2.81	0.695	3.22	0.163
	Calcium	18.8	4.98	31.8	143	381	370	552	461	338	300	69.6	835	27.3
	Chloride	1.86 J	2.22 J	2.58 J	3.35	4.92	5.10	7.55	8.49	8.77	2.88 J	6.84	9.91	1.45
	Fluoride	0.354	0.109	0.158	0.177	0.0468 J	0.249	0.263	<0.0330	0.255	0.166	0.671	0.524	0.173
	Sulfate	59.4	1.41 J	112	616	1390	1420	1920	2520	1390	731	351	232	52.3
	TDS	156	66.0	248	961	2010	2210	3070	3570	2190	1390	577	500	198
	pH	5.42	6.00	6.41	6.11	5.47	6.37	6.12	5.56	6.21	6.52	4.84	6.55	6.77
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<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	0.00359 J	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	Barium	0.0523	0.0330	0.0452	0.0207	0.0237	0.0426	0.0405	0.0235	0.0511	0.0506	0.0254	0.0334	0.0221
	Beryllium	0.00131	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000859	<0.000200	<0.000200	0.000527	<0.000200	<0.000200
	Cadmium	0.000317 J	<0.000300	<0.000300	<0.000300	0.00144	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	0.000975 J	<0.000300	<0.000300
	Chromium	0.00417 J	0.00501 J	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	0.00406	0.000341 J	0.000850 J	0.0616	0.0626	0.000335 J	0.0332	0.417	0.000739 J	0.000936 J	0.101	0.00189	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	0.00757 J	<0.00300	0.00421 J	0.0127	0.0638	0.00652 J	0.273	0.00800 J	<0.00300	<0.00300	0.135	0.0172	<0.00300
	Mercury	<0.0000670	<0.0000670	<0.0000670	<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	0.000572 J	<0.000200	0.000673 J	0.00233	0.0410	0.000369 J	0.00233	0.489	0.000281 J	0.00265	0.00136
	Radium	1.77	1.49 U	1.33 U	1.76 U	2.43	2.32	1.41 U	0.959 U	0.479 U	0.958 U	0.482 U	1.34 U	1.06 U
	Selenium	0.00322 J	<0.00150	0.00163 J	<0.00150	<0.00150	<0.00150	<0.00150	0.00273 J	<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	<0.000600	<0.000600	<0.000600

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH values are reported in standard units (s.u.)
2. Radium results are reported in picocuries per liter (pCi/L).
3. < indicates the constituent was not detected above the analytical method detection limit (MDL)
4. J indicates the constituent was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value.
Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
5. TDS indicates total dissolved solids.
6. 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.

TABLE 5B
ANALYTICAL DATA SUMMARY - GROUNDWATER, FEBRUARY- JUNE, 2023
Georgia Power Company - Plant Arkwright
AP-1 Landfill
Macon, Georgia

Substance	Well ID													
	AP1GWA-1	AP1GWA-2	AP1PZ-1	AP1PZ-2	AP1PZ-3	AP1PZ-4	AP1PZ-5	AP1PZ-6	AP1PZ-7	AP1PZ-8	AP1PZ-9	AP1PZ-10	AP1PZ-11	
	2/1/2023	2/1/2023	2/1/2023	2/1/2023	6/13/2023	2/1/2023	2/2/2023	2/1/2023	2/1/2023	2/2/2023	2/2/2023	2/1/2023	2/1/2023	
APPENDIX III	Boron	0.0954	0.00973 J	0.348	0.385	1.50	3.99	7.22	7.69	2.53	2.90	0.742	0.349	0.166
	Calcium	16.7	4.50	32.9	142	363	394	593	494	347	305	71.0	85.9	24.6
	Chloride	1.98	2.09	2.45	3.31	4.91	5.15	7.86	8.13	6.83	2.67	6.96	8.01	1.16
	Fluoride	0.288	<0.0330	0.141	0.0811 J	<0.500	0.143	0.258	0.0718 J	0.0931 J	0.215	0.733	0.482	0.124
	Sulfate	43.6	1.67 J	106	574	1330	1380	2060	2380	1390	702	336	238	44.7
	TDS	112	38.0	207	851	2000	2190	3140	3800	2060	2800	563	498	170
	pH	5.55	6.08	6.45	6.28	5.57	6.47	6.12	5.45	6.51	6.60	4.62	6.38	6.83
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<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	0.00353 J	0.00249 J	<0.00200	<0.00200	<0.00200	0.00294 J	<0.00200
	Barium	0.0571	0.0302	0.0417	0.0193	0.0215	0.0394	0.0425	0.0225	0.0409	0.0464	0.0247	0.0316	0.0196
	Beryllium	0.00103	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000829	<0.000200	<0.000200	0.000670	<0.000200	<0.000200
	Cadmium	<0.000300	<0.000300	<0.000300	0.000348 J	0.00361	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	0.00113	<0.000300	<0.000300
	Chromium	0.00448 J	0.00868 J	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	0.00334	<0.000300	0.000836 J	0.0858	0.0515	0.000752 J	0.0258	0.421	<0.000300	0.000677 J	0.113	0.00125	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	0.00633 J	<0.00300	0.00412 J	0.0153	0.0625	0.00621 J	0.256	0.00849 J	<0.00300	0.00351 J	0.159	0.0148	<0.00300
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	<0.000200	0.00146	0.000721 J	<0.000200	0.000306 J	0.00360	0.0323	<0.000200	0.00204	0.510	0.000667 J	0.00257	0.00170
	Radium	1.12 U	1.46 U	2.69	2.17	1.53 J	2.85	2.36	2.12	3.75	0.723 U	1.48 U	0.990 U	1.21 U
	Selenium	0.00304 J	<0.00150	<0.00150	<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	<0.000600	<0.000600	<0.000600	

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH values are reported in standard units (s.u.)
2. Radium results are reported in picocuries per liter (pCi/L).
3. < indicates the constituent was not detected above the analytical method detection limit (MDL)
4. J indicates the constituent was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value.
Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
5. TDS indicates total dissolved solids.
6. 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.

TABLE 6A
ANALYTICAL DATA SUMMARY - SURFACE WATER, AUGUST 2022
Georgia Power Company - Plant Arkwright
AP-1 Landfill
Macon, Georgia

Substance		Surface Water Sample Location					
		OR-0.8	OR-0.3	OR-0.1	OR+0.25	BC-0.3	BC-0.1
		8/16/2022	8/16/2022	8/16/2022	8/16/2022	8/16/2022	8/16/2022
APPENDIX III	Boron	<0.0086	<0.0086	<0.0086	<0.0086	<0.040	<0.0086
	Calcium	7.6	7.7	7.6	7.5	9.6	10.3
	Chloride	7.8	7.9	6.9	7.9	7.0	7.0
	Fluoride	0.12	0.12	0.11	0.12	0.11	0.11
	Sulfate	5.1	5.2	7.1	5.2	5.4	7.1
	TDS	56.9	103	45.9	43.9	90.9	85.9
	pH	7.25	7.15	7.31	7.40	7.16	7.18
APPENDIX IV	Antimony	<0.00078	<0.00078	<0.00078	<0.00078	<0.0030	<0.00078
	Arsenic	<0.0022	<0.0022	<0.0022	<0.0022	<0.0050	<0.0022
	Barium	0.021	0.022	0.022	0.021	0.028	0.070
	Beryllium	<0.000054	<0.000054	<0.000054	<0.000054	<0.00050	<0.000054
	Cadmium	<0.00011	<0.00011	<0.00011	<0.00011	<0.00050	<0.00011
	Chromium	<0.0011	<0.0011	<0.0011	<0.0011	<0.0050	<0.0011
	Cobalt	<0.00039	<0.00039	<0.00039	<0.00039	<0.0050	<0.00039
	Lead	<0.00089	<0.00089	<0.00089	<0.00089	<0.0010	0.0012
	Lithium	<0.00073	<0.00073	<0.00073	<0.00073	<0.030	<0.00073
	Mercury	<0.00013	<0.00013	<0.00013	<0.00013	NS	<0.00013
	Molybdenum	<0.00074	<0.00074	<0.00074	<0.00074	<0.010	<0.00074
	Radium	0.160 U	0.445 U	0.708 U	0.148 U	NS	0.474 U
	Selenium	<0.0014	<0.0014	<0.0014	<0.0014	<0.0050	<0.0014
Thallium	<0.00018	<0.00018	<0.00018	<0.00018	<0.0010	<0.00018	
ADDITIONAL ANALYTES	Total Alkalinity	30.2	30.5	30.3	29.7	44.6	44.8
	Bicarbonate Alkalinity	30.2	30.5	30.3	29.7	44.6	44.8
	Magnesium	2.2	2.2	2.2	2.1	4.1	4.3
	Potassium	3.1	3.1	3.1	3.1	2.3	2.4
	Sodium	8.0	8.2	8.0	8.0	7.5	7.5

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH values are reported in standard units (s.u.)
2. Radium results are reported in picocuries per liter (pCi/L).
3. < indicates the constituent was not detected above the analytical method detection limit (MDL)
4. J indicates the constituent was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value.
Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
5. TDS indicates total dissolved solids.
6. 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.
7. NA indicates constituent was not analyzed due to miscommunication with the lab.
8. NS indicates location was not sampled for the constituent.

TABLE 6B
ANALYTICAL DATA SUMMARY - SURFACE WATER, FEBRUARY 2023
Georgia Power Company - Plant Arkwright
AP-1 Landfill
Macon, Georgia

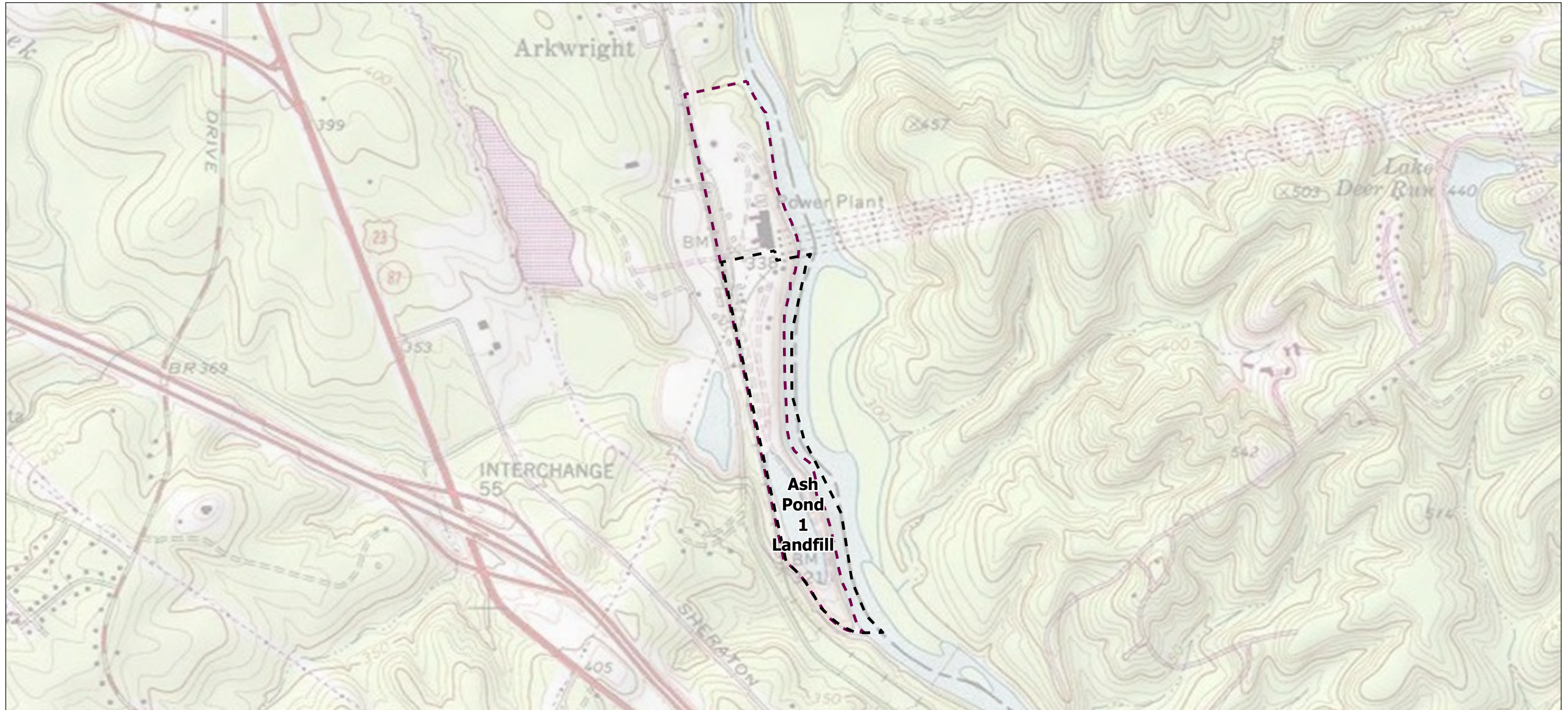
Substance		Surface Water Sample Location					
		OR-0.8	OR-0.3	OR-0.1	OR+0.25	BC-0.3	BC-0.1
		2/9/2023	2/9/2023	2/9/2023	2/9/2023	2/8/2023	2/8/2023
APPENDIX III	Boron	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086
	Calcium	5.2	5.1	5.1	5.1	6.8	7
	Chloride	5.5	5.5	5.5	5.5	6.3	6.4
	Fluoride	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Sulfate	4.6	4.6	4.6	4.6	7	7
	TDS	64	54	112	39	61	82
	pH	7.70	7.54	7.49	7.37	7.19	7.25
APPENDIX IV	Antimony	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078
	Arsenic	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022
	Barium	0.026	0.026	0.025	0.025	0.032	0.033
	Beryllium	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054	<0.000054
	Cadmium	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011
	Chromium	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	Cobalt	<0.00039	<0.00039	<0.00039	<0.00039	<0.00039	<0.00039
	Lead	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
	Lithium	<0.00073	<0.00073	<0.00073	<0.00073	<0.00073	<0.00073
	Mercury	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013	<0.00013
	Molybdenum	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074
	Radium	1.48 U	2.12 U	1.71 U	1.85 U	2.12 U ⁷	1.92 U ⁷
	Selenium	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
	Thallium	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018	<0.00018
ADDITIONAL ANALYTES	Total Alkalinity	20.5	20.9	20.4	20.4	32.5	32.7
	Bicarbonate Alkalinity	20.5	20.9	20.4	20.4	32.5	32.7
	Magnesium	1.6	1.6	1.6	1.6	3.3	3.4
	Potassium	2.5	2.3	2.4	2.3	1.9	2
	Sodium	5.3	5.3	5.4	5.2	6.7	6.8



Notes:

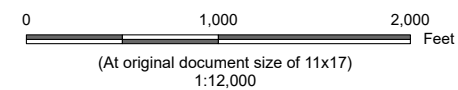
1. Results for constituents are reported in milligrams per liter (mg/L). pH values are reported in standard units (s.u.)
2. Radium results are reported in picocuries per liter (pCi/L).
3. < indicates the constituent was not detected above the analytical method detection limit (MDL)
4. J indicates the constituent was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value.
Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
5. TDS indicates total dissolved solids.
6. 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.
7. Radium sample collected on 2/14/2023

FIGURES





- Legend
-  Ash Pond 1 Landfill Permit Boundary
 -  Ash Pond 1 Tax Parcel



Project Location
Macon, Georgia

Prepared by DMB on 5/30/2023
TR by BS on 5/30/2023
IR by MD on 5/30/2023

Client/Project
Georgia Power
2023 Annual Groundwater Monitoring Report
Plant Arkwright Ash Pond 1 Landfill

Figure No.

1

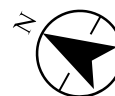
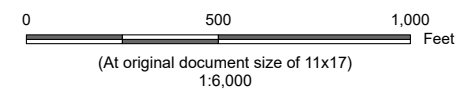
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Site Location Map

Notes
 1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
 2. Data Sources: Tax Parcel and AP-1 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**
- Piezometer Location
 - ⊕ Surface Water Sampling Location
 - Beaverdam Creek
 - Ash Pond 1 Landfill Permit Boundary



Project Location
Macon, Georgia

Prepared by DMB on 7/17/2023
TR by BS on 7/17/2023
IR by MD on 7/17/2023

Client/Project
Georgia Power
2023 Annual Groundwater Monitoring Report
Plant Arkwright Ash Pond 1 Landfill

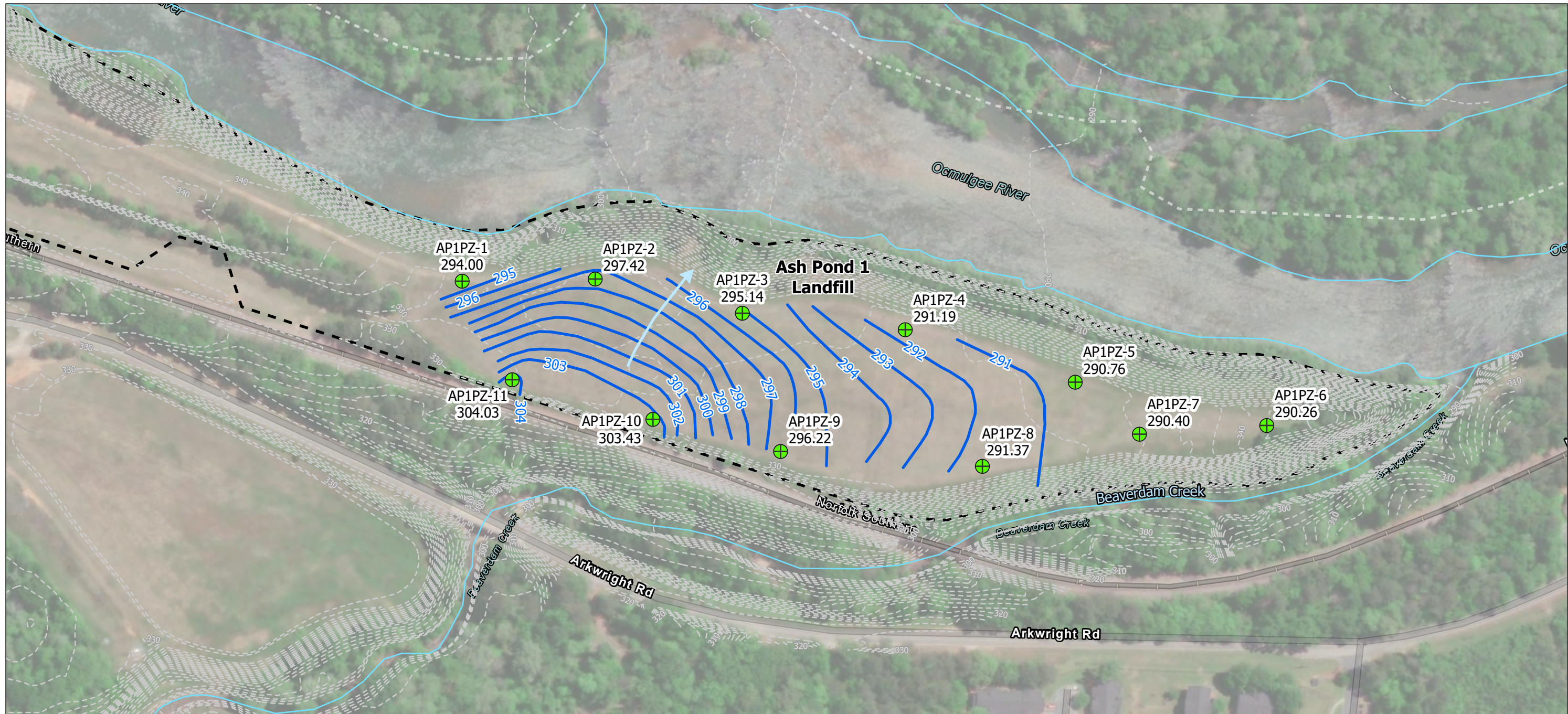
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Figure No.

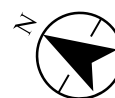
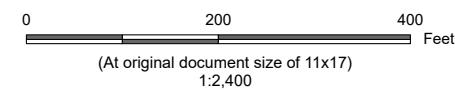
2

Title

**Piezometer and Surface Water
Sample Locations Map**



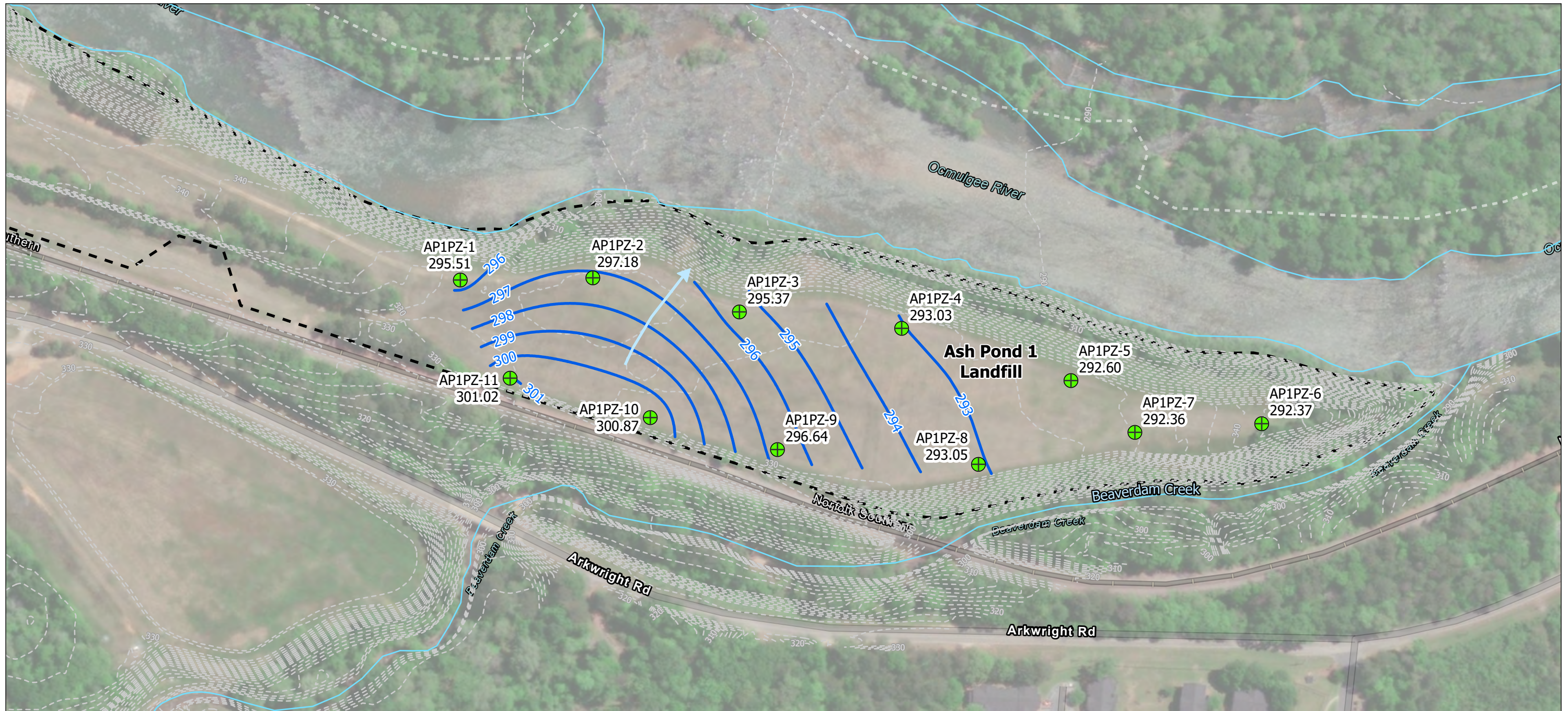
- Legend**
- Piezometer Location
 - Beaverdam Creek/Ocmulgee River (Approximate)
 - Interpreted Groundwater Flow Direction
 - Potentiometric Surface Contour Aug 2022 (feet (ft) NAVD88)
 - - - Topographic Contour 2018 (2 ft interval)
 - Approximate Limits of Ash Pond 1 Landfill
- 320.49 Groundwater Elevation (ft NAVD88)
 AP1GWA-1 and AP1GWA-2 not included in contouring



Project Location: Macon, Georgia
 Prepared by DMB on 5/30/2023
 TR by BS on 5/30/2023
 IR by MD on 5/30/2023

Client/Project: Georgia Power
 2023 Annual Groundwater Monitoring Report
 Plant Arkwright Ash Pond 1 Landfill
 Figure No. 175569434

3
Potentiometric Surface Contour
Map AP-1 Landfill - August 30, 2022

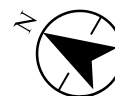
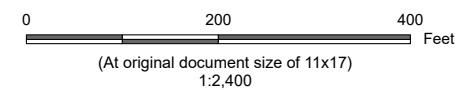


- Legend**
- Piezometer Location
 - Beaverdam Creek/Ocmulgee River (Approximate)
 - Interpreted Groundwater Flow Direction
 - Potentiometric Surface Contour Jan 2023 (feet (ft) NAVD88)
 - - - Inferred Potentiometric Surface Contour Jan 2023 (ft NAVD88)
 - - - Topographic Contour 2018 (2 ft interval)
 - Approximate Limits of Ash Pond 1 Landfill

Notes

1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
2. Data Sources: AP-1 Boundary, Piezometers, Topography, and Beaverdam Creek provided by Southern Company Services and Wood Environment & Infrastructure Solutions; Groundwater 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

295.51 Groundwater Elevation (ft NAVD88)
 AP1GWA-1 and AP1GWA-2 not included in contouring



Project Location
 Macon, Georgia

Prepared by DMB on 5/30/2023
 TR by BS on 5/30/2023
 IR by MD on 5/30/2023

Client/Project
 Georgia Power
 2023 Annual Groundwater Monitoring Report
 Plant Arkwright Ash Pond 1 Landfill

Figure No. 175569434

4

**Potentiometric Surface Contour
 Map AP-1 Landfill - January 30, 2023**

Appendix A

Well Inspections and Repair



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.: APIGWA-1
 Priority Maintenance Item Identified: NA

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater 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: John Myer 8/30/2022

DL/SME Review By / Date: Edgar Smith 9/22/22

MONITORING WELL INSPECTION CHECKLIST



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

Date: 8/30/2022
 Monitoring Well No.: AP1GWA-2
 Priority Maintenance Item Identified: NA

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

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

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

MONITORING WELL INSPECTION CHECKLIST



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

Date: 8/30/2022
 Monitoring Well No.: AP1PZ-1
 Priority Maintenance Item Identified: None

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater 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.: AP1PZ-2
 Priority Maintenance Item Identified: None

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

Comments: Include inspection details, including items requiring repair or maintenance.
 style="text-align: center;">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.: AP1PZ-3
 Priority Maintenance Item Identified: None

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater 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.: APIPZ-4
 Priority Maintenance Item Identified: None

Description	Yes	No	NA	Comments
Location/Identification				
Is the well visible and accessible?	X			
Is the well properly identified with the correct well ID?	X			
Is the well in a high traffic area and does the well require protection from traffic?		X		
Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	X			
Protective Casing				
Is the protective casing free from apparent damage and able to be secured?	X			
Is the casing free of degradation or deterioration?	X			
Does the casing have a functioning weep hole?	X			
Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	X			
Is the well locked and is the lock in good condition?	X			
Surface pad				
Is the well pad in good condition (not cracked or broken)?	X			
Is the well pad sloped away from the protective casing?	X			
Is the well pad in complete contact with the protective casing?	X			
Is the well pad in complete contact with the ground surface and stable?(Not undermined by erosion, animal burrows, and does not move when stepped on).	X			
Is the pad surface clean (not covered with sediment or debris)?	X			
Internal casing				
Does the cap prevent entry of foreign material into the well?	X			
Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
Is the well properly vented for equilibrium of air pressure?	X			
Is the survey point clearly marked on the inner casing?	X			
Is the depth of the well consistent with the original well log?	X			
Is the casing stable? (or does the pvc move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
Sampling (Groundwater Wells Only)				
Does well recharge adequately when purged?	X			
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater 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.: AP1PZ-5
 Priority Maintenance Item Identified: None

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

Comments: Include inspection details, including items requiring repair or maintenance.
 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.: AP1PZ-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		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.: AP1PZ-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		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.: AP1PZ-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		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 9/22/2022

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.: AP1PZ-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		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		Some drawn down
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.: AP1PZ-10
 Priority Maintenance Item Identified: None

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

MONITORING WELL INSPECTION CHECKLIST



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

Date: 8/30/2022
 Monitoring Well No.: AP1PZ11
 Priority Maintenance Item Identified: None

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

MONITORING WELL INSPECTION CHECKLIST



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

 Date: 2/2/2023
 Monitoring Well No.: AP1GWA-1
 Priority Maintenance Item Identified: N/A

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

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

N/A

Prepared By / Date: Emily Scheiben 2/2/2023
 DL/SME Review By / Date: Dylan Quintal 4/17/2023

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.: APIGWA-2
 Priority Maintenance Item Identified: N/A

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

1/31/2023

DL/SME Review By / Date: **Dylan Quintal**

4/17/2023

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.: AP1PZ-1

Priority Maintenance Item Identified: N/A

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

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

N/A

Prepared By / Date: Emily Scheiben

2/2/2023

DL/SME Review By / Date: Dylan Quintal

4/17/2023

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.: AP1PZ-2
 Priority Maintenance Item Identified: N/A

	Description	Yes	No	NA	Comments
1	Location/Identification				
a	Is the well visible and accessible?	x			
b	Is the well properly identified with the correct well ID?	x			
c	Is the well in a high traffic area and does the well require protection from traffic?		x		
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	x			
2	Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	x			
b	Is the casing free of degradation or deterioration?	x			
c	Does the casing have a functioning weep hole?	x			
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	x			
e	Is the well locked and is the lock in good condition?	x			
3	Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	x			
b	Is the well pad sloped away from the protective casing?	x			
c	Is the well pad in complete contact with the protective casing?	x			
d	Is the well pad in complete contact with the ground surface and stable? (Not undermined by erosion, animal burrows, and does not move when stepped on).	x			
e	Is the pad surface clean (not covered with sediment or debris)?	x			
4	Internal casing				
a	Does the cap prevent entry of foreign material into the well?	x			
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	x			
c	Is the well properly vented for equilibrium of air pressure?	x			
d	Is the survey point clearly marked on the inner casing?	x			
e	Is the depth of the well consistent with the original well log?	x			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	x			
5	Sampling (Groundwater Wells Only)				
a	Does well recharge adequately when purged?	x			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	x			
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 4/17/2023

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.: AP1PZ-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		Was damaged by a vehicle on 2-2-23
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	Unable to sample due to recent vehicle incident
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.
 Repair well - See photos for extent of damage.

Prepared By / Date: Emily Scheiben 2/2/2023
 DL/SME Review By / Date: Dylan Quintal 4/17/2023

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.: AP1PZ-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			
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 4/17/2023

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.: AP1PZ-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: Jackson Bankston / 1/31/23

DL/SME Review By / Date: **Dylan Quintal**

4/17/2023

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.: AP1PZ-6
 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: Jackson Bankston / 1/31/23

DL/SME Review By / Date: **Dylan Quintal**

4/17/2023

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.: AP1PZ-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: Jackson Bankston / 1/31/23

DL/SME Review By / Date: Dylan Quintal

4/17/2023

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.: AP1PZ-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: Jackson Bankston / 1/31/23

DL/SME Review By / Date: **Dylan Quintal**

4/17/2023

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.: AP1PZ-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: Jackson Bankston / 1/31/23

DL/SME Review By / Date: **Dylan Quintal**

4/17/2023

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.: AP1PZ-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: Jackson Bankston / 1/31/23

DL/SME Review By / Date: Dylan Quintal

4/17/2023

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.: AP1PZ-11

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: Jackson Bankston / 1/31/23

DL/SME Review By / Date: **Dylan Quintal**

4/17/2023



MEMORANDUM

Date: 7/28/2023
To: Joju Abraham – Georgia Power
CC: Ben Hodges
From: Stantec Consulting Services Inc.
Subject: Plant Arkwright Ash Pond 1 - Well Maintenance and Repair Documentation
Georgia Power Company

Stantec Consulting Services Inc. (Stantec) has prepared this memorandum to provide documentation of groundwater monitoring well maintenance and/or repair performed at Plant Arkwright during the annual reporting period. All repairs and maintenance were completed in accordance with the Georgia Environmental Protection Division (GAEPD) guidance on routine visual inspections of groundwater monitoring wells.

Georgia Power Site/Unit	Date Performed	Well ID	Maintenance/ Repair Performed
Ash Pond 1	2/28/2023	AP1PZ-3	Bent stick-up protective cover was removed and replaced with a new straight stick-up cover; Bent well riser cut down flush with ground surface and new 2-in PVC section attached using a coupler; Old well pad was removed, and replaced with new pad with same dimensions (4'x 4' x 4"); A replacement survey pin set into new well pad; Bent bollard was removed and replaced with new straight bollard and new footing; Damaged well ID signage was removed and replaced with a new one.
Ash Pond 1	3/7/2023	AP1PZ-3	Reinstallation of dedicated pump into well
Ash Pond 1	6/20/2023	AP1PZ-3	Complete survey of PZ-3

All maintenance and repairs are also documented in the 2023 Annual groundwater monitoring report.

Plant Arkwright AP1 PZ-3 Repair

- Old PZ-3 pad, protective cover and bent bollard was removed.
- The well riser was not broken but bent approx. 8" above the top of the pad.
- The bent section of riser was cut off and a new section was installed with a 2" coupler (not glued in place).
- The old protective cover was imbedded in grout, so it was cut off approx. 3" above the grout and the corners were bent in to accept the new cover.
- The new protective cover was cut to length, flared at the base and placed over the stub of the old cover and secured with aluminum screws to hold in place.
- The inside of the protective cover was filled with pea gravel and vent/weep holes drilled.
- The new 4'x4'x4" pad was poured, and survey pin installed.
- The well sign was reinstated.
- A new bollard was installed.



Figure 1 Before Repair



Figure 2 After Repair

Metro Engineering & Surveying Co., Inc.
 Plant Arkwright
 Macon, GA.

Monitoring Well Survey Data
 June 20, 2023
 MES Job No.: 15348

Ash Pond 1

Well ID	Latitude	Longitude	Casing Northing	Casing Easting	Top of Casing Elevation (PVC)	Nail on Pad Northing	Nail on Pad Easting	Nail on Pad Elevation	Ground Elevation (Rebar)
AP1PZ-3	N32.919622	W83.698025	1062286.1	2440387.5	338.41	1062286.2	2440388.4	335.77	335.66



Survey Data Certification for Southern Company to determine the northing, easting and vertical elevation of the nail in the concrete pad & the top of the PVC well casing.

Date of field survey: June 20, 2023

Field survey positional tolerance: 0.5 feet horizontally-NAD83(2011), 0.01 feet vertical-NAVD88.

Equipment used for horizontal location: Leica GS16 (Base Unit) and Leica GS18T (Rover Unit).

The elevation location of each well was established based upon a level run with a digital level loop from the nail on the concrete pad of existing well AP1-PZ2 (El.=336.89) using a Leica DNA10 digital level.

**Appendix B
2023 AP1-PZ6 Abandonment
Report – Plant Arkwright**





**2023 AP1PZ-6 ABANDONMENT REPORT –
PLANT ARKWRIGHT**

Ash Pond 1 Landfill
Solid Waste Disposal Facility
Permit No. 011-030D(LI)

July 31, 2023

Prepared for:



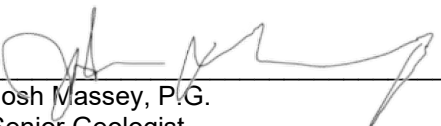
Prepared by:
Stantec Consulting Services Inc.
10745 Westside Way, Suite 250
Alpharetta, Georgia 30009-7640

**2023 AP1PZ-6 Abandonment Report – Plant Arkwright
Plant Arkwright Ash Pond 1 Landfill**

CERTIFICATION STATEMENT

I hereby certify that this *2023 AP1PZ-6 Abandonment Report – Plant Arkwright Ash Pond 1* has been prepared by, or under the direct supervision of, a Qualified Groundwater Scientist with Stantec Consulting Services, Inc. and is in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule [40 Code of Federal Regulations 257 Subpart D], specifically §257.91(e)(1), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10.

According to 391-3-4-.01, a Qualified Groundwater Scientist is “a professional engineer or geologist registered to practice in Georgia who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields that enable that individual to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective action.”



Josh Massey, P.G.
Senior Geologist



July 31, 2023
Date



Table of Contents

1	INTRODUCTION.....	1.1
2	PIEZOMETER ABANDONMENT	2.1
3	REFERENCES.....	3.2

TABLE

Table 1 Summary Details of Abandoned Piezometer

FIGURE

Figure 1 Location of Abandoned Piezometer AP1PZ-6

LIST OF APPENDICES

Appendix A AP1PZ-6 Abandonment Documents

Appendix B SCS-CFS Drilling Bond



1 Introduction

Stantec Consulting Services Inc. (Stantec) is submitting this Abandonment Report to Southern Company Services, Inc. (SCS) and Georgia Power Company (Georgia Power), which documents the abandonment of one piezometer, AP1PZ-6, at the Plant Arkwright site in Macon, Georgia.

Plant Arkwright is located in Bibb County, Georgia, approximately six miles northwest of the city of Macon. The Plant Arkwright coal-fired power plant was retired in 2002, decommissioned in 2003, and closed in 2010. When in operation, the coal-fired Plant Arkwright power plant consisted of four 40-megawatt units. A solid waste disposal facility, Plant Arkwright Coal Combustion Residual (CCR) Ash Pond 1 (AP-1 Landfill), received coal combustion by-products, coal ash and gypsum, from coal power generating processes at Plant Arkwright. AP-1 Landfill received a closure certificate on June 30, 2010, under Solid Waste Permit Number 011-030D(LI) and is currently in post-closure care. A CCR unit solid waste handling permit application dated November 2018 was submitted to Georgia Environmental Protection Division (Georgia EPD) pursuant to the requirements of 391-3-4-.10. The Groundwater Monitoring Plan (Jacobs 2021) describes the interim groundwater monitoring program for the site prior to the removal, as detailed in the November 2018 CCR Permit Application submittal under the Georgia CCR Rule. Piezometer AP1PZ-6 was proposed for abandonment in a minor modification of Solid Waste Permit Number 011-030D(LI) on June 15, 2023 (Stantec 2023a) in preparation for Southpoint construction activities at Ash Pond 1 (Stantec 2023b).

This report provides details for the abandonment of one piezometer, AP1PZ-6, located in the footprint of AP 1 Landfill. The piezometer is screened in the overburden, which includes partially weathered biotite gneiss rock. The local geology of the area is generally comprised of unconsolidated overburden soils (e.g. silt and clays) overlying gneissic bedrock.

AP1PZ-6 construction details are included in Table 1, and the location of AP1PZ-6 is shown in Figure 1. The abandonment procedures are discussed in forthcoming section 2.

2 Piezometer Abandonment

Piezometer AP1PZ-6 was abandoned in general accordance with the Georgia Water Well Standards Act (OCGA § 12-5-120 through 138), the U.S. Environmental Protection Agency (USEPA) Science and Ecosystem Support Division guidance document Design and Installation of Monitoring Wells (SESDGUID-101-R2) for well abandonment procedures (US EPA, 2017), and the procedures outlined in the approved Groundwater Monitoring Plan (Jacobs, 2021).

Prior to the abandonment of the piezometer, a dedicated pump and tubing, concrete pad, pro cover and four bollards were removed. Total depth of the piezometer was measured to confirm that the field measurement matched the boring log depth. A cement/bentonite grout mix was then pumped into the 2-inch-diameter piezometer with a tremie pipe from the bottom of the piezometer to approximately 20 feet



**2023 AP1PZ-6 Abandonment Report – Plant Arkwright
Plant Arkwright Ash Pond 1 Landfill
3 References**

below grade, approximately 38 feet above the top of the piezometer screen and 20 feet above the bottom of the ash at AP-1. Curing time for the cement/bentonite mix was greater than two hours.

Southern Company Services-Civil Field Services (SCS-CFS) utilized a CME550X drilling rig to over drill AP1PZ-6 using 2.25-inch inner diameter hollow stem augers to produce a new 6-inch boring, such that the polyvinyl chloride (PVC) screen/casing, filter pack, grout and seal of the piezometer were removed completely. A slurry of Portland cement and water (i.e. neat cement) was mixed using a ratio of 94 pounds of Portland cement to 7-8 gallons of water. The neat cement was then pumped into the over-drilled borehole through a PVC tremie pipe placed at the bottom of the over-drilled boring and raised to target depth of 40 feet below existing grade. Neat cement in the over-drilled boring was allowed to cure for 18 hours. The field-measured top of the cement plug was 32 feet below existing grade, which is approximately 1.72 feet below the proposed excavation depth of 30.28 feet below existing grade at AP1PZ-6 (Stantec, 2023b). The remaining over-drilled borehole from existing ground surface to the top of the cement plug at approximately 32 feet below existing grade was filled with Aquaguard 30% solids bentonite grout.

The specific abandonment methods, measurements, and quantities of materials used for plugging and abandoning AP1PZ-6 are shown in Appendix A. Abandonment activities at AP-1 Landfill occurred on June 20-21, 2023. SCS-CFS has a current bond with the Water Wells Standards Advisory Council for the state of Georgia, which was valid at the time of abandonment (Appendix B).

3 References

Jacobs (2021). "Interim Groundwater Monitoring Plan." Prepared for Southern Company Services, as updated in September 2021.

Stantec (2023a). "Minor Modification AP-1: Update Groundwater Monitoring Plan." Prepared for Southern Company Services, June 2023.

Stantec (2023b). "Minor Modification AP-1: South Point Slope Improvement." Prepared for Southern Company Services, June 2023.

US EPA (2017). Groundwater Sampling; Science and Ecosystem Support Division, United States Environmental Protection Agency (US EPA) Region 4, SESDPROC-301-R4, April 26, 2017.



TABLE



TABLE 1
Summary Details of Abandoned Piezometer

Georgia Power Company - Plant Arkwright
 AP-1 Landfill
 Bibb County, Georgia

Well Name	Installation Date	Northing (ft NAD83) ⁽¹⁾	Easting (ft NAD83) ⁽¹⁾	Ground Surface Elevation (ft, NAVD88) ⁽²⁾	Top of Casing Elevation (ft, NAVD88) ⁽²⁾	Top of Screen Depth (ft)	Bottom of Screen Depth (ft)	Top of Screen Elevation (ft, NAVD88)	Bottom of Screen Elevation (ft, NAVD88)	Well Depth (ft below ground surface)	Lithology Screened	Hydraulic Location and Purpose
AP1PZ-6	5/13/2021	1061273.40	2440714.78	344.25	347.56	58.85	68.85	285.40	275.40	69.25	Overburden/PWR	Downgradient

Notes:

1. Horizontal locations were referenced to Georgia State Plane West, North American Datum of 1983 (NAD 83).
2. Elevations are feet (ft) referenced to North American Vertical Datum of 1988 (NAVD 88).
3. Screen elevations were calculated using total depth and length of bottom sump.
4. PWR indicates Partially Weathered Rock.

FIGURE

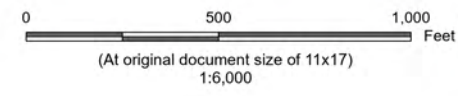




AP1PZ-6 abandoned June 20-21, 2023



- Legend**
- ⊕ Piezometer
 - ⊕ Abandoned Piezometer
 - ⊕ Surface Water Sampling Location
 - Beaverdam Creek
 - Ash Pond 1 Landfill Permit Boundary



Project Location
Macon, Georgia

Prepared by DMB on 7/26/2023
TR by ES on 7/26/2023
IR by MD on 7/26/2023

Client/Project
Georgia Power
2023 AP1PZ-6 Abandonment Report -
Plant Arkwright Ash Pond 1 Landfill

Figure No.
1

Title
**Location of Abandoned Piezometer
AP1PZ-6**

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

APPENDIX A

AP1PZ-6 ABANDONMENT DOCUMENTS





Well Abandonment Log

Project Name: <u>AP-1 Southpoint Construction</u>	Date Started: <u>6/20/2023</u>	Date Completed: <u>6/21/2023</u>
Borehole/Well No: <u>AP1-PZ6</u>	Northing (ft): <u>1061273.40</u>	Easting (ft): <u>2440714.78</u>
Plant Name: <u>Arkwright</u>	Location Datum: <u>Georgia State West</u>	Elevation Datum: <u>NAVD88</u>
Plant Address: <u>Macon, GA 31211</u>	Surface/ Ground Elevation (ft): <u>344.25</u>	Stickup (ft, ags): <u>3.3</u>
Project Number: <u>175569434</u>	Borehole Diameter (in): <u>#</u>	Borehole Depth (ft, bgs): <u>70.0</u>
Goals/Task: <u>Abandon AP1-PZ6</u>	Well Casing Diameter (in): <u>#</u>	Well Depth (ft, bgs): <u>69.25</u>
Drilling Company: <u>Southern Company- Civil Field Services</u>	Top of Casing elev (ft): <u>347.56</u>	Screen length (ft): <u>10</u>
Drilling Equipment/Rig Type: <u>CME 550x</u>		
Abandonment Drilling Method: <u>2.25-inch Inner Diameter Hollow Stem Augers</u>		
Recovery Sampling Method: <u>NA</u>		
Prepared By: <u>Calli Provenza</u>		
Review By: <u>Josh Massey, PG</u>		

*Not to Scale

Well Abandonment Construction (depths in feet bgs)		Materials Inventory
	Top of overdrill/top of Aquaguard at 344.25 feet NAVD 88	Casing Type (steel or PVC, schedule 40 or 80): <u>2" ID PVC</u>
Excavation Depth <u>30.28</u> ft bgs		Casing Top: <u>3.3</u> ft, ags Bottom: <u>69.25</u> ft, bgs
		Screen Type: <u>PVC U-Pack Type II</u>
	Top of neat cement 32 feet bgs	Screen Slot Size: <u>0.010</u>
		Screen Top: <u>58.85</u> ft, bgs Bottom: <u>68.85</u> ft, bgs
		Sump/end cap Top: <u>68.85</u> ft, bgs Bottom: <u>69.25</u> ft, bgs
		Neat cement, overdrill: Top: <u>32</u> ft, bgs Bottom: <u>70</u> ft, bgs
		Abandonment Grout Type: Neat cement (Portland cement and water slurry)
		Abandonment Grout Quantity: Neat cement: 56 gallons
		Bentonite: Top: <u>0</u> ft, bgs Bottom: <u>32</u> ft, bgs
		Abandonment Bentonite Type: <u>Aquaguard 30% solids bentonite grout</u>
		Abandonment Bentonite Quantity: Aquaguard: 68 gallons
		Notes: Dedicated pump & tubing removed prior to abandonment. Concrete well pad, pro cover and bollards removed. Portland cement/bentonite grout (94% cement to 6% bentonite) initially used as abandonment grout type in PZ6. 8 gallons tremied from 69.25 feet bgs to 20 feet bgs. Curing time was 2 hours. Existing piezometer overdrilled to create open 6-inch boring 70 ft bgs. Boring filled with neat cement from 70 ft bgs to 32 ft bgs. Neat cement curing time was overnight (18 hours). Aquaguard 30% solid bentonite grout placed from 32 ft bgs to existing grade.
Depth to Water (ft bgs) <u>53.95</u> <u>6/19/2023</u>		

APPENDIX B

SCS-CFS DRILLING BOND



CONTINUATION
CERTIFICATE

SAFECO Insurance Company of America

, Surety upon

a certain Bond No. **4993104**

dated effective June 30, 1987
(MONTH-DAY-YEAR)

on behalf of Southern Company Services, Inc.
(PRINCIPAL)

and in favor of Georgia Department of Natural Resources, Environmental Protection Division
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on June 30, 2021
(MONTH-DAY-YEAR)

and ending on June 30, 2022
(MONTH-DAY-YEAR)

Amount of bond Fifteen Thousand Dollars and 00/100 (\$15,000.00)

Description of bond Water Well Contractors & Drillers

Premium: \$100.00

PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.

Signed and dated on 05/06/2021
(MONTH-DAY-YEAR)
SAFECO Insurance Company of America
175 Berkeley Street, Boston, MA 02116

By 
Attorney-in-Fact Jeffrey M. Wilson, Attorney-in-Fact

McGriff Insurance Services, Inc.
Agent

2211 7th Avenue South, Birmingham, AL 35233
Address of Agent

(205) 252-9871
Telephone Number of Agent



This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

American States Insurance Company
First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

Certificate No: 8205019-016032

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American States Insurance Company is a corporation duly organized under the laws of the State of Indiana, that First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America are corporations duly organized under the laws of the State of New Hampshire (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Alisa B. Ferris; Anna Childress; Jeffrey M. Wilson; Mark W. Edwards II, Richard H. Mitchell, Robert R. Freel; Sam Audia; William M. Smith

all of the city of Birmingham state of AL each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 11th day of March, 2021.

American States Insurance Company
First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

By: [Signature]
David M. Carey, Assistant Secretary



State of PENNSYLVANIA ss
County of MONTGOMERY

On this 11th day of March, 2021 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: [Signature]
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-law and Authorizations of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, which are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorney-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 6th day of May, 2021.



By: [Signature]
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

CONTINUATION
CERTIFICATE

SAFECO Insurance Company of America

, Surety upon

a certain Bond No. **4993104**

dated effective June 30, 1987
(MONTH-DAY-YEAR)

on behalf of Southern Company Services, Inc.
(PRINCIPAL)

and in favor of Georgia Department of Natural Resources, Environmental Protection Division
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on June 30, 2022
(MONTH-DAY-YEAR)

and ending on June 30, 2023
(MONTH-DAY-YEAR)

Amount of bond Fifteen Thousand Dollars and 00/100 (\$15,000.00)

Description of bond Water Well Contractors & Drillers

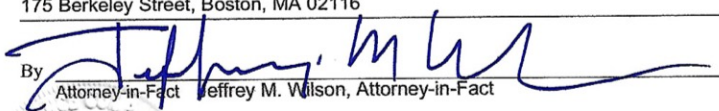
Premium: \$100.00

PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.

Signed and dated on 05/06/2021
(MONTH-DAY-YEAR)

SAFECO Insurance Company of America

175 Berkeley Street, Boston, MA 02116

By 
Attorney-in-Fact Jeffrey M. Wilson, Attorney-in-Fact

McGriff Insurance Services, Inc.

Agent

2211 7th Avenue South, Birmingham, AL 35233

Address of Agent

(205) 252-9871

Telephone Number of Agent



This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

American States Insurance Company
First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

Certificate No: 8205019-016032

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American States Insurance Company is a corporation duly organized under the laws of the State of Indiana, that First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America are corporations duly organized under the laws of the State of New Hampshire (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Alisa B. Ferris; Anna Childress; Jeffrey M. Wilson; Mark W. Edwards II, Richard H. Mitchell, Robert R. Frecl; Sam Audia; William M. Smith

all of the city of Birmingham state of AL each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 11th day of March, 2021.

American States Insurance Company
First National Insurance Company of America
General Insurance Company of America
Safeco Insurance Company of America

By: David M. Carey, Assistant Secretary



State of PENNSYLVANIA ss
County of MONTGOMERY

On this 11th day of March, 2021 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-law and Authorizations of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America, which are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorney-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, of American States Insurance Company, First National Insurance Company of America, General Insurance Company of America, and Safeco Insurance Company of America do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 6th day of May, 2021.



By: Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

Appendix C

Field Sampling Data and Analytical Data Reports



C.1 Field Sampling Data



Low-Flow Test Report:

Test Date / Time: 9/7/2022 9:29:47 AM

Project: Plant Arkwright AP-1

Operator Name: E. Scheiben

Location Name: AP1GWA-1 Latitude: 32.9299897952187 Longitude: -83.7009504809976 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.5 ft Total Depth: 37.5 ft Initial Depth to Water: 24.36 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 37.5 ft Pump Intake From TOC: 32.5 ft Estimated Total Volume Pumped: 13500 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:

AP1GWA-1 collected at 10:20

EB-01 collected at 09:05

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	
9/7/2022 9:29 AM	00:00	5.67 pH	21.22 °C	208.89 µS/cm	3.31 mg/L	25.00 NTU	64.6 mV	24.36 ft	300.00 ml/min
9/7/2022 9:34 AM	05:00	5.46 pH	20.45 °C	216.04 µS/cm	2.81 mg/L	25.10 NTU	133.8 mV	24.36 ft	300.00 ml/min
9/7/2022 9:39 AM	10:00	5.42 pH	20.42 °C	215.69 µS/cm	2.82 mg/L	10.10 NTU	101.8 mV	24.36 ft	300.00 ml/min
9/7/2022 9:44 AM	15:00	5.41 pH	20.42 °C	215.99 µS/cm	2.81 mg/L	8.31 NTU	101.2 mV	24.36 ft	300.00 ml/min
9/7/2022 9:49 AM	20:00	5.41 pH	20.37 °C	216.16 µS/cm	2.81 mg/L	5.66 NTU	105.9 mV	24.36 ft	300.00 ml/min
9/7/2022 9:54 AM	25:00	5.42 pH	20.37 °C	215.83 µS/cm	2.81 mg/L	2.29 NTU	142.1 mV	24.36 ft	300.00 ml/min
9/7/2022 9:59 AM	30:00	5.43 pH	20.40 °C	213.44 µS/cm	2.80 mg/L	2.46 NTU	108.8 mV	24.36 ft	300.00 ml/min
9/7/2022 10:04 AM	35:00	5.42 pH	20.42 °C	213.46 µS/cm	2.80 mg/L	2.34 NTU	107.6 mV	24.36 ft	300.00 ml/min
9/7/2022 10:09 AM	40:00	5.42 pH	20.42 °C	213.09 µS/cm	2.80 mg/L	1.44 NTU	107.6 mV	24.36 ft	300.00 ml/min
9/7/2022 10:14 AM	45:00	5.42 pH	20.46 °C	212.00 µS/cm	2.79 mg/L	1.91 NTU	108.1 mV	24.36 ft	300.00 ml/min

Samples

Sample ID:	Description:
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/7/2022 11:11:02 AM

Project: Plant Arkwright AP-1

Operator Name: E. Scheiben

Location Name: AP1GWA-2 Latitude: 32.930034257851 Longitude: -83.7009518221021 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 21.1 ft Total Depth: 31.1 ft Initial Depth to Water: 18.38 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 31.1 ft Pump Intake From TOC: 26.1 ft Estimated Total Volume Pumped: 14000 ml Flow Cell Volume: 90 ml Final Flow Rate: 350 ml/min Final Draw Down: 0 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	
9/7/2022 11:11 AM	00:00	6.05 pH	21.92 °C	76.06 µS/cm	4.07 mg/L	16.30 NTU	152.4 mV	18.38 ft	350.00 ml/min
9/7/2022 11:16 AM	05:00	6.02 pH	21.72 °C	74.69 µS/cm	4.05 mg/L	27.50 NTU	116.0 mV	18.38 ft	350.00 ml/min
9/7/2022 11:21 AM	10:00	6.00 pH	21.69 °C	74.98 µS/cm	3.97 mg/L	15.80 NTU	106.9 mV	18.38 ft	350.00 ml/min
9/7/2022 11:26 AM	15:00	6.00 pH	21.71 °C	75.34 µS/cm	3.79 mg/L	9.99 NTU	103.6 mV	18.38 ft	350.00 ml/min
9/7/2022 11:31 AM	20:00	6.00 pH	21.72 °C	75.71 µS/cm	3.65 mg/L	7.39 NTU	126.0 mV	18.38 ft	350.00 ml/min
9/7/2022 11:36 AM	25:00	6.00 pH	21.76 °C	76.35 µS/cm	3.56 mg/L	6.05 NTU	90.9 mV	18.38 ft	350.00 ml/min
9/7/2022 11:41 AM	30:00	6.00 pH	21.84 °C	76.71 µS/cm	3.45 mg/L	3.99 NTU	76.0 mV	18.38 ft	350.00 ml/min
9/7/2022 11:46 AM	35:00	6.00 pH	21.83 °C	77.28 µS/cm	3.39 mg/L	3.29 NTU	64.8 mV	18.38 ft	350.00 ml/min
9/7/2022 11:51 AM	40:00	6.00 pH	21.80 °C	77.71 µS/cm	3.27 mg/L	2.73 NTU	67.9 mV	18.38 ft	350.00 ml/min

Samples

Sample ID:	Description:
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AP1GWA-2

Sample collected at 11:55

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/7/2022 12:52:00 PM

Project: Plant Arkwright AP-1

Operator Name: E. Scheiben

Location Name: AP1PZ-1 Latitude: 32.9273225592229 Longitude: -83.7005008757114 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 77.62 ft Total Depth: 87.62 ft Initial Depth to Water: 44.16 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 87.62 ft Pump Intake From TOC: 85.62 ft Estimated Total Volume Pumped: 5000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.05 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	
9/7/2022 12:52 PM	00:00	6.36 pH	30.44 °C	325.27 µS/cm	1.67 mg/L	14.50 NTU	-19.3 mV	44.16 ft	100.00 ml/min
9/7/2022 12:57 PM	05:00	6.42 pH	24.32 °C	352.77 µS/cm	0.83 mg/L	13.70 NTU	30.3 mV	45.25 ft	100.00 ml/min
9/7/2022 1:02 PM	10:00	6.43 pH	23.55 °C	354.92 µS/cm	0.68 mg/L	11.70 NTU	60.7 mV	45.58 ft	100.00 ml/min
9/7/2022 1:07 PM	15:00	6.42 pH	23.43 °C	353.71 µS/cm	0.60 mg/L	9.07 NTU	58.5 mV	45.69 ft	100.00 ml/min
9/7/2022 1:12 PM	20:00	6.43 pH	23.31 °C	354.72 µS/cm	0.58 mg/L	6.69 NTU	73.1 mV	45.89 ft	100.00 ml/min
9/7/2022 1:17 PM	25:00	6.43 pH	23.14 °C	353.40 µS/cm	0.51 mg/L	5.64 NTU	76.1 mV	45.92 ft	100.00 ml/min
9/7/2022 1:22 PM	30:00	6.43 pH	22.92 °C	355.56 µS/cm	0.50 mg/L	5.33 NTU	76.6 mV	46.07 ft	100.00 ml/min
9/7/2022 1:27 PM	35:00	6.42 pH	22.77 °C	353.02 µS/cm	0.50 mg/L	4.38 NTU	62.7 mV	46.10 ft	100.00 ml/min
9/7/2022 1:32 PM	40:00	6.41 pH	22.80 °C	354.71 µS/cm	0.47 mg/L	4.46 NTU	74.2 mV	46.15 ft	100.00 ml/min
9/7/2022 1:37 PM	45:00	6.41 pH	22.81 °C	353.09 µS/cm	0.47 mg/L	4.23 NTU	75.7 mV	46.18 ft	100.00 ml/min
9/7/2022 1:42 PM	50:00	6.41 pH	22.95 °C	353.64 µS/cm	0.48 mg/L	4.25 NTU	62.8 mV	46.21 ft	100.00 ml/min

Samples

Sample ID:	Description:
AP1PZ-1	Collected at 13:50

Low-Flow Test Report:

Test Date / Time: 9/8/2022 9:26:48 AM

Project: Plant Arkwright AP-1

Operator Name: E. Scheiben

Location Name: AP1PZ-2 Latitude: 32.9204371278322 Longitude: -83.6983309686184 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.67 ft Total Depth: 62.67 ft Initial Depth to Water: 42.4 ft	Pump Type: Dedicated Bladder QED Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 62 ft Pump Intake From TOC: 57 ft Estimated Total Volume Pumped: 5912 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 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	
9/8/2022 9:26 AM	00:00	7.49 pH	23.72 °C	969.08 µS/cm	8.21 mg/L		106.3 mV	42.40 ft	120.00 ml/min
9/8/2022 9:28 AM	01:28	6.82 pH	22.74 °C	1,157.2 µS/cm	1.91 mg/L	12.00 NTU	96.0 mV	42.40 ft	120.00 ml/min
9/8/2022 9:33 AM	06:28	6.27 pH	21.44 °C	1,067.1 µS/cm	0.95 mg/L	10.30 NTU	98.0 mV	42.40 ft	120.00 ml/min
9/8/2022 9:38 AM	11:28	6.20 pH	21.38 °C	1,063.3 µS/cm	0.71 mg/L	11.40 NTU	90.6 mV	42.40 ft	120.00 ml/min
9/8/2022 9:43 AM	16:28	6.18 pH	21.40 °C	1,061.7 µS/cm	0.60 mg/L	9.85 NTU	86.6 mV	42.40 ft	120.00 ml/min
9/8/2022 9:48 AM	21:28	6.17 pH	21.46 °C	1,078.1 µS/cm	0.46 mg/L	7.49 NTU	63.8 mV	42.40 ft	120.00 ml/min
9/8/2022 9:53 AM	26:28	6.16 pH	21.45 °C	1,093.4 µS/cm	0.41 mg/L	5.90 NTU	54.3 mV	42.40 ft	120.00 ml/min
9/8/2022 9:58 AM	31:28	6.14 pH	21.42 °C	1,089.9 µS/cm	0.37 mg/L	6.27 NTU	49.2 mV	42.40 ft	120.00 ml/min
9/8/2022 10:01 AM	34:16	6.14 pH	21.55 °C	1,107.5 µS/cm	0.37 mg/L	5.68 NTU	50.5 mV	42.40 ft	120.00 ml/min
9/8/2022 10:06 AM	39:16	6.12 pH	21.55 °C	1,114.3 µS/cm	0.35 mg/L	4.26 NTU	51.5 mV	42.40 ft	120.00 ml/min
9/8/2022 10:11 AM	44:16	6.11 pH	21.61 °C	1,127.1 µS/cm	0.36 mg/L	3.08 NTU	53.0 mV	42.40 ft	120.00 ml/min
9/8/2022 10:16 AM	49:16	6.11 pH	21.59 °C	1,134.0 µS/cm	0.34 mg/L	2.60 NTU	64.6 mV	42.40 ft	120.00 ml/min

Samples

Sample ID:	Description:
AP1PZ-2	Collected at 1025

Low-Flow Test Report:

Test Date / Time: 9/7/2022 5:35:31 PM

Project: Plant Arkwright AP-1

Operator Name: J. Bankston

Location Name: AP1PZ-3 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.38 ft Total Depth: 67.38 ft Initial Depth to Water: 42.6 ft	Pump Type: Dedicated bladder pump Tubing Type: Poly Pump Intake From TOC: 62.38 ft Estimated Total Volume Pumped: 15000 ml Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 0.98 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 %	+/- 0.3	+/- 10	+/- 10	+/- 5	
9/7/2022 5:35 PM	00:00	5.58 pH	28.12 °C	2,408.8 µS/cm	1.98 mg/L	2.81 NTU	127.2 mV	42.60 ft	300 ml/min
9/7/2022 5:40 PM	05:00	5.59 pH	27.99 °C	2,392.5 µS/cm	1.63 mg/L	3.71 NTU	127.3 mV	42.17 ft	300 ml/min
9/7/2022 5:45 PM	10:00	5.54 pH	27.28 °C	2,375.5 µS/cm	1.42 mg/L	4.97 NTU	123.4 mV	43.60 ft	300 ml/min
9/7/2022 5:50 PM	15:00	5.52 pH	26.46 °C	2,397.1 µS/cm	1.13 mg/L	4.76 NTU	124.7 mV	43.52 ft	300 ml/min
9/7/2022 5:55 PM	20:01	5.49 pH	27.31 °C	2,413.5 µS/cm	0.59 mg/L	4.11 NTU	125.9 mV	43.50 ft	300 ml/min
9/7/2022 6:00 PM	25:01	5.49 pH	26.35 °C	2,390.8 µS/cm	0.50 mg/L	4.18 NTU	144.5 mV	43.55 ft	300 ml/min
9/7/2022 6:05 PM	30:01	5.48 pH	26.44 °C	2,392.7 µS/cm	0.41 mg/L	2.90 NTU	119.2 mV	43.58 ft	300 ml/min
9/7/2022 6:10 PM	35:01	5.48 pH	25.91 °C	2,389.8 µS/cm	0.42 mg/L	2.89 NTU	140.5 mV	43.55 ft	300 ml/min
9/7/2022 6:15 PM	40:01	5.48 pH	25.14 °C	2,380.7 µS/cm	0.38 mg/L	2.48 NTU	117.0 mV	43.53 ft	300 ml/min
9/7/2022 6:20 PM	45:01	5.48 pH	25.19 °C	2,392.4 µS/cm	0.37 mg/L	1.79 NTU	116.3 mV	43.49 ft	300 ml/min
9/7/2022 6:25 PM	50:01	5.47 pH	25.28 °C	2,394.3 µS/cm	0.36 mg/L	1.57 NTU	116.5 mV	43.58 ft	300 ml/min

Samples

Sample ID:	Description:
AP1PZ-3	9/7/22 1830

Low-Flow Test Report:

Test Date / Time: 9/7/2022 2:51:43 PM

Project: Plant Arkwright AP-1

Operator Name: E. Scheiben

Location Name: AP1PZ-4 Latitude: 32.9210630471097 Longitude: -83.698776550591 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.44 ft Total Depth: 67.44 ft Initial Depth to Water: 47.06 ft	Pump Type: Peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 68 ft Pump Intake From TOC: 63 ft Estimated Total Volume Pumped: 4500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.65 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	
9/7/2022 2:51 PM	00:00	6.44 pH	32.44 °C	2,153.4 µS/cm	2.98 mg/L	6.27 NTU	-31.8 mV	47.06 ft	100.00 ml/min
9/7/2022 2:56 PM	05:00	6.46 pH	24.40 °C	2,400.0 µS/cm	1.37 mg/L	6.79 NTU	-33.2 mV	47.06 ft	100.00 ml/min
9/7/2022 3:01 PM	10:00	6.45 pH	23.50 °C	2,418.4 µS/cm	0.98 mg/L	5.96 NTU	-56.6 mV	47.56 ft	100.00 ml/min
9/7/2022 3:06 PM	15:00	6.45 pH	23.46 °C	2,419.6 µS/cm	0.84 mg/L	4.75 NTU	-56.4 mV	47.64 ft	100.00 ml/min
9/7/2022 3:11 PM	20:00	6.43 pH	23.50 °C	2,417.1 µS/cm	0.67 mg/L	4.08 NTU	-58.6 mV	47.69 ft	100.00 ml/min
9/7/2022 3:16 PM	25:00	6.42 pH	23.27 °C	2,410.9 µS/cm	0.58 mg/L	4.11 NTU	-59.8 mV	47.71 ft	100.00 ml/min
9/7/2022 3:21 PM	30:00	6.41 pH	23.46 °C	2,409.4 µS/cm	0.52 mg/L	3.45 NTU	-35.4 mV	47.71 ft	100.00 ml/min
9/7/2022 3:26 PM	35:00	6.40 pH	23.35 °C	2,402.8 µS/cm	0.49 mg/L	2.83 NTU	-59.5 mV	47.71 ft	100.00 ml/min
9/7/2022 3:31 PM	40:00	6.39 pH	23.41 °C	2,393.9 µS/cm	0.44 mg/L	2.36 NTU	-60.0 mV	47.71 ft	100.00 ml/min
9/7/2022 3:36 PM	45:00	6.37 pH	23.32 °C	2,391.1 µS/cm	0.44 mg/L	2.54 NTU	-35.3 mV	47.71 ft	100.00 ml/min

Samples

Sample ID:	Description:
AP1PZ-4	Collected at 1545
DUP-01	Collected at AP1PZ-4

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/8/2022 11:37:45 AM

Project: Plant Arkwright AP-1

Operator Name: E. Scheiben

Location Name: AP1PZ-5 Latitude: 32.917865859031 Longitude: -83.6973610147834 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.25 ft Total Depth: 67.25 ft Initial Depth to Water: 48.89 ft	Pump Type: Dedicated Bladder QED Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 67 ft Pump Intake From TOC: 62.25 ft Estimated Total Volume Pumped: 3631.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 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	
9/8/2022 11:37 AM	00:00	6.21 pH	29.03 °C	2,760.6 µS/cm	4.37 mg/L		-28.0 mV	48.89 ft	100.00 ml/min
9/8/2022 11:42 AM	05:00	6.17 pH	22.31 °C	3,054.2 µS/cm	1.08 mg/L	4.31 NTU	-27.0 mV	48.89 ft	100.00 ml/min
9/8/2022 11:47 AM	10:00	6.16 pH	21.66 °C	3,079.7 µS/cm	0.93 mg/L	4.88 NTU	-49.5 mV	48.89 ft	100.00 ml/min
9/8/2022 11:52 AM	15:00	6.14 pH	21.51 °C	3,077.4 µS/cm	0.72 mg/L	2.72 NTU	-50.5 mV	48.89 ft	100.00 ml/min
9/8/2022 11:59 AM	21:19	6.13 pH	21.59 °C	3,069.2 µS/cm	0.61 mg/L	2.27 NTU	-27.8 mV	48.89 ft	100.00 ml/min
9/8/2022 12:04 PM	26:19	6.12 pH	21.38 °C	3,079.0 µS/cm	0.51 mg/L	1.78 NTU	-26.7 mV	48.89 ft	100.00 ml/min
9/8/2022 12:09 PM	31:19	6.12 pH	21.38 °C	3,081.4 µS/cm	0.45 mg/L	1.36 NTU	-53.8 mV	48.89 ft	100.00 ml/min
9/8/2022 12:14 PM	36:19	6.12 pH	21.47 °C	3,076.5 µS/cm	0.43 mg/L	1.41 NTU	-54.5 mV	48.89 ft	100.00 ml/min

Samples

Sample ID:	Description:
AP1PZ-5	Collected at 1225

Low-Flow Test Report:

Test Date / Time: 9/7/2022 5:52:37 PM

Project: Plant Arkwright AP-1

Operator Name: J. Meyer

Location Name: AP1PZ-6 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 62.2 ft Total Depth: 72.2 ft Initial Depth to Water: 56.7 ft	Pump Intake From TOC: 67.5 ft Estimated Total Volume Pumped: 5878 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 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: 67 ft Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Weather Conditions:

Sunny 88 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/7/2022 5:52 PM	00:00	4.83 pH	23.01 °C	3,262.5 µS/cm	1.82 mg/L	12.80 NTU	155.1 mV	56.70 ft	120.00 ml/min
9/7/2022 5:57 PM	05:00	5.26 pH	22.09 °C	3,322.8 µS/cm	1.03 mg/L	9.11 NTU	81.4 mV	56.70 ft	120.00 ml/min
9/7/2022 6:01 PM	09:00	5.42 pH	21.78 °C	3,335.9 µS/cm	0.69 mg/L	6.15 NTU	56.2 mV	56.70 ft	120.00 ml/min
9/7/2022 6:06 PM	14:00	5.48 pH	21.82 °C	3,347.5 µS/cm	0.50 mg/L	5.50 NTU	46.0 mV	56.70 ft	120.00 ml/min
9/7/2022 6:11 PM	19:00	5.51 pH	21.46 °C	3,354.4 µS/cm	0.41 mg/L	4.47 NTU	39.0 mV	56.70 ft	120.00 ml/min
9/7/2022 6:16 PM	24:00	5.54 pH	21.28 °C	3,358.2 µS/cm	0.32 mg/L	2.97 NTU	33.4 mV	56.70 ft	120.00 ml/min
9/7/2022 6:21 PM	29:00	5.54 pH	21.16 °C	3,362.8 µS/cm	0.30 mg/L	2.82 NTU	31.0 mV	56.70 ft	120.00 ml/min
9/7/2022 6:26 PM	33:59	5.55 pH	21.21 °C	3,356.5 µS/cm	0.27 mg/L	2.22 NTU	29.2 mV	56.70 ft	120.00 ml/min
9/7/2022 6:31 PM	38:59	5.55 pH	21.34 °C	3,363.1 µS/cm	0.26 mg/L	1.99 NTU	28.1 mV	56.70 ft	120.00 ml/min
9/7/2022 6:36 PM	43:59	5.56 pH	21.04 °C	3,358.9 µS/cm	0.24 mg/L	1.77 NTU	26.9 mV	56.70 ft	120.00 ml/min
9/7/2022 6:41 PM	48:59	5.56 pH	21.04 °C	3,362.2 µS/cm	0.24 mg/L	1.34 NTU	26.0 mV	56.70 ft	120.00 ml/min

Samples

Sample ID:	Description:
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AP1PZ-6

Sample collected at 1845

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/7/2022 1:32:54 PM

Project: Plant Arkwright AP-1

Operator Name: J. Bankston

Location Name: AP1PZ-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58.3 ft Total Depth: 68.3 ft Initial Depth to Water: 49.45 ft	Pump Type: Dedicated bladder pump Tubing Type: Poly Pump Intake From TOC: 63.3 ft Estimated Total Volume Pumped: 1766.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 3.16 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850724
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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	+/- 3	+/- 0.3	+/- 10	+/- 10	+/- 5	
9/7/2022 1:32 PM	00:00	6.25 pH	25.37 °C	2.59 mS/cm	1.10 mg/L	6.39 NTU	-27.4 mV	49.77 ft	100.00 ml/min
9/7/2022 1:35 PM	03:00	6.24 pH	25.32 °C	2.60 mS/cm	0.96 mg/L	6.22 NTU	-26.8 mV	51.40 ft	100.00 ml/min
9/7/2022 1:38 PM	06:00	6.21 pH	25.59 °C	2.60 mS/cm	0.72 mg/L	7.20 NTU	-27.3 mV	51.73 ft	100.00 ml/min
9/7/2022 1:39 PM	06:54	6.21 pH	25.59 °C	2.60 mS/cm	0.64 mg/L	7.10 NTU	-27.3 mV	51.73 ft	100.00 ml/min
9/7/2022 1:42 PM	09:27	6.21 pH	25.50 °C	2.60 mS/cm	0.53 mg/L	5.67 NTU	-27.2 mV	52.03 ft	100.00 ml/min
9/7/2022 1:45 PM	12:27	6.21 pH	25.77 °C	2.59 mS/cm	0.43 mg/L	3.94 NTU	-26.3 mV	52.22 ft	100.00 ml/min
9/7/2022 1:47 PM	14:40	6.21 pH	25.87 °C	2.58 mS/cm	0.41 mg/L	4.14 NTU	-24.8 mV	52.49 ft	100.00 ml/min
9/7/2022 1:50 PM	17:40	6.21 pH	25.57 °C	2.55 mS/cm	0.38 mg/L	4.46 NTU	-20.9 mV	52.61 ft	100.00 ml/min

Samples

Sample ID:	Description:
AP1PZ-7	9/7/22 1400

Low-Flow Test Report:

Test Date / Time: 9/7/2022 3:18:18 PM

Project: Plant Arkwright AP-1

Operator Name: J. Bankston

Location Name: AP1PZ-8 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 56.09 ft Total Depth: 66.09 ft Initial Depth to Water: 46.3 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 61.09 ft Estimated Total Volume Pumped: 6756.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.82 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850724
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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	+/- 3 %	+/- 0.3	+/- 10	+/- 10	+/- 5	
9/7/2022 3:18 PM	00:00	6.56 pH	25.32 °C	1,819.3 µS/cm	1.50 mg/L	10.10 NTU	-38.4 mV	46.30 ft	100.00 ml/min
9/7/2022 3:18 PM	00:21	6.55 pH	25.40 °C	1,827.9 µS/cm	1.46 mg/L	10.00 NTU	-41.7 mV	46.79 ft	100.00 ml/min
9/7/2022 3:23 PM	05:21	6.53 pH	26.64 °C	1,802.5 µS/cm	2.19 mg/L	6.40 NTU	-34.9 mV	47.90 ft	100.00 ml/min
9/7/2022 3:28 PM	10:21	6.53 pH	26.37 °C	1,808.0 µS/cm	3.03 mg/L	5.13 NTU	-34.2 mV	48.50 ft	100.00 ml/min
9/7/2022 3:33 PM	15:21	6.52 pH	25.53 °C	1,799.5 µS/cm	2.06 mg/L	2.98 NTU	-37.0 mV	48.75 ft	100.00 ml/min
9/7/2022 3:38 PM	20:21	6.53 pH	25.07 °C	1,804.3 µS/cm	0.92 mg/L	1.81 NTU	-33.0 mV	48.77 ft	100.00 ml/min
9/7/2022 3:43 PM	25:21	6.53 pH	25.01 °C	1,814.6 µS/cm	1.32 mg/L	1.18 NTU	-37.1 mV	48.92 ft	100.00 ml/min
9/7/2022 3:48 PM	30:21	6.52 pH	25.08 °C	1,815.6 µS/cm	0.79 mg/L	0.90 NTU	-32.9 mV	48.98 ft	100.00 ml/min
9/7/2022 3:53 PM	35:21	6.53 pH	24.24 °C	1,815.6 µS/cm	0.92 mg/L	0.99 NTU	-37.2 mV	48.99 ft	100.00 ml/min
9/7/2022 3:58 PM	40:21	6.52 pH	24.46 °C	1,843.4 µS/cm	0.84 mg/L	0.79 NTU	-33.6 mV	49.02 ft	100.00 ml/min
9/7/2022 4:03 PM	45:21	6.52 pH	26.00 °C	1,825.9 µS/cm	0.46 mg/L	1.32 NTU	-34.7 mV	49.10 ft	100.00 ml/min
9/7/2022 4:08 PM	50:21	6.52 pH	26.14 °C	1,814.1 µS/cm	0.38 mg/L	0.58 NTU	-34.2 mV	49.11 ft	100.00 ml/min
9/7/2022 4:15 PM	56:59	6.52 pH	25.69 °C	1,847.9 µS/cm	0.30 mg/L	0.60 NTU	-34.5 mV	49.18 ft	100.00 ml/min

9/7/2022 4:20 PM	01:01:59	6.51 pH	25.85 °C	1,861.9 μ S/cm	0.41 mg/L	0.59 NTU	-33.7 mV	49.13 ft	100.00 ml/min
9/7/2022 4:25 PM	01:06:59	6.52 pH	24.90 °C	1,845.1 μ S/cm	0.25 mg/L	0.63 NTU	-35.6 mV	49.13 ft	100.00 ml/min
9/7/2022 4:25 PM	01:07:34	6.52 pH	24.86 °C	1,848.5 μ S/cm	0.25 mg/L	2.80 NTU	-35.6 mV	49.12 ft	100.00 ml/min

Samples

Sample ID:	Description:
AP1PZ-8	9/7/22 1627

Low-Flow Test Report:

Test Date / Time: 9/7/2022 3:43:27 PM

Project: Plant Arkwright AP-1

Operator Name: J. Meyer

Location Name: AP1PZ-9 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 46.3 ft Total Depth: 56.3 ft Initial Depth to Water: 42.1 ft	Pump Intake From TOC: 52.3 ft Estimated Total Volume Pumped: 2726.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.9 ft	Casing Type: PVC Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 56 ft Instrument Used: Aqua TROLL 400 Serial Number: 728623
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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	+/- 0.5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/7/2022 3:43 PM	00:00	5.37 pH	24.33 °C	710.20 µS/cm	1.86 mg/L	11.10 NTU	141.2 mV	42.25 ft	100.00 ml/min
9/7/2022 3:48 PM	05:00	5.22 pH	23.25 °C	711.36 µS/cm	1.24 mg/L	9.12 NTU	156.0 mV	42.80 ft	100.00 ml/min
9/7/2022 3:53 PM	10:00	5.00 pH	22.80 °C	704.56 µS/cm	1.49 mg/L	5.97 NTU	178.2 mV	43.28 ft	100.00 ml/min
9/7/2022 3:58 PM	15:00	4.89 pH	22.50 °C	704.01 µS/cm	1.93 mg/L	3.01 NTU	190.1 mV	43.89 ft	100.00 ml/min
9/7/2022 3:58 PM	15:16	4.88 pH	22.49 °C	704.47 µS/cm	1.94 mg/L	3.01 NTU	196.2 mV	43.89 ft	100.00 ml/min
9/7/2022 4:01 PM	18:16	4.84 pH	22.72 °C	705.47 µS/cm	2.10 mg/L	4.31 NTU	194.3 mV	44.25 ft	100.00 ml/min
9/7/2022 4:04 PM	21:16	4.82 pH	22.90 °C	703.93 µS/cm	2.18 mg/L	4.54 NTU	197.5 mV	44.50 ft	100.00 ml/min
9/7/2022 4:07 PM	24:16	4.82 pH	22.98 °C	702.83 µS/cm	2.24 mg/L	1.71 NTU	197.3 mV	44.81 ft	100.00 ml/min
9/7/2022 4:10 PM	27:16	4.84 pH	23.06 °C	702.65 µS/cm	2.28 mg/L	2.08 NTU	196.1 mV	45.00 ft	100.00 ml/min

Samples

Sample ID:	Description:
AP1-PZ9	Sample collected at 1615
EB-02	Sample collected at 1705

Low-Flow Test Report:

Test Date / Time: 9/7/2022 1:40:35 PM

Project: Plant Arkwright AP-1

Operator Name: J. Meyer

Location Name: AP1PZ-10 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 44 ft Total Depth: 54 ft Initial Depth to Water: 40 ft	Pump Intake From TOC: 51.7 ft Estimated Total Volume Pumped: 4000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.8 ft	Casing Type: PVC Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 54 ft Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Weather Conditions:

Sunny 87 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/7/2022 1:40 PM	00:00	6.48 pH	23.57 °C	666.26 µS/cm	1.36 mg/L	2.21 NTU	-45.0 mV	40.20 ft	100.00 ml/min
9/7/2022 1:45 PM	05:00	6.44 pH	23.57 °C	671.52 µS/cm	1.02 mg/L	4.23 NTU	-45.3 mV	40.50 ft	100.00 ml/min
9/7/2022 1:50 PM	10:00	6.46 pH	23.70 °C	668.54 µS/cm	1.03 mg/L	3.47 NTU	-51.9 mV	40.78 ft	100.00 ml/min
9/7/2022 1:55 PM	15:00	6.47 pH	23.62 °C	688.13 µS/cm	0.81 mg/L	3.24 NTU	-76.1 mV	41.03 ft	100.00 ml/min
9/7/2022 2:00 PM	20:00	6.56 pH	23.61 °C	751.10 µS/cm	0.66 mg/L	2.08 NTU	-97.7 mV	41.20 ft	100.00 ml/min
9/7/2022 2:05 PM	25:00	6.61 pH	23.52 °C	771.07 µS/cm	0.43 mg/L	1.61 NTU	-99.8 mV	41.38 ft	100.00 ml/min
9/7/2022 2:10 PM	30:00	6.60 pH	23.26 °C	770.86 µS/cm	0.37 mg/L	2.02 NTU	-95.4 mV	41.54 ft	100.00 ml/min
9/7/2022 2:15 PM	35:00	6.57 pH	23.31 °C	762.77 µS/cm	0.38 mg/L	2.53 NTU	-89.0 mV	41.70 ft	100.00 ml/min
9/7/2022 2:20 PM	40:00	6.55 pH	23.16 °C	750.02 µS/cm	0.38 mg/L	1.60 NTU	-82.1 mV	41.80 ft	100.00 ml/min

Samples

Sample ID:	Description:
AP1PZ-10	Sample collected at 14:30
FB-02	Sample collected at 14:45

Low-Flow Test Report:

Test Date / Time: 9/8/2022 9:51:29 AM

Project: Plant Arkwright AP-1

Operator Name: J. Meyer

Location Name: AP1PZ-11 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 62.8 ft Total Depth: 72.8 ft Initial Depth to Water: 37.5 ft	Pump Intake From TOC: 63.8 ft Estimated Total Volume Pumped: 2020 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0 ft	Casing Type: PVC Pump Type: QED Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 72 ft Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Weather Conditions:

Sunny 74 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/8/2022 9:51 AM	00:00	6.96 pH	22.06 °C	310.11 µS/cm	2.08 mg/L	3.41 NTU	64.2 mV	37.50 ft	100.00 ml/min
9/8/2022 9:56 AM	05:00	6.85 pH	21.34 °C	318.79 µS/cm	1.63 mg/L	3.26 NTU	94.8 mV	37.50 ft	100.00 ml/min
9/8/2022 10:01 AM	10:00	6.81 pH	21.29 °C	318.74 µS/cm	1.61 mg/L	4.05 NTU	84.1 mV	37.50 ft	100.00 ml/min
9/8/2022 10:06 AM	15:12	6.79 pH	21.37 °C	316.47 µS/cm	1.51 mg/L	4.29 NTU	88.0 mV	37.50 ft	100.00 ml/min
9/8/2022 10:11 AM	20:12	6.77 pH	21.50 °C	318.41 µS/cm	1.52 mg/L	3.90 NTU	109.3 mV	37.50 ft	100.00 ml/min

Samples

Sample ID:	Description:
AP1-PZ11	Sample collected at 1015
DUP-02	

Low-Flow Test Report:

Test Date / Time: 2/1/2023 9:37:43 AM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: AP1GWA-1 Latitude: 32.9299897952187 Longitude: -83.7009504809976 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.5 ft Total Depth: 37.5 ft Initial Depth to Water: 23.25 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 37.5 ft Pump Intake From TOC: 32.5 ft Estimated Total Volume Pumped: 13691.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 500 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Turbidity = 0 indicates test was paused/resumed

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 %	+/- 5	+/- 10	+/- 0.3	
2/1/2023 9:37 AM	00:00	5.68 pH	21.19 °C	178.27 µS/cm	4.17 mg/L	15.20 NTU	94.1 mV	23.25 ft	500.00 ml/min
2/1/2023 9:42 AM	05:00	5.55 pH	20.55 °C	184.64 µS/cm	3.44 mg/L	9.60 NTU	179.4 mV	23.25 ft	500.00 ml/min
2/1/2023 9:45 AM	07:23	5.58 pH	20.62 °C	184.88 µS/cm	3.46 mg/L	0.00 NTU	182.1 mV	23.25 ft	500.00 ml/min
2/1/2023 9:50 AM	12:23	5.55 pH	20.71 °C	185.60 µS/cm	3.49 mg/L	5.03 NTU	187.8 mV	23.25 ft	500.00 ml/min
2/1/2023 9:55 AM	17:23	5.52 pH	20.92 °C	185.22 µS/cm	3.47 mg/L	2.87 NTU	151.5 mV	23.25 ft	500.00 ml/min
2/1/2023 10:00 AM	22:23	5.52 pH	21.00 °C	184.89 µS/cm	3.43 mg/L	2.65 NTU	146.4 mV	23.25 ft	500.00 ml/min
2/1/2023 10:05 AM	27:23	5.55 pH	20.78 °C	185.09 µS/cm	3.46 mg/L	1.98 NTU	173.0 mV	23.25 ft	500.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1GWA-1	5 bottles filled at 1010

Low-Flow Test Report:

Test Date / Time: 2/1/2023 10:53:57 AM

Project: Plant Arkwright

Operator Name: Jackson Bankston

Location Name: AP1GWA-2 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 21.1 ft Total Depth: 31.1 ft Initial Depth to Water: 17.71 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 26.1 ft Estimated Total Volume Pumped: 5361.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.08 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Lost connection with Aqua troll caused time change during low flow test

Weather Conditions:

Cloudy, 65-70

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
2/1/2023 10:53 AM	00:00	6.36 pH	20.18 °C	82.34 µS/cm	6.42 mg/L	1.68 NTU	97.4 mV	17.83 ft	100.00 ml/min
2/1/2023 10:58 AM	05:00	6.12 pH	19.42 °C	78.86 µS/cm	4.64 mg/L	4.83 NTU	99.2 mV	17.83 ft	100.00 ml/min
2/1/2023 11:03 AM	10:00	6.11 pH	19.44 °C	78.85 µS/cm	4.52 mg/L	7.64 NTU	102.5 mV	17.76 ft	100.00 ml/min
2/1/2023 11:08 AM	15:00	6.09 pH	19.46 °C	78.24 µS/cm	4.48 mg/L	11.00 NTU	104.1 mV	17.80 ft	100.00 ml/min
2/1/2023 11:13 AM	20:00	6.08 pH	19.59 °C	78.16 µS/cm	4.46 mg/L	11.00 NTU	107.8 mV	17.78 ft	100.00 ml/min
2/1/2023 11:16 AM	22:26	6.08 pH	19.69 °C	78.69 µS/cm	4.44 mg/L	10.77 NTU	102.1 mV	17.77 ft	100.00 ml/min
2/1/2023 11:17 AM	23:37	6.08 pH	19.73 °C	78.95 µS/cm	4.44 mg/L	10.35 NTU	97.5 mV	17.82 ft	100.00 ml/min
2/1/2023 11:22 AM	28:37	6.09 pH	19.71 °C	77.70 µS/cm	4.43 mg/L	7.82 NTU	109.6 mV	17.75 ft	100.00 ml/min
2/1/2023 11:27 AM	33:37	6.08 pH	19.83 °C	78.00 µS/cm	4.43 mg/L	7.71 NTU	114.0 mV	17.75 ft	100.00 ml/min
2/1/2023 11:32 AM	38:37	6.08 pH	19.77 °C	77.52 µS/cm	4.42 mg/L	5.55 NTU	151.3 mV	17.72 ft	100.00 ml/min
2/1/2023 11:37 AM	43:37	6.08 pH	19.81 °C	77.54 µS/cm	4.42 mg/L	4.97 NTU	158.4 mV	17.79 ft	100.00 ml/min
2/1/2023 11:42 AM	48:37	6.07 pH	19.98 °C	77.92 µS/cm	4.42 mg/L	4.29 NTU	126.7 mV	17.79 ft	100.00 ml/min
2/1/2023 11:47 AM	53:37	6.08 pH	19.91 °C	77.72 µS/cm	4.41 mg/L	4.19 NTU	127.7 mV	17.79 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1GWA-2	2/1/2023 1155 2 1000 ml Ra-226/Ra-228 2 250 ml Metals, Anions 1 500 ml TDS
ARK-AP1-FB-02	2/1/2023 0930 2 1000ml Ra-226Ra-228 2 250ml Metals, Anions 1 500ml TDS Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 2/1/2023 11:07:22 AM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: AP1PZ-1 Latitude: 32.9273225592229 Longitude: -83.7005008757114 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 77.62 ft Total Depth: 87.62 ft Initial Depth to Water: 44 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 90 ft Pump Intake From TOC: 85.62 ft Estimated Total Volume Pumped: 3620 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.45 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Turbidity=0 indicates test was paused/resumed.

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	
2/1/2023 11:07 AM	00:00	6.45 pH	19.64 °C	349.04 µS/cm	2.40 mg/L	8.17 NTU	33.4 mV	44.00 ft	100.00 ml/min
2/1/2023 11:12 AM	05:00	6.42 pH	19.81 °C	347.74 µS/cm	2.13 mg/L	8.32 NTU	63.8 mV	44.35 ft	100.00 ml/min
2/1/2023 11:17 AM	10:00	6.42 pH	19.85 °C	348.54 µS/cm	2.15 mg/L	8.02 NTU	69.9 mV	44.80 ft	100.00 ml/min
2/1/2023 11:18 AM	11:12	6.43 pH	20.63 °C	343.49 µS/cm	2.09 mg/L	0.00 NTU	68.1 mV	44.80 ft	100.00 ml/min
2/1/2023 11:23 AM	16:12	6.43 pH	19.89 °C	348.40 µS/cm	2.05 mg/L	7.48 NTU	71.6 mV	45.05 ft	100.00 ml/min
2/1/2023 11:28 AM	21:12	6.44 pH	19.91 °C	349.86 µS/cm	1.96 mg/L	5.38 NTU	89.0 mV	45.22 ft	100.00 ml/min
2/1/2023 11:33 AM	26:12	6.44 pH	19.77 °C	350.58 µS/cm	1.89 mg/L	4.95 NTU	92.5 mV	45.28 ft	100.00 ml/min
2/1/2023 11:38 AM	31:12	6.44 pH	20.03 °C	348.97 µS/cm	1.83 mg/L	3.84 NTU	94.5 mV	45.40 ft	100.00 ml/min
2/1/2023 11:43 AM	36:12	6.45 pH	20.13 °C	347.88 µS/cm	1.80 mg/L	4.09 NTU	74.8 mV	45.45 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-1	5 bottles filled at 1150
ARK-AP1-EB-02	5 bottles filled at 10:45 at AP1PZ-1

Low-Flow Test Report:

Test Date / Time: 2/1/2023 12:43:04 PM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: AP1PZ-2 Latitude: 32.9204371278322 Longitude: -83.6983309686184 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.67 ft Total Depth: 62.67 ft Initial Depth to Water: 42.66 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 62 ft Pump Intake From TOC: 57 ft Estimated Total Volume Pumped: 8487.5 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Turbidity=0 indicates test was paused/resumed.

Weather Conditions:

Cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
2/1/2023 12:43 PM	00:00	6.35 pH	19.73 °C	1,056.6 µS/cm	4.56 mg/L	16.10 NTU	52.4 mV	42.66 ft	150.00 ml/min
2/1/2023 12:44 PM	01:35	6.33 pH	20.70 °C	970.37 µS/cm	2.31 mg/L	0.00 NTU	46.8 mV	42.66 ft	150.00 ml/min
2/1/2023 12:49 PM	06:35	6.32 pH	20.01 °C	976.60 µS/cm	2.13 mg/L	35.90 NTU	44.2 mV	42.66 ft	150.00 ml/min
2/1/2023 12:54 PM	11:35	6.33 pH	20.21 °C	972.96 µS/cm	1.85 mg/L	31.90 NTU	42.0 mV	42.66 ft	150.00 ml/min
2/1/2023 12:59 PM	16:35	6.32 pH	20.25 °C	989.17 µS/cm	1.70 mg/L	21.70 NTU	40.0 mV	42.66 ft	150.00 ml/min
2/1/2023 1:04 PM	21:35	6.31 pH	20.09 °C	1,011.9 µS/cm	1.63 mg/L	17.20 NTU	36.7 mV	42.66 ft	150.00 ml/min
2/1/2023 1:09 PM	26:35	6.30 pH	19.77 °C	1,033.6 µS/cm	1.60 mg/L	10.10 NTU	39.2 mV	42.66 ft	150.00 ml/min
2/1/2023 1:14 PM	31:35	6.29 pH	19.82 °C	1,046.1 µS/cm	1.56 mg/L	7.49 NTU	37.6 mV	42.66 ft	150.00 ml/min
2/1/2023 1:19 PM	36:35	6.29 pH	19.77 °C	1,053.7 µS/cm	1.55 mg/L	7.03 NTU	37.2 mV	42.66 ft	150.00 ml/min
2/1/2023 1:24 PM	41:35	6.27 pH	19.86 °C	1,061.0 µS/cm	1.54 mg/L	6.70 NTU	37.6 mV	42.66 ft	150.00 ml/min
2/1/2023 1:29 PM	46:35	6.28 pH	19.97 °C	1,064.5 µS/cm	1.52 mg/L	4.39 NTU	37.8 mV	42.66 ft	150.00 ml/min
2/1/2023 1:34 PM	51:35	6.28 pH	19.91 °C	1,074.0 µS/cm	1.52 mg/L	3.33 NTU	37.5 mV	42.66 ft	150.00 ml/min

2/1/2023 1:39 PM	56:35	6.28 pH	19.86 °C	1,081.6 µS/cm	1.52 mg/L	2.96 NTU	37.1 mV	42.66 ft	150.00 ml/min
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Samples

Sample ID:	Description:
AP1PZ-2	5 bottles filled at 1345

Low-Flow Test Report:

Test Date / Time: 2/1/2023 2:30:42 PM

Project: Plant Arkwright

Operator Name: E. Scheiben

Location Name: AP1PZ-4 Latitude: 32.9210630471097 Longitude: -83.698776550591 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.44 ft Total Depth: 67.44 ft Initial Depth to Water: 45.67 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 68 ft Pump Intake From TOC: 63 ft Estimated Total Volume Pumped: 6050 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.49 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Weather Conditions:

Cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
2/1/2023 2:30 PM	00:00	6.52 pH	19.67 °C	2,366.8 µS/cm	2.34 mg/L	12.00 NTU	-98.4 mV	45.67 ft	110.00 ml/min
2/1/2023 2:35 PM	05:00	6.51 pH	19.42 °C	2,425.0 µS/cm	1.91 mg/L	16.10 NTU	-96.0 mV	45.94 ft	100.00 ml/min
2/1/2023 2:40 PM	10:00	6.52 pH	19.29 °C	2,431.1 µS/cm	1.84 mg/L	19.00 NTU	-112.9 mV	46.02 ft	100.00 ml/min
2/1/2023 2:45 PM	15:00	6.52 pH	19.26 °C	2,431.2 µS/cm	1.78 mg/L	13.60 NTU	-113.4 mV	46.06 ft	100.00 ml/min
2/1/2023 2:50 PM	20:00	6.51 pH	19.54 °C	2,412.2 µS/cm	1.69 mg/L	10.80 NTU	-95.2 mV	46.13 ft	100.00 ml/min
2/1/2023 2:55 PM	25:00	6.51 pH	19.47 °C	2,419.5 µS/cm	1.66 mg/L	7.87 NTU	-94.7 mV	46.16 ft	100.00 ml/min
2/1/2023 3:00 PM	30:00	6.51 pH	19.48 °C	2,411.6 µS/cm	1.63 mg/L	6.77 NTU	-93.6 mV	46.16 ft	100.00 ml/min
2/1/2023 3:05 PM	35:00	6.50 pH	19.40 °C	2,416.7 µS/cm	1.65 mg/L	6.36 NTU	-110.7 mV	46.16 ft	100.00 ml/min
2/1/2023 3:10 PM	40:00	6.50 pH	19.60 °C	2,404.3 µS/cm	1.64 mg/L	5.40 NTU	-91.2 mV	46.16 ft	100.00 ml/min
2/1/2023 3:15 PM	45:00	6.49 pH	19.72 °C	2,395.5 µS/cm	1.62 mg/L	5.29 NTU	-88.5 mV	46.16 ft	100.00 ml/min
2/1/2023 3:20 PM	50:00	6.48 pH	19.64 °C	2,392.8 µS/cm	1.62 mg/L	3.93 NTU	-89.1 mV	46.16 ft	100.00 ml/min
2/1/2023 3:25 PM	55:00	6.48 pH	19.51 °C	2,396.2 µS/cm	1.61 mg/L	3.51 NTU	-107.7 mV	46.16 ft	100.00 ml/min

2/1/2023 3:30 PM	01:00:00	6.47 pH	19.38 °C	2,399.4 µS/cm	1.63 mg/L	3.26 NTU	-107.3 mV	46.16 ft	100.00 ml/min
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Samples

Sample ID:	Description:
ARK-AP1PZ-4	5 bottles filled at 1540
ARK-AP1-FD-02	5 bottles filled at AP1PZ-4

Low-Flow Test Report:

Test Date / Time: 2/2/2023 11:50:04 AM

Project: Plant Arkwright

Operator Name: B. Pennell

Location Name: AP1PZ-5 Latitude: 32.9178326481967 Longitude: -83.6973771080375 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.25 ft Total Depth: 66.25 ft Initial Depth to Water: 47.14 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 67 ft Pump Intake From TOC: 62.25 ft Estimated Total Volume Pumped: 4000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.24 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1233

Weather Conditions:

Cloudy, 11 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 11:50 AM	00:00	5.99 pH	16.24 °C	3,188.8 µS/cm	2.88 mg/L	27.70 NTU	-3.4 mV	47.82 ft	100.00 ml/min
2/2/2023 11:55 AM	05:00	6.07 pH	17.45 °C	3,140.2 µS/cm	1.39 mg/L	5.20 NTU	-31.6 mV	48.09 ft	100.00 ml/min
2/2/2023 12:00 PM	10:00	6.08 pH	17.45 °C	3,139.9 µS/cm	1.01 mg/L	4.27 NTU	-42.7 mV	48.17 ft	100.00 ml/min
2/2/2023 12:05 PM	15:00	6.09 pH	17.53 °C	3,141.5 µS/cm	0.88 mg/L	3.05 NTU	-47.4 mV	48.25 ft	100.00 ml/min
2/2/2023 12:10 PM	20:00	6.10 pH	17.56 °C	3,144.2 µS/cm	0.77 mg/L	1.96 NTU	-77.4 mV	48.31 ft	100.00 ml/min
2/2/2023 12:15 PM	25:00	6.10 pH	17.57 °C	3,146.8 µS/cm	0.70 mg/L	1.27 NTU	-53.7 mV	48.34 ft	100.00 ml/min
2/2/2023 12:20 PM	30:00	6.10 pH	17.54 °C	3,145.8 µS/cm	0.65 mg/L	1.03 NTU	-55.4 mV	48.35 ft	100.00 ml/min
2/2/2023 12:25 PM	35:00	6.11 pH	17.59 °C	3,148.6 µS/cm	0.63 mg/L	0.83 NTU	-56.5 mV	48.37 ft	100.00 ml/min
2/2/2023 12:30 PM	40:00	6.12 pH	17.59 °C	3,146.6 µS/cm	0.62 mg/L	0.74 NTU	-57.6 mV	48.38 ft	100.00 ml/min

Samples

Sample ID:	Description:
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ARK-AP1PZ-5	5 Polys collected at 1233
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ARK-AP1-EB-01 5 Bottles filled at AP1PZ-5; collection time 1310

Low-Flow Test Report:

Test Date / Time: 2/1/2023 1:26:42 PM

Project: Plant Arkwright

Operator Name: Jackson Bankston

Location Name: AP1PZ-6 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 62.2 ft Total Depth: 72.2 ft Initial Depth to Water: 54.65 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 67.6 ft Estimated Total Volume Pumped: 1741.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: -1.62 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Initial Depth to water was 54.65

Weather Conditions:

Cloudy, 65-70

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10	+/- 10	+/- 10	+/- 5	
2/1/2023 1:26 PM	00:00	5.17 pH	18.42 °C	3,267.7 µS/cm	2.04 mg/L	6.14 NTU	61.6 mV	54.81 ft	100.00 ml/min
2/1/2023 1:29 PM	02:25	5.25 pH	18.35 °C	3,320.1 µS/cm	2.10 mg/L	6.45 NTU	58.6 mV	54.76 ft	100.00 ml/min
2/1/2023 1:34 PM	07:25	5.36 pH	18.40 °C	3,335.7 µS/cm	1.70 mg/L	4.62 NTU	40.7 mV	54.84 ft	100.00 ml/min
2/1/2023 1:39 PM	12:25	5.43 pH	18.35 °C	3,339.3 µS/cm	1.58 mg/L	3.66 NTU	32.1 mV	54.88 ft	100.00 ml/min
2/1/2023 1:44 PM	17:25	5.45 pH	18.28 °C	3,341.9 µS/cm	1.48 mg/L	2.77 NTU	27.9 mV	54.88 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-6	2 1000ml Ra-226/Ra-228 2 250ml Metals, Anions 1 500ml TDS Collection time: 13:55
ARK-AP1FD-01	2 1000ml Ra-226/Ra-228 2 250ml Metals, Anions 1 500ml TDS Collection Location: AP1PZ-6

Low-Flow Test Report:

Test Date / Time: 2/1/2023 3:37:02 PM

Project: Plant Arkwright

Operator Name: Jackson Bankston

Location Name: AP1PZ-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58.3 ft Total Depth: 68.3 ft Initial Depth to Water: 48.05 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 63.6 ft Estimated Total Volume Pumped: 2471.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.2 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Disregard last three data entries, after stabilization was reached aqua troll had connectivity issues

Weather Conditions:

Cloudy, 68-72

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	
2/1/2023 3:37 PM	00:00	6.23 pH	18.55 °C	2,447.6 µS/cm	0.82 mg/L	8.31 NTU	-17.8 mV	48.91 ft	100.00 ml/min
2/1/2023 3:42 PM	05:00	6.23 pH	19.15 °C	2,405.3 µS/cm	0.54 mg/L	7.95 NTU	-11.8 mV	49.51 ft	100.00 ml/min
2/1/2023 3:47 PM	10:00	6.24 pH	18.92 °C	2,390.4 µS/cm	0.51 mg/L	4.40 NTU	-10.2 mV	50.02 ft	100.00 ml/min
2/1/2023 3:52 PM	15:00	6.25 pH	18.89 °C	2,398.8 µS/cm	0.55 mg/L	3.87 NTU	-13.2 mV	50.25 ft	100.00 ml/min
2/1/2023 3:56 PM	19:56	6.24 pH	19.01 °C	2,400.1 µS/cm	0.50 mg/L	2.99 NTU	-8.5 mV	50.25 ft	100.00 ml/min
2/1/2023 4:00 PM	23:40	6.45 pH	19.47 °C	1.45 µS/cm	8.58 mg/L		-29.5 mV	50.25 ft	100.00 ml/min
2/1/2023 4:01 PM	24:43	6.51 pH	19.73 °C	1.29 µS/cm	8.75 mg/L		-19.1 mV	50.25 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-7	2/1/23 1600 2 1000ml Ra-226/Ra-228 2 250 ml Metals, Anions 1 500ml TDS

Low-Flow Test Report:

Test Date / Time: 2/2/2023 9:20:46 AM

Project: Plant Arkwright

Operator Name: Jackson Bankston

Location Name: AP1PZ-8 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 56.1 ft Total Depth: 66.09 ft Initial Depth to Water: 45.14 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 61.09 ft Estimated Total Volume Pumped: 45180 ml Flow Cell Volume: 90 ml Final Flow Rate: 1004 ml/min Final Draw Down: 2.16 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Weather Conditions:

Overcast, 55, slight 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 %	+/- 10	+/- 10	+/- 0.3	
2/2/2023 9:20 AM	00:00	6.60 pH	16.52 °C	1,767.2 µS/cm	2.88 mg/L	6.37 NTU	-22.7 mV	45.69 ft	1,004.0 ml/min
2/2/2023 9:25 AM	05:00	6.58 pH	16.77 °C	1,699.1 µS/cm	2.52 mg/L	6.50 NTU	-18.3 mV	46.02 ft	1,004.0 ml/min
2/2/2023 9:30 AM	10:00	6.59 pH	16.79 °C	1,774.9 µS/cm	2.71 mg/L	5.94 NTU	-16.4 mV	46.84 ft	1,004.0 ml/min
2/2/2023 9:35 AM	15:00	6.61 pH	16.84 °C	1,715.0 µS/cm	2.49 mg/L	4.22 NTU	-15.8 mV	47.21 ft	1,004.0 ml/min
2/2/2023 9:40 AM	20:00	6.61 pH	16.85 °C	1,711.7 µS/cm	2.59 mg/L	3.06 NTU	-15.3 mV	47.33 ft	1,004.0 ml/min
2/2/2023 9:45 AM	25:00	6.60 pH	16.87 °C	1,723.7 µS/cm	2.34 mg/L	2.84 NTU	-15.3 mV	47.16 ft	1,004.0 ml/min
2/2/2023 9:50 AM	30:00	6.60 pH	16.83 °C	1,714.4 µS/cm	2.18 mg/L	1.69 NTU	-15.5 mV	47.20 ft	1,004.0 ml/min
2/2/2023 9:55 AM	35:00	6.64 pH	16.49 °C	1,721.5 µS/cm	1.91 mg/L	1.67 NTU	-15.5 mV	47.27 ft	1,004.0 ml/min
2/2/2023 10:00 AM	40:00	6.61 pH	16.66 °C	1,730.2 µS/cm	1.91 mg/L	1.17 NTU	-15.9 mV	47.19 ft	1,004.0 ml/min
2/2/2023 10:05 AM	45:00	6.60 pH	16.65 °C	1,729.7 µS/cm	1.96 mg/L	1.19 NTU	-16.3 mV	47.30 ft	1,004.0 ml/min

Samples

Sample ID:	Description:
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ARK-AP1PZ-8	2/2/23 1010 2 1000 ml Ra-226/Ra-228 2 250 ml Anions, Metals 1 500 ml TDS
ARK-AP1-FB-01	2/2/23 1045 2 1000 ml Ra-226/Ra-228 2 250 ml Anions, Metals 1 500 ml TDS

Low-Flow Test Report:

Test Date / Time: 2/2/2023 9:35:09 AM

Project: Plant Arkwright

Operator Name: B. Pennell

Location Name: AP1PZ-9 Latitude: 32.9190746686314 Longitude: -83.6986903846264 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 46.3 ft Total Depth: 56.3 ft Initial Depth to Water: 40.72 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 57 ft Pump Intake From TOC: 52.3 ft Estimated Total Volume Pumped: 3500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 5.21 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1013

Weather Conditions:

Cloudy, light rain, 11 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 9:35 AM	00:00	5.13 pH	16.41 °C	701.52 µS/cm	0.92 mg/L	22.30 NTU	181.7 mV	42.33 ft	100.00 ml/min
2/2/2023 9:40 AM	05:00	4.71 pH	16.74 °C	691.11 µS/cm	1.08 mg/L	17.20 NTU	251.9 mV	42.84 ft	100.00 ml/min
2/2/2023 9:45 AM	10:00	4.48 pH	16.75 °C	690.96 µS/cm	1.62 mg/L	12.30 NTU	280.3 mV	43.47 ft	100.00 ml/min
2/2/2023 9:50 AM	15:00	4.44 pH	16.78 °C	688.15 µS/cm	1.88 mg/L	8.88 NTU	266.3 mV	43.99 ft	100.00 ml/min
2/2/2023 9:55 AM	20:00	4.48 pH	16.83 °C	685.21 µS/cm	2.11 mg/L	6.17 NTU	259.6 mV	44.54 ft	100.00 ml/min
2/2/2023 10:00 AM	25:00	4.52 pH	16.81 °C	684.24 µS/cm	2.17 mg/L	3.87 NTU	253.8 mV	45.05 ft	100.00 ml/min
2/2/2023 10:05 AM	30:00	4.56 pH	16.61 °C	682.58 µS/cm	2.30 mg/L	3.03 NTU	248.9 mV	45.56 ft	100.00 ml/min
2/2/2023 10:10 AM	35:00	4.62 pH	16.41 °C	681.83 µS/cm	2.41 mg/L	2.74 NTU	241.4 mV	45.93 ft	100.00 ml/min

Samples

Sample ID:	Description:
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ARK-AP1PZ-9

5 Polys collected at 1013

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 2/1/2023 2:10:07 PM

Project: Plant Arkwright

Operator Name: B. Pennell

Location Name: AP1PZ-10 Latitude: 32.9197923475445 Longitude: -83.6989267542958 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 44 ft Total Depth: 54 ft Initial Depth to Water: 39.26 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 56 ft Pump Intake From TOC: 51.7 ft Estimated Total Volume Pumped: 1500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.86 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1428

Weather Conditions:

Cloudy, 18 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	
2/1/2023 2:10 PM	00:00	6.41 pH	18.21 °C	741.36 µS/cm	0.91 mg/L	3.70 NTU	-54.8 mV	41.66 ft	100.00 ml/min
2/1/2023 2:15 PM	05:00	6.42 pH	18.24 °C	743.24 µS/cm	0.56 mg/L	2.84 NTU	-52.8 mV	41.87 ft	100.00 ml/min
2/1/2023 2:20 PM	10:00	6.40 pH	18.26 °C	734.77 µS/cm	0.52 mg/L	2.43 NTU	-47.8 mV	42.03 ft	100.00 ml/min
2/1/2023 2:25 PM	15:00	6.38 pH	18.27 °C	725.48 µS/cm	0.50 mg/L	1.99 NTU	-42.8 mV	42.12 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-10	5 Polys collected at 1428

Low-Flow Test Report:

Test Date / Time: 2/1/2023 3:30:06 PM

Project: Plant Arkwright

Operator Name: B. Pennell

Location Name: AP1PZ-11 Latitude: 32.9205668713555 Longitude: -83.6991245672107 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 62.8 ft Total Depth: 72.8 ft Initial Depth to Water: 37.24 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Tubing Inner Diameter: 0.17 in Tubing Length: 73 ft Pump Intake From TOC: 68.3 ft Estimated Total Volume Pumped: 2250 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.23 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Sample time: 1548

Weather Conditions:

Cloudy, 18 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	
2/1/2023 3:30 PM	00:00	6.91 pH	19.06 °C	277.19 µS/cm	2.00 mg/L	4.23 NTU	38.3 mV	37.47 ft	150.00 ml/min
2/1/2023 3:35 PM	05:00	6.87 pH	18.39 °C	281.68 µS/cm	1.84 mg/L	4.94 NTU	67.9 mV	37.47 ft	150.00 ml/min
2/1/2023 3:40 PM	10:00	6.85 pH	18.52 °C	280.34 µS/cm	1.89 mg/L	3.98 NTU	57.4 mV	37.47 ft	150.00 ml/min
2/1/2023 3:45 PM	15:00	6.83 pH	18.51 °C	280.18 µS/cm	1.99 mg/L	3.92 NTU	59.3 mV	37.47 ft	150.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-11	5 Polys collected at 1548

Plant Arkwright (Ocmulgee River) Surface Water Samples 8/16/2022

Sample ID	Total Depth	Sample Depth	Time	Temp(C)	pH	OPR (mV)	DO (mg/L)	Turbidity (NTU)	Conductance – (mS/cm)	Coordinates
OR-0.8			1015	81.8	7.25	64.7	7.67	2.55	0.117	32.926994,-83.697536
OR-0.3			1100	82.3	7.15	101.0	7.68	3.49	0.055	32.919226, -83.697100
OR-0.1			1125	81.6	7.31	86.0	7.72	3.00	0.102	32.916342,-83.696092
BC-0.1			1220	77.1	7.18	97.9	7.02	12.96	0.126	32.916017,-83.696292
OR+0.25			1230	80.8	7.40	99.9	7.09	5.07	0.104	32.914186,-83.691789

OR samples collected with aerial drone utilizing a bailer

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

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

Plant Arkwright 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

C.2 Calibration Data



EQUIPMENT CALIBRATION FORM

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

Date: 8/30/2022
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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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
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
Page 1 **of** 1


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
Page 1 **of** 1


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


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

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

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

Explanations: NA (JM 9/22/22)

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

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

EQUIPMENT CALIBRATION FORM

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

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


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

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

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

Explanations: NA

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

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

EQUIPMENT CALIBRATION FORM

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

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


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

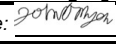
Afternoon (PM) Calibration Verification			Verification By: Bryan Pennell		
Weather:	Partly cloudy, 26 C				
Time (24hr) Start:	18:33	<i>Acceptance Criteria</i>	Time (24hr) Finish:	18:53	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	22.2	+/- 4°C	<i>Local Weather Station:</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
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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	Acceptance Criteria	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	Acceptance Criteria	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	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:** 9/2/2022 **Signature:** *John Myer*
Review By: John Myer **Date:** 9/22/2022 **Signature:** *John Myer*

EQUIPMENT CALIBRATION FORM

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

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


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

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

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

Explanations: NA (JM 9/22/22)

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 9/2/2022
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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

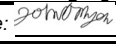
Afternoon (PM) Calibration Verification			Verification By: Bryan Pennell		
Weather:	Cloudy, 29 C				
Time (24hr) Start:	14:41	<i>Acceptance Criteria</i>	Time (24hr) Finish:	15:21	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	23.4	+/- 4°C	<i>Local Weather Station:</i>	1018.7	
<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) Start:	11:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	12:05	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	25.6	+/- 4°C	<i>Local Weather Station:</i>	1018.1	
<i>Aqua TROLL 400:</i>	25.4		<i>Aqua TROLL 400:</i>	1005.8	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.2	98.6	797	10.3	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4510	+/- 1 %	25.4	NA
pH 7 (SU)	7.00	6.98	+/- .1 (SU)	25.6	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	25.4	NA
pH 10 (SU)	10.00	9.99	+/- .1 (SU)	25.4	NA
D.O. (%)	N/A	99.1	95-105 %	26.7	NA
ORP (mV)	228.0	227.5	+/- 10 mV	26.0	NA

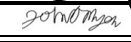
Afternoon (PM) Calibration Verification			Verification By: Emily Scheiben		
Weather:		partly cloudy			
Time (24hr) Start:	19:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	19:30	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	29.0	+/- 4°C	<i>Local Weather Station:</i>	1015.5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

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

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

Explanations: NA (JM 9/22/2022)

Prepared By: Emily Scheiben **Date:** 9/6/2022 **Signature:** 

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

EQUIPMENT CALIBRATION FORM

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

Date: 9/7/2022
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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):	<i>20 NTU Standard</i>	<i>100 NTU Standard</i>	<i>800 NTU Standard</i>	<i>10 NTU Verification</i>	<i>Acceptance Criteria</i>
	19.8	97.3	821	9.74	+/- 3 %
	Calibration Value	Post Calibration	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4,490 (µS/cm)	4490	4490	+/- 1 %	21.4	NA
pH 7 (SU)	7.00	7.02	+/- .1 (SU)	21.3	NA
pH 4 (SU)	4.00	4.00	+/- .1 (SU)	21.5	NA
pH 10 (SU)	10.00	10.05	+/- .1 (SU)	21.4	NA
D.O. (%)	N/A	98.7	95-105 %	22.0	NA
ORP (mV)	233.3	236.6	+/- 10 mV	21.7	NA

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

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

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	728623	Yes
Turbidity Meter	Hach	2100Q	15030C039579	Yes
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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<i>Acceptance Criteria</i>
	20.0	101	782	9.99	+/- 3 %
	Calibration Value	Verification	<i>Acceptance Criteria</i>	Cal Sol Temp (°C)	Notes:
Specific Conductance 4490 (µS/cm)	4490	4475.6	+/- 1 %	30.8	NA
pH 7 (SU)	7.00	7.03	+/- .1 (SU)	29.3	NA
pH 4 (SU)	4.00	4.04	+/- .1 (SU)	30.8	NA
pH 10 (SU)	10.00	9.99	+/- .1 (SU)	28.7	NA
D.O. (%)	N/A	95.5	95-105 %	29.3	NA
ORP (mV)	228.0	219.0	+/- 10 mV	29.2	NA

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

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

Explanations: NA (JM 9/22/22)

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

EQUIPMENT CALIBRATION FORM

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

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

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

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

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

Explanations: NA

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

EQUIPMENT CALIBRATION FORM

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

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

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

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

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

Explanations: NA

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

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

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

	Instruments			Calibrated Within Acceptance Criteria:
	Manufacturer	Model	Serial Number	
Water Quality Meter	InSitu	AquaTroll 400	851413	No
Turbidity Meter	Hach	2100Q	13110C029655	Yes
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:** *Brian Steele*

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

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: 1/31/2023

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

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

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

	Manufacturer	Instruments Model	Serial Number	Calibrated Within Acceptance Criteria:
<i>Water Quality Meter</i>	InSitu	AquaTroll 400	728566	Yes
<i>Turbidity Meter</i>	Hach	2100Q	22090D000235	Yes
<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:** *Emily Scheiben*
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	Yes
<i>Turbidity Meter</i>	Hach	2100Q	22090D000235	Yes
<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	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: 2/1/2023	Signature:	
Review By: Dylan Quintal	Date: 4/17/2023	Signature:	

EQUIPMENT CALIBRATION FORM

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

Date: 2/1/2023

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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:		Clear, 50°F			
Time (24hr) Start:	6:00	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:15	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	24.1	+/- 4°C	<i>Local Weather Station:</i>	1020.6	
<i>Aqua TROLL 400:</i>	22.9		<i>Aqua TROLL 400:</i>	1006.6	
Turbidity (NTUs):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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):	20 NTU Standard	100 NTU Standard	800 NTU Standard	10 NTU Verification	<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

Prepared By: Emily Scheiben **Date:** 2/1/2023 **Signature:** *Emily Scheiben*
Review By: Dylan Quintal **Date:** 4/17/2023 **Signature:** *Dylan Quintal*

EQUIPMENT CALIBRATION FORM

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

Date: 2/2/2023

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Morning (AM) Calibration			Calibrated By: 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	Yes
<i>Turbidity Meter</i>	Hach	2100Q	22090D000235	Yes
<i>NIST Thermometer</i>	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 4/28/2024

Explanations: NA

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

EQUIPMENT CALIBRATION FORM

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

Date: 2/2/2023

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

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

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

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

Explanations: None

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

EQUIPMENT CALIBRATION FORM

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

Date: 2/2/2023

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Morning (AM) Calibration			Calibrated By: Emily Scheiben		
Weather:	Clear, 49°F				
Time (24hr) Start:	6:30	<i>Acceptance Criteria</i>	Time (24hr) Finish:	7:20	
Temperature (°C):			Barometric Pressure (mbar):		
<i>NIST Thermometer:</i>	22.0	+/- 4°C	<i>Local Weather Station:</i>	1020.7	
<i>Aqua TROLL 400:</i>	22.1		<i>Aqua TROLL 400:</i>	1007.3	
Turbidity (NTUs):	<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: <i>Emily Scheiben</i>	
Review By: Dylan Quintal	Date: 4/17/2023	Signature: <i>Dylan Quintal</i>	

EQUIPMENT CALIBRATION FORM

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

Date: 2/3/2023

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

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

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

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 2/3/2023

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

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:
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:	N/A
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Prepared By: Emily Scheiben	Date: 2/3/2023	Signature: <i>Emily Scheiben</i>	
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: 2/7/2023

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	Yes
Turbidity Meter	Hach	2100Q	14080C034447	Yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: 6/28/2024

Explanations: None

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

C.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 AP1
Work Orders: 592388 and 592528

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 08, 2022 and September 09, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

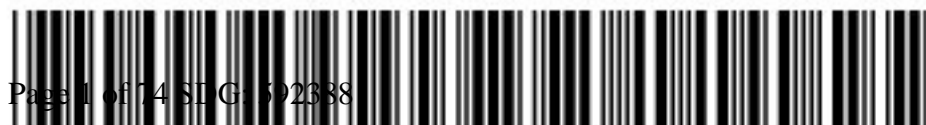
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without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

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: 592528 GEL Work Order: 592528

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: 592388 GEL Work Order: 592388

The Qualifiers in this report are defined as follows:

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

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

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

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

Reviewed by _____



GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-11	Project: GPCC00100
Sample ID: 592528001	Client ID: GPCC001
Matrix: WG	
Collect Date: 08-SEP-22 10:15	
Receive Date: 09-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		6.77			SU			EOS1	09/08/22	1015	2314508	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		1.45	0.0670	0.200	mg/L	1		HXC1	09/16/22	1201	2317683	2
Fluoride		0.173	0.0330	0.100	mg/L	1						
Sulfate		52.3	0.665	2.00	mg/L	5		HXC1	09/17/22	0122	2317683	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/13/22	1312	2315121	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1603	2314769	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0221	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron		0.163	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		27.3	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		0.00136	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		198	2.38	10.0	mg/L			CH6	09/12/22	1120	2315106	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/12/22	1630	2314768
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/12/22	1315	2315120

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 ComplianceAP1

Client Sample ID: AP1PZ-11
Sample ID: 592528001

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	SM 4500-H B/SW846 9040C, SM 2550B		
2	EPA 300.0		
3	EPA 300.0		
4	SW846 7470A		
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

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 ComplianceAP1

Client Sample ID: DUP-02	Project: GPCC00100
Sample ID: 592528002	Client ID: GPCC001
Matrix: WG	
Collect Date: 08-SEP-22 12:00	
Receive Date: 09-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		1.41	0.0670	0.200	mg/L		1	HXC1	09/16/22	1232	2317683	1
Fluoride		0.176	0.0330	0.100	mg/L		1					
Sulfate		52.9	0.665	2.00	mg/L		5	HXC1	09/17/22	0255	2317683	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/13/22	1314	2315121	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1621	2314769	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0216	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron		0.158	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		26.7	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					
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		0.00116	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		199	2.38	10.0	mg/L			CH6	09/12/22	1120	2315106	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/12/22	1630	2314768
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/12/22	1315	2315120

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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 ComplianceAP1

Client Sample ID:	DUP-02	Project:	GPCC00100
Sample ID:	592528002	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	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 ComplianceAP1

Client Sample ID: AP1PZ-2	Project: GPCC00100
Sample ID: 592528003	Client ID: GPCC001
Matrix: WG	
Collect Date: 08-SEP-22 10:25	
Receive Date: 09-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		6.11			SU			EOS1	09/08/22	1025	2314508	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.35	0.0670	0.200	mg/L	1		HXC1	09/16/22	1302	2317683	2
Fluoride		0.177	0.0330	0.100	mg/L	1						
Sulfate		616	6.65	20.0	mg/L	50		HXC1	09/17/22	0326	2317683	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/13/22	1316	2315121	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1625	2314769	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0207	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		0.0616	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0127	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.413	0.0520	0.150	mg/L	1.00	10	PRB	09/19/22	1630	2314769	6
Calcium		143	0.800	2.00	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		961	2.38	10.0	mg/L			CH6	09/13/22	1112	2315610	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/12/22	1630	2314768
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/12/22	1315	2315120

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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 ComplianceAP1

Client Sample ID:	AP1PZ-2	Project:	GPCC00100
Sample ID:	592528003	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 7470A										
5	SW846 3005A/6020B										
6	SW846 3005A/6020B										
7	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 ComplianceAP1

Client Sample ID: AP1PZ-5	Project: GPCC00100
Sample ID: 592528004	Client ID: GPCC001
Matrix: WG	
Collect Date: 08-SEP-22 12:25	
Receive Date: 09-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		6.12			SU			EOS1	09/08/22	1225	2314508	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		7.55	0.0670	0.200	mg/L		1	HXC1	09/16/22	1333	2317683	2
Fluoride		0.263	0.0330	0.100	mg/L		1					
Sulfate		1920	26.6	80.0	mg/L		200	HXC1	09/17/22	0356	2317683	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/13/22	1318	2315121	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1641	2314769	5
Arsenic	J	0.00359	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0405	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		0.0332	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.273	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.0410	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		7.44	0.520	1.50	mg/L	1.00	100	PRB	09/19/22	1714	2314769	6
Calcium		552	8.00	20.0	mg/L	1.00	100					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		3070	2.38	10.0	mg/L			CH6	09/13/22	1112	2315610	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	CD3	09/12/22	1630	2314768
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/12/22	1315	2315120

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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 ComplianceAP1

Client Sample ID: AP1PZ-5
Sample ID: 592528004

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 7470A										
5	SW846 3005A/6020B										
6	SW846 3005A/6020B										
7	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 ComplianceAP1

Client Sample ID: EB-01	Project: GPCC00100
Sample ID: 592388001	Client ID: GPCC001
Matrix: WQ	
Collect Date: 07-SEP-22 09:05	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	J	0.186	0.0670	0.200	mg/L		1	JLD1	09/09/22	0300	2314142	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	AXS5	09/12/22	1104	2314311	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	PRB	09/19/22	1134	2314178	3
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000218	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					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1233	2314178	4
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	5

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	EB-01	Project:	GPCC00100
Sample ID:	592388001	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: 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 ComplianceAP1

Client Sample ID: AP1GWA-1	Project: GPCC00100
Sample ID: 592388002	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 10:20	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		1.86	0.0670	0.200	mg/L		1	JLD1	09/09/22	0331	2314142	1
Fluoride		0.354	0.0330	0.100	mg/L		1					
Sulfate		59.4	1.33	4.00	mg/L		10	JLD1	09/09/22	1147	2314142	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1106	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	PRB	09/19/22	1138	2314178	4
Barium		0.0523	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.00131	0.000200	0.000500	mg/L	1.00	1					
Boron		0.109	0.00520	0.0150	mg/L	1.00	1					
Cadmium	J	0.000317	0.000300	0.00100	mg/L	1.00	1					
Calcium		18.8	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00417	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00406	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00757	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	J	0.00322	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1235	2314178	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		156	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1GWA-1
Sample ID: 592388002

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	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 ComplianceAP1

Client Sample ID: AP1GWA-2	Project: GPCC00100
Sample ID: 592388003	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 11:55	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.22	0.0670	0.200	mg/L		1	JLD1	09/09/22	0402	2314142	1
Fluoride		0.109	0.0330	0.100	mg/L		1					
Sulfate		1.41	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	AXS5	09/12/22	1107	2314311	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1643	2314178	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0330	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron		0.0210	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		4.98	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00501	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000341	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		66.0	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	4

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	AP1GWA-2	Project:	GPCC00100
Sample ID:	592388003	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	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 ComplianceAP1

Client Sample ID: FB-01	Project: GPCC00100
Sample ID: 592388004	Client ID: GPCC001
Matrix: WQ	
Collect Date: 07-SEP-22 12:10	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.255	0.0670	0.200	mg/L		1	JLD1	09/09/22	0433	2314142	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	AXS5	09/12/22	1116	2314311	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1647	2314178	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	4

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	FB-01	Project:	GPCC00100
Sample ID:	592388004	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	SM 2540C										

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 ComplianceAP1

Client Sample ID: AP1PZ-1	Project: GPCC00100
Sample ID: 592388005	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 13:50	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.58	0.0670	0.200	mg/L		1	JLD1	09/09/22	0504	2314142	1
Fluoride		0.158	0.0330	0.100	mg/L		1					
Sulfate		112	1.33	4.00	mg/L		10	JLD1	09/09/22	1218	2314142	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1121	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1307	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0452	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		31.8	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000850	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00421	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000572	0.000200	0.00100	mg/L	1.00	1					
Selenium	J	0.00163	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.336	0.0260	0.0750	mg/L	1.00	5	PRB	09/18/22	1620	2314178	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		248	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater Compliance AP1

Client Sample ID: AP1PZ-1	Project: GPCC00100
Sample ID: 592388005	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	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 ComplianceAP1

Client Sample ID: AP1PZ-7	Project: GPCC00100
Sample ID: 592388006	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 14:00	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		8.77	0.0670	0.200	mg/L		1	JLD1	09/09/22	1237	2314387	1
Fluoride		0.255	0.0330	0.100	mg/L		1					
Sulfate		1390	13.3	40.0	mg/L		100	JLD1	09/09/22	2304	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1123	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1311	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0511	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	0.000739	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		0.00233	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		2.46	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1624	2314178	5
Calcium		338	4.00	10.0	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2190	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-7
Sample ID: 592388006

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
The following Analytical Methods were performed:											
Method	Description	Analyst Comments									
1	EPA 300.0										
2	EPA 300.0										
3	SW846 7470A										
4	SW846 3005A/6020B										
5	SW846 3005A/6020B										
6	SM 2540C										

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: 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 ComplianceAP1

Client Sample ID: AP1PZ-10	Project: GPCC00100
Sample ID: 592388007	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 14:30	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		9.91	0.0670	0.200	mg/L		1	JLD1	09/09/22	0535	2314142	1
Fluoride		0.524	0.0330	0.100	mg/L		1					
Sulfate		232	3.33	10.0	mg/L		25	JLD1	09/09/22	1248	2314142	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1124	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1314	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0334	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		0.00189	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0172	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00265	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		3.22	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1627	2314178	5
Calcium		835	4.00	10.0	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		500	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-10
Sample ID: 592388007

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
The following Analytical Methods were performed:											
Method	Description	Analyst Comments									
1	EPA 300.0										
2	EPA 300.0										
3	SW846 7470A										
4	SW846 3005A/6020B										
5	SW846 3005A/6020B										
6	SM 2540C										

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: 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 ComplianceAP1

Client Sample ID: FB-02	Project: GPCC00100
Sample ID: 592388008	Client ID: GPCC001
Matrix: WQ	
Collect Date: 07-SEP-22 14:45	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.319	0.0670	0.200	mg/L		1	JLD1	09/09/22	0605	2314142	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	AXS5	09/12/22	1126	2314311	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1650	2314178	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	4

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	FB-02	Project:	GPCC00100
Sample ID:	592388008	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	SM 2540C										

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 ComplianceAP1

Client Sample ID: AP1PZ-4 Project: GPCC00100
Sample ID: 592388009 Client ID: GPCC001
Matrix: WG
Collect Date: 07-SEP-22 15:45
Receive Date: 08-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.10	0.0670	0.200	mg/L		1	JLD1	09/09/22	1307	2314387	1
Fluoride		0.249	0.0330	0.100	mg/L		1					
Sulfate		1420	26.6	80.0	mg/L		200	JLD1	09/09/22	2334	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1128	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1321	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0426	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	0.000335	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00652	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00233	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		3.72	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1631	2314178	5
Calcium		370	4.00	10.0	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2210	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	AP1PZ-4	Project:	GPCC00100
Sample ID:	592388009	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	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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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 ComplianceAP1

Client Sample ID: DUP-01	Project: GPCC00100
Sample ID: 592388010	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 12:00	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.13	0.0670	0.200	mg/L		1	JLD1	09/09/22	1337	2314387	1
Fluoride		0.243	0.0330	0.100	mg/L		1					
Sulfate		1430	26.6	80.0	mg/L		200	JLD1	09/10/22	0004	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1130	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1325	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0430	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	0.000327	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00664	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00230	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		3.68	0.520	1.50	mg/L	1.00	100	PRB	09/18/22	1654	2314178	5
Calcium		381	8.00	20.0	mg/L	1.00	100					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2230	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: DUP-01	Project: GPCC00100
Sample ID: 592388010	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	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 ComplianceAP1

Client Sample ID: AP1PZ-9	Project: GPCC00100
Sample ID: 592388011	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 16:15	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.84	0.0670	0.200	mg/L		1	JLD1	09/09/22	1406	2314387	1
Fluoride		0.671	0.0330	0.100	mg/L		1					
Sulfate		351	5.32	16.0	mg/L		40	JLD1	09/10/22	0034	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1131	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1345	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0254	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.000527	0.000200	0.000500	mg/L	1.00	1					
Cadmium	J	0.000975	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.101	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.135	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000281	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.695	0.0520	0.150	mg/L	1.00	10	PRB	09/18/22	1705	2314178	5
Calcium		69.6	0.800	2.00	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		577	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	AP1PZ-9	Project:	GPCC00100
Sample ID:	592388011	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	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 ComplianceAP1

Client Sample ID: AP1PZ-8	Project: GPCC00100
Sample ID: 592388012	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 16:27	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.88	0.0670	0.200	mg/L		1	JLD1	09/09/22	1436	2314387	1
Fluoride		0.166	0.0330	0.100	mg/L		1					
Sulfate		731	13.3	40.0	mg/L		100	JLD1	09/10/22	0104	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1133	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1348	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0506	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	0.000936	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		2.81	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1709	2314178	5
Calcium		300	4.00	10.0	mg/L	1.00	50					
Molybdenum		0.489	0.0100	0.0500	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1390	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-8
Sample ID: 592388012
Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
The following Analytical Methods were performed:											
Method	Description		Analyst Comments								
1	EPA 300.0										
2	EPA 300.0										
3	SW846 7470A										
4	SW846 3005A/6020B										
5	SW846 3005A/6020B										
6	SM 2540C										

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: 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 ComplianceAP1

Client Sample ID: EB-02	Project: GPCC00100
Sample ID: 592388013	Client ID: GPCC001
Matrix: WQ	
Collect Date: 07-SEP-22 17:05	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	J	0.191	0.0670	0.200	mg/L		1	JLD1	09/09/22	1606	2314387	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	J	0.167	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	AXS5	09/12/22	1135	2314311	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1712	2314178	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	J	0.00134	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		0.204	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	09/09/22	1638	2314703	4

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Contact: Atlanta, Georgia 30308
Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: EB-02 Project: GPCC00100
Sample ID: 592388013 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	SM 2540C		

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 ComplianceAP1

Client Sample ID: AP1PZ-3	Project: GPCC00100
Sample ID: 592388014	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 18:30	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.92	0.0670	0.200	mg/L		1	JLD1	09/09/22	1636	2314387	1
Fluoride	J	0.0468	0.0330	0.100	mg/L		1					
Sulfate		1390	13.3	40.0	mg/L		100	JLD1	09/10/22	0134	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1137	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1356	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0237	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium		0.00144	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0626	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0638	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000673	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		1.51	0.104	0.300	mg/L	1.00	20	PRB	09/18/22	1716	2314178	5
Calcium		381	1.60	4.00	mg/L	1.00	20					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2010	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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 ComplianceAP1

Client Sample ID: AP1PZ-3
Sample ID: 592388014

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

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 ComplianceAP1

Client Sample ID: AP1PZ-6	Project: GPCC00100
Sample ID: 592388015	Client ID: GPCC001
Matrix: WG	
Collect Date: 07-SEP-22 18:45	
Receive Date: 08-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		8.49	0.0670	0.200	mg/L		1	JLD1	09/09/22	1706	2314387	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		2520	26.6	80.0	mg/L		200	JLD1	09/10/22	0204	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1142	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1359	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0235	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.000859	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		0.417	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00800	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000369	0.000200	0.00100	mg/L	1.00	1					
Selenium	J	0.00273	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		7.29	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1719	2314178	5
Calcium		461	4.00	10.0	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		3570	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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 ComplianceAP1

Client Sample ID: AP1PZ-6 Project: GPCC00100
Sample ID: 592388015 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	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: September 22, 2022

Page 1 of 8

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

Contact: Joju Abraham

Workorder: 592528

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2317683										
QC1205193507	592528001	DUP									
Chloride		1.45		1.40	mg/L	3.38		(0%-20%)	HXC1	09/16/22	21:47
Fluoride		0.173		0.180	mg/L	3.63 ^		(+/-0.100)			
Sulfate		52.3		52.2	mg/L	0.107		(0%-20%)		09/17/22	01:53
QC1205193506	LCS										
Chloride	5.00			4.64	mg/L		92.8	(90%-110%)		09/16/22	21:16
Fluoride	2.50			2.57	mg/L		103	(90%-110%)			
Sulfate	10.0			9.88	mg/L		98.8	(90%-110%)			
QC1205193505	MB										
Chloride			U	ND	mg/L					09/16/22	20:45
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205193509	592528001	PS									
Chloride	5.00	1.45		6.12	mg/L		93.4	(90%-110%)		09/16/22	22:18
Fluoride	2.50	0.173		2.64	mg/L		98.6	(90%-110%)			
Sulfate	10.0	10.5		20.7	mg/L		103	(90%-110%)		09/17/22	02:24

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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	2314769										
QC1205187548	LCS										
Antimony	0.0500			0.0467	mg/L		93.3	(80%-120%)	PRB	09/19/22	15:59
Arsenic	0.0500			0.0470	mg/L		94	(80%-120%)			
Barium	0.0500			0.0505	mg/L		101	(80%-120%)			
Beryllium	0.0500			0.0528	mg/L		106	(80%-120%)			
Boron	0.100			0.106	mg/L		106	(80%-120%)			
Cadmium	0.0500			0.0492	mg/L		98.4	(80%-120%)			
Calcium	2.00			2.04	mg/L		102	(80%-120%)			
Chromium	0.0500			0.0465	mg/L		93	(80%-120%)			
Cobalt	0.0500			0.0468	mg/L		93.5	(80%-120%)			
Lead	0.0500			0.0511	mg/L		102	(80%-120%)			
Lithium	0.0500			0.0491	mg/L		98.2	(80%-120%)			
Molybdenum	0.0500			0.0507	mg/L		101	(80%-120%)			
Selenium	0.0500			0.0471	mg/L		94.2	(80%-120%)			
Thallium	0.0500			0.0498	mg/L		99.5	(80%-120%)			
QC1205187547	MB										
Antimony			U	ND	mg/L					09/19/22	15:56

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314769										
Arsenic			U	ND	mg/L				PRB	09/19/22	15:56
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L						
Boron			U	ND	mg/L						
Cadmium			U	ND	mg/L						
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						
Cobalt			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Molybdenum			U	ND	mg/L						
Selenium			U	ND	mg/L						
Thallium			U	ND	mg/L						
QC1205187549 592528001 MS											
Antimony	0.0500	U	ND	0.0491	mg/L		98	(75%-125%)		09/19/22	16:07
Arsenic	0.0500	U	ND	0.0481	mg/L		94.5	(75%-125%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314769										
Barium	0.0500	0.0221		0.0711	mg/L		98.1	(75%-125%)	PRB	09/19/22	16:07
Beryllium	0.0500	U	ND	0.0536	mg/L		107	(75%-125%)			
Boron	0.100	0.163		0.264	mg/L		102	(75%-125%)			
Cadmium	0.0500	U	ND	0.0506	mg/L		101	(75%-125%)			
Calcium	2.00	27.3		28.3	mg/L		N/A	(75%-125%)			
Chromium	0.0500	U	ND	0.0481	mg/L		94.5	(75%-125%)			
Cobalt	0.0500	U	ND	0.0473	mg/L		94.3	(75%-125%)			
Lead	0.0500	U	ND	0.0515	mg/L		103	(75%-125%)			
Lithium	0.0500	U	ND	0.0521	mg/L		101	(75%-125%)			
Molybdenum	0.0500	0.00136		0.0550	mg/L		107	(75%-125%)			
Selenium	0.0500	U	ND	0.0470	mg/L		93	(75%-125%)			
Thallium	0.0500	U	ND	0.0496	mg/L		99.1	(75%-125%)			
QC1205187550	592528001	MSD									
Antimony	0.0500	U	ND	0.0496	mg/L	1.1	99.1	(0%-20%)		09/19/22	16:10
Arsenic	0.0500	U	ND	0.0483	mg/L	0.388	94.9	(0%-20%)			
Barium	0.0500	0.0221		0.0713	mg/L	0.256	98.5	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314769										
Beryllium	0.0500	U	ND	0.0552	mg/L	2.95	110	(0%-20%)	PRB	09/19/22	16:10
Boron	0.100		0.163	0.273	mg/L	3.26	110	(0%-20%)			
Cadmium	0.0500	U	ND	0.0513	mg/L	1.2	102	(0%-20%)			
Calcium	2.00		27.3	28.5	mg/L	0.771	N/A	(0%-20%)			
Chromium	0.0500	U	ND	0.0479	mg/L	0.352	94.1	(0%-20%)			
Cobalt	0.0500	U	ND	0.0481	mg/L	1.54	95.8	(0%-20%)			
Lead	0.0500	U	ND	0.0514	mg/L	0.206	103	(0%-20%)			
Lithium	0.0500	U	ND	0.0539	mg/L	3.42	105	(0%-20%)			
Molybdenum	0.0500		0.00136	0.0554	mg/L	0.694	108	(0%-20%)			
Selenium	0.0500	U	ND	0.0471	mg/L	0.198	93.2	(0%-20%)			
Thallium	0.0500	U	ND	0.0499	mg/L	0.623	99.7	(0%-20%)			
QC1205187551 592528001 SDILT											
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/19/22	16:18
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Barium			22.1	4.61	ug/L	4.43		(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314769										
Boron		163		35.4	ug/L	8.61		(0%-20%)	PRB	09/19/22	16:18
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Calcium		27300		5220	ug/L	4.4		(0%-20%)			
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Cobalt	U	ND	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%)			
Molybdenum		1.36	J	0.237	ug/L	12.9		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			

Metals Analysis-Mercury

Batch 2315121

QC1205188329	592595001	DUP									
Mercury			0.000353	0.000359	mg/L	1.69 ^		(+/-0.000200)	JP2	09/13/22	13:21
QC1205188328	LCS										
Mercury			0.00200	0.00205	mg/L		103	(80%-120%)		09/13/22	13:11
QC1205188327	MB										
Mercury			U	ND	mg/L					09/13/22	13:09

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch	2315121										
QC1205188330	592595001	MS									
Mercury	0.00200	0.000353		0.00235	mg/L		100	(75%-125%)	JP2	09/13/22	13:23
QC1205188331	592595001	SDILT									
Mercury		0.353	U	ND	ug/L	N/A		(0%-10%)		09/13/22	13:28
Solids Analysis											
Batch	2315106										
QC1205188261	592273001	DUP									
Total Dissolved Solids		217		218	mg/L	0.46		(0%-5%)	CH6	09/12/22	11:20
QC1205188259	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)		09/12/22	11:20
QC1205188258	MB										
Total Dissolved Solids			U	ND	mg/L					09/12/22	11:20
Batch	2315610										
QC1205189371	592607004	DUP									
Total Dissolved Solids		23.0		22.0	mg/L	4.44 ^		(+/-10.0)	CH6	09/13/22	11:12
QC1205189365	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)		09/13/22	11:12
QC1205189364	MB										
Total Dissolved Solids			U	ND	mg/L					09/13/22	11:12

- 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

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QC Summary

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

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: 592388

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2314142										
QC1205186285	592010001	DUP									
Chloride		11.4		11.4	mg/L	0.263		(0%-20%)	JLD1	09/09/22	10:45
Fluoride		1.63		1.64	mg/L	0.588		(0%-20%)		09/08/22	22:54
Sulfate		112		112	mg/L	0.409		(0%-20%)		09/09/22	10:45
QC1205186282	LCS										
Chloride	5.00			4.94	mg/L		98.9	(90%-110%)		09/08/22	19:09
Fluoride	2.50			2.41	mg/L		96.2	(90%-110%)			
Sulfate	10.0			10.3	mg/L		103	(90%-110%)			
QC1205186281	MB										
Chloride			U	ND	mg/L					09/08/22	18:38
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205186286	592010001	PS									
Chloride	5.00	1.14		6.27	mg/L		103	(90%-110%)		09/09/22	11:16
Fluoride	2.50	1.63		6.10	mg/L		179*	(90%-110%)		09/08/22	23:25
Sulfate	10.0	11.2		22.2	mg/L		110	(90%-110%)		09/09/22	11:16

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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	2314387										
QC1205186796	592398004	DUP									
Chloride		5.78		5.64	mg/L	2.45		(0%-20%)	JLD1	09/09/22	19:35
Fluoride	U	ND	U	ND	mg/L	N/A					
Sulfate		1050		1040	mg/L	0.589		(0%-20%)		09/10/22	05:33
QC1205186793	LCS										
Chloride	5.00			4.77	mg/L		95.5	(90%-110%)		09/09/22	10:37
Fluoride	2.50			2.30	mg/L		91.9	(90%-110%)			
Sulfate	10.0			9.90	mg/L		99	(90%-110%)			
QC1205186792	MB										
Chloride			U	ND	mg/L					09/09/22	10:08
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205186797	592398004	PS									
Chloride	5.00	5.78		11.1	mg/L		107	(90%-110%)		09/09/22	20:05
Fluoride	2.50	U	ND	2.29	mg/L		91.4	(90%-110%)			
Sulfate	10.0	10.5		21.2	mg/L		107	(90%-110%)		09/10/22	06:03
Metals Analysis - ICPMS											
Batch	2314178										
QC1205186327	LCS										
Antimony	0.0500			0.0504	mg/L		101	(80%-120%)	PRB	09/18/22	12:22

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QC Summary

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Arsenic	0.0500			0.0483	mg/L		96.6	(80%-120%)	PRB	09/18/22	12:22
Barium	0.0500			0.0505	mg/L		101	(80%-120%)			
Beryllium	0.0500			0.0565	mg/L		113	(80%-120%)			
Boron	0.100			0.107	mg/L		107	(80%-120%)			
Cadmium	0.0500			0.0505	mg/L		101	(80%-120%)			
Calcium	2.00			2.15	mg/L		107	(80%-120%)			
Chromium	0.0500			0.0487	mg/L		97.4	(80%-120%)			
Cobalt	0.0500			0.0490	mg/L		98	(80%-120%)			
Lead	0.0500			0.0511	mg/L		102	(80%-120%)			
Lithium	0.0500			0.0525	mg/L		105	(80%-120%)			
Molybdenum	0.0500			0.0500	mg/L		99.9	(80%-120%)			
Selenium	0.0500			0.0483	mg/L		96.5	(80%-120%)			
Thallium	0.0500			0.0497	mg/L		99.4	(80%-120%)			
QC1205186326	MB										
Antimony			U	ND	mg/L					09/18/22	12:18
Arsenic			U	ND	mg/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Barium			U	ND	mg/L				PRB	09/18/22	12:18
Beryllium			U	ND	mg/L						
Boron			U	ND	mg/L						
Cadmium			U	ND	mg/L						
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						
Cobalt			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Molybdenum			U	ND	mg/L						
Selenium			U	ND	mg/L						
Thallium			U	ND	mg/L						
QC1205186328 592388002 MS											
Antimony	0.0500	U	ND	0.0500	mg/L		100	(75%-125%)		09/19/22	12:37
Arsenic	0.0500	U	ND	0.0488	mg/L		95.8	(75%-125%)		09/19/22	11:41
Barium	0.0500		0.0523	0.0516	mg/L		0*	(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	2314178										
Beryllium	0.0500	0.00131		0.0578	mg/L		113	(75%-125%)	PRB	09/19/22	11:41
Boron	0.100	0.109		0.117	mg/L		8.15 *	(75%-125%)			
Cadmium	0.0500	J 0.000317		0.0519	mg/L		103	(75%-125%)			
Calcium	2.00	18.8		2.21	mg/L		N/A	(75%-125%)			
Chromium	0.0500	J 0.00417		0.0500	mg/L		91.7	(75%-125%)			
Cobalt	0.0500	0.00406		0.0499	mg/L		91.6	(75%-125%)			
Lead	0.0500	U ND		0.0538	mg/L		107	(75%-125%)			
Lithium	0.0500	J 0.00757		0.0559	mg/L		96.7	(75%-125%)			
Molybdenum	0.0500	U ND		0.0531	mg/L		106	(75%-125%)			
Selenium	0.0500	J 0.00322		0.0483	mg/L		90.2	(75%-125%)			
Thallium	0.0500	U ND		0.0525	mg/L		105	(75%-125%)			
QC1205186329 592388002 MSD											
Antimony	0.0500	U ND		0.0504	mg/L	0.639	101	(0%-20%)		09/19/22	12:39
Arsenic	0.0500	U ND		0.0491	mg/L	0.484	96.2	(0%-20%)		09/19/22	11:45
Barium	0.0500	0.0523		0.0517	mg/L	0.153	0*	(0%-20%)			
Beryllium	0.0500	0.00131		0.0585	mg/L	1.3	114	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Boron	0.100	0.109		0.118	mg/L	1.32	9.7*	(0%-20%)	PRB	09/19/22	11:45
Cadmium	0.0500	J	0.000317	0.0535	mg/L	3.02	106	(0%-20%)			
Calcium	2.00		18.8	2.20	mg/L	0.242	N/A	(0%-20%)			
Chromium	0.0500	J	0.00417	0.0512	mg/L	2.45	94.2	(0%-20%)			
Cobalt	0.0500		0.00406	0.0513	mg/L	2.91	94.5	(0%-20%)			
Lead	0.0500	U	ND	0.0538	mg/L	0.0112	107	(0%-20%)			
Lithium	0.0500	J	0.00757	0.0564	mg/L	0.94	97.7	(0%-20%)			
Molybdenum	0.0500	U	ND	0.0547	mg/L	2.89	109	(0%-20%)			
Selenium	0.0500	J	0.00322	0.0492	mg/L	1.86	92	(0%-20%)			
Thallium	0.0500	U	ND	0.0529	mg/L	0.822	106	(0%-20%)			
QC1205194585 592388002 PS											
Barium	50.0		52.3	100	ug/L		95.3	(75%-125%)		09/19/22	11:49
Boron	100		109	222	ug/L		114	(75%-125%)			
QC1205186330 592388002 SDILT											
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/19/22	12:43
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/19/22	11:52
Barium			52.3	10.1	ug/L	3.06		(0%-20%)			

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QC Summary

Workorder: 592388

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2314178										
Beryllium		1.31	J	0.248	ug/L	5.42		(0%-20%)	PRB	09/19/22	11:52
Boron		109		24.9	ug/L	14.5		(0%-20%)			
Cadmium	J	0.317	U	ND	ug/L	N/A		(0%-20%)			
Calcium		18800		3570	ug/L	5.19		(0%-20%)			
Chromium	J	4.17	U	ND	ug/L	N/A		(0%-20%)			
Cobalt		4.06	J	0.819	ug/L	.887		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium	J	7.57	U	ND	ug/L	N/A		(0%-20%)			
Molybdenum	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Selenium	J	3.22	U	ND	ug/L	N/A		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Metals Analysis-Mercury											
Batch	2314311										
QC1205186635	592388003	DUP									
Mercury		U	ND	U	ND	mg/L	N/A		AXS5	09/12/22	11:09
QC1205186634	LCS										
Mercury		0.00200		0.00214	mg/L		107	(80%-120%)		09/12/22	11:02
QC1205186633	MB										
Mercury			U	ND	mg/L					09/12/22	11:01

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QC Summary

Workorder: 592388

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch 2314311											
QC1205186636	592388003	MS									
Mercury	0.00200	U	ND	0.00212	mg/L		106	(75%-125%)	AXS5	09/12/22	11:11
QC1205186637	592388003	SDILT									
Mercury		U	ND	U	ND	ug/L	N/A	(0%-10%)		09/12/22	11:13
Solids Analysis											
Batch 2314703											
QC1205187425	592388012	DUP									
Total Dissolved Solids			1390	1410	mg/L	1.29		(0%-5%)	CH6	09/09/22	16:38
QC1205187423	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)		09/09/22	16:38
QC1205187422	MB										
Total Dissolved Solids			U	ND	mg/L					09/09/22	16:38

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.

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QC Summary

Workorder: 592388

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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 #: 592528**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

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

Analytical Batch: 2314769

Preparation Method: SW846 3005A

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

Preparation Batch: 2314768

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592528001	AP1PZ-11
592528002	DUP-02
592528003	AP1PZ-2
592528004	AP1PZ-5
1205187547	Method Blank (MB) ICP-MS
1205187548	Laboratory Control Sample (LCS)
1205187551	592528001(AP1PZ-11L) Serial Dilution (SD)
1205187549	592528001(AP1PZ-11S) Matrix Spike (MS)
1205187550	592528001(AP1PZ-11SD) 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 592528003 (AP1PZ-2) and 592528004 (AP1PZ-5) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	592528	
	003	004
Boron	10X	100X
Calcium	10X	100X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

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

Analytical Batch: 2315121

Preparation Method: SW846 7470A Prep

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

Preparation Batch: 2315120

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592528001	AP1PZ-11
592528002	DUP-02
592528003	AP1PZ-2
592528004	AP1PZ-5
1205188327	Method Blank (MB)CVAA
1205188328	Laboratory Control Sample (LCS)
1205188331	592595001(NonSDGL) Serial Dilution (SD)
1205188329	592595001(NonSDGD) Sample Duplicate (DUP)
1205188330	592595001(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: 2317683

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592528001	AP1PZ-11
592528002	DUP-02
592528003	AP1PZ-2
592528004	AP1PZ-5

1205193505 Method Blank (MB)
 1205193506 Laboratory Control Sample (LCS)
 1205193507 592528001(AP1PZ-11) Sample Duplicate (DUP)
 1205193509 592528001(AP1PZ-11) 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 1205193507 (AP1PZ-11DUP), 1205193509 (AP1PZ-11PS), 592528001 (AP1PZ-11), 592528002 (DUP-02), 592528003 (AP1PZ-2) and 592528004 (AP1PZ-5) 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	592528			
	001	002	003	004
Sulfate	5X	5X	50X	200X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

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

Analytical Batch: 2315106

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592528001	AP1PZ-11
592528002	DUP-02
1205188258	Method Blank (MB)
1205188259	Laboratory Control Sample (LCS)
1205188261	592273001(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

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

Analytical Batch: 2315610

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592528003	AP1PZ-2
592528004	AP1PZ-5
1205189364	Method Blank (MB)
1205189365	Laboratory Control Sample (LCS)
1205189371	592607004(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.

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 #: 592388**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

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

Analytical Batch: 2314178

Preparation Method: SW846 3005A

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

Preparation Batch: 2314177

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592388001	EB-01
592388002	AP1GWA-1
592388003	AP1GWA-2
592388004	FB-01
592388005	AP1PZ-1
592388006	AP1PZ-7
592388007	AP1PZ-10
592388008	FB-02
592388009	AP1PZ-4
592388010	DUP-01
592388011	AP1PZ-9
592388012	AP1PZ-8
592388013	EB-02
592388014	AP1PZ-3
592388015	AP1PZ-6
1205186326	Method Blank (MB)ICP-MS
1205186327	Laboratory Control Sample (LCS)
1205186330	592388002(AP1GWA-1L) Serial Dilution (SD)
1205186328	592388002(AP1GWA-1S) Matrix Spike (MS)
1205186329	592388002(AP1GWA-1SD) Matrix Spike Duplicate (MSD)
1205194585	592388002(AP1GWA-1PS) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analytes. The post spike recoveries were within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recoveries may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1205186328 (AP1GWA-1MS)	Barium	-1.38* (75%-125%)
	Boron	8.15* (75%-125%)
1205186329 (AP1GWA-1MSD)	Barium	-1.22* (75%-125%)
	Boron	9.7* (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 592388005 (AP1PZ-1), 592388006 (AP1PZ-7), 592388007 (AP1PZ-10), 592388009 (AP1PZ-4), 592388010 (DUP-01), 592388011 (AP1PZ-9), 592388012 (AP1PZ-8), 592388014 (AP1PZ-3) and 592388015 (AP1PZ-6) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	592388									
	005	006	007	009	010	011	012	014	015	
Boron	5X	50X	50X	50X	100X	10X	50X	20X	50X	
Calcium	1X	50X	50X	50X	100X	10X	50X	20X	50X	
Molybdenum	1X	1X	1X	1X	1X	1X	50X	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: 2314311

Preparation Method: SW846 7470A Prep

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

Preparation Batch: 2314310

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592388001	EB-01
592388002	AP1GWA-1

592388003	AP1GWA-2
592388004	FB-01
592388005	AP1PZ-1
592388006	AP1PZ-7
592388007	AP1PZ-10
592388008	FB-02
592388009	AP1PZ-4
592388010	DUP-01
592388011	AP1PZ-9
592388012	AP1PZ-8
592388013	EB-02
592388014	AP1PZ-3
592388015	AP1PZ-6
1205186633	Method Blank (MB)CVAA
1205186634	Laboratory Control Sample (LCS)
1205186637	592388003(AP1GWA-2L) Serial Dilution (SD)
1205186635	592388003(AP1GWA-2D) Sample Duplicate (DUP)
1205186636	592388003(AP1GWA-2S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

General Chemistry

Product: Ion Chromatography

Analytical Method: EPA 300.0

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

Analytical Batch: 2314142

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592388001	EB-01
592388002	AP1GWA-1
592388003	AP1GWA-2
592388004	FB-01
592388005	AP1PZ-1
592388007	AP1PZ-10
592388008	FB-02
1205186281	Method Blank (MB)
1205186282	Laboratory Control Sample (LCS)
1205186285	592010001(NonSDG) Sample Duplicate (DUP)
1205186286	592010001(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
Fluoride	1205186286 (Non SDG 592010001PS)	179* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205186285 (Non SDG 592010001DUP), 1205186286 (Non SDG 592010001PS), 592388002 (AP1GWA-1), 592388005 (AP1PZ-1) and 592388007 (AP1PZ-10) 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	592388		
	002	005	007
Sulfate	10X	10X	25X

Product: Ion Chromatography

Analytical Method: EPA 300.0

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

Analytical Batch: 2314387

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592388006	AP1PZ-7
592388009	AP1PZ-4
592388010	DUP-01
592388011	AP1PZ-9
592388012	AP1PZ-8
592388013	EB-02
592388014	AP1PZ-3
592388015	AP1PZ-6
1205186792	Method Blank (MB)
1205186793	Laboratory Control Sample (LCS)
1205186796	592398004(ARAMW-7) Sample Duplicate (DUP)
1205186797	592398004(ARAMW-7) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1205186796 (ARAMW-7DUP), 1205186797 (ARAMW-7PS), 592388006 (AP1PZ-7), 592388009 (AP1PZ-4), 592388010 (DUP-01), 592388011 (AP1PZ-9), 592388012 (AP1PZ-8), 592388014 (AP1PZ-3) and 592388015 (AP1PZ-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	592388						
	006	009	010	011	012	014	015
Sulfate	100X	200X	200X	40X	100X	100X	200X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

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

Analytical Batch: 2314703

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592388001	EB-01
592388002	AP1GWA-1
592388003	AP1GWA-2
592388004	FB-01
592388005	AP1PZ-1
592388006	AP1PZ-7
592388007	AP1PZ-10
592388008	FB-02
592388009	AP1PZ-4
592388010	DUP-01
592388011	AP1PZ-9
592388012	AP1PZ-8
592388013	EB-02
592388014	AP1PZ-3
592388015	AP1PZ-6
1205187422	Method Blank (MB)
1205187423	Laboratory Control Sample (LCS)
1205187425	592388012(AP1PZ-8) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

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

EWOT

Client: GPCC SDG/AR/COC/Work Order: 592528 / 592534

Received By: Shanequa Patterson Date Received: 9/13/22

Carrier and Tracking Number

Circle Applicable:
 FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information Yes No *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.

A) Shipped as a DOT Hazardous? 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"/>	<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: <u>Wet Ice</u> <u>Ice Packs</u> <u>Dry ice</u> <u>None</u> <u>Other</u> : *all temperatures are recorded in Celsius TEMP: <u>3.2</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>IR2-22</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 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):

Page: 1 of 2
 Project #: 175569434
 Quote #: _____
 QC Number (1): 4 Coolers
 PC Number: _____
 Client Name: Georgia Power
 Facility Name: Plant Arkwright AP-1
 Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
 Contacted By: John Myer, Emily Scheiben, Jackson Bankston
 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 (hh:mm)	QC Code (e)	Field Filtered (e)	Sample Matrix (e)	Should this sample be considered:		Sample Analysis Requested (6) (Fill in the number of containers for each test)										Comments
						Radioactive (if yes, please supply isotopic info.)	(7) Known or Possible Hazards	Metals App. III, IV (6020B)	TDS (SM Method 2540C)	Metals App. IV (6020B)	Antons (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B)	Ag (App. I) (6020B)	Alkalinity (300.0 R2.1)	Metals Al, K, Mg, Na, Fe, Mn (6020B)	NI	NI	
EB-01	09/07/22	0905	EB	N	WQ			X	X	X	X	X	X	X	X	X	X	NA
AP1GWA-1	09/07/22	1020	N	N	WG			X	X	X	X	X	X	X	X	X	X	pH: 5.42
AP1GWA-2	09/07/22	1155	N	N	WG			X	X	X	X	X	X	X	X	X	X	pH: 6.00
FB-01	09/07/22	1210	FB	N	WQ			X	X	X	X	X	X	X	X	X	X	NA
AP1PZ-1	09/07/22	1350	N	N	WG			X	X	X	X	X	X	X	X	X	X	pH: 6.41
AP1PZ-7	09/07/22	1400	N	N	WG			X	X	X	X	X	X	X	X	X	X	pH: 6.21
AP1PZ-10	09/07/22	1430	N	N	WG			X	X	X	X	X	X	X	X	X	X	pH: 6.55
FB-02	09/07/22	1445	FB	N	WQ			X	X	X	X	X	X	X	X	X	X	NA
AP1PZ-4	09/07/22	1545	N	N	WG			X	X	X	X	X	X	X	X	X	X	pH: 6.37
DUP-01	09/07/22	NA	FD	N	WQ			X	X	X	X	X	X	X	X	X	X	NA

Chain of Custody Signatures
 Relinquished By (Signed) _____ Date _____ Time _____
 Received by (signed) _____ Date _____ Time _____
 1. *[Signature]* 9/8/22 9:10 AM 8:10
 2. *[Signature]* 9/8/22 12:43 PM 12:43
 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:** _____ °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, 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
 Ba = Barium
 Cd = Cadmium
 Cr = Chromium
 Pb = Lead
Hg = Mercury
Se = Selenium
Ag = Silver
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

E.T

Client: G DCC		SDG/AR/COC/Work Order: 592388	
Received By: Shanequa Patterson		Date Received: 9/8/22	
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other	
Suspected Hazard Information		Yes	No
		*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
A) Shipped as a DOT Hazardous?			<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): _____ CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3	
D) Did the client designate samples are hazardous?			<input checked="" type="checkbox"/>
		COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?			<input checked="" type="checkbox"/>
		If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:	
Sample Receipt Criteria		Yes	NA
			No
1	Shipping containers received intact and sealed?	<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"/>
		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"/>
		Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 1.9	
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Temperature Device Serial #: IR2-22 Secondary Temperature Device Serial # (If Applicable):	
5	Sample containers intact and sealed?	<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"/>
		Sample ID's and Containers Affected: If Preservation added, Lot#:	
7	Do any samples require Volatile Analysis?	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)	
		Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)	
		Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:	
8	Samples received within holding time?	<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"/>
		ID's and containers affected:	
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<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"/>	<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"/>
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Circle Applicable: Not relinquished Other (describe)	
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials **AS** Date **9/9/22** Page ____ of ____

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 AP1
Work Orders: 592396 and 592534

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 08, 2022 and September 09, 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: 592396 GEL Work Order: 592396

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: 592534 GEL Work Order: 592534

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 ComplianceAP1

Client Sample ID: EB-01
 Sample ID: 592396001
 Matrix: WQ
 Collect Date: 07-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.11	+/-1.14	1.89	+/-1.18	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.35	+/-1.19	1.89	+/-1.22		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.238	+/-0.336	0.585	+/-0.338	1.00	pCi/L			LXP1	10/07/22	0935	2315712	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"	2315719	82.7	(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

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 ComplianceAPI

Client Sample ID: AP1GWA-1

Project: GPCC00100

Sample ID: 592396002

Client ID: GPCC001

Matrix: WG

Collect Date: 07-SEP-22

Receive Date: 08-SEP-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.673	+/-0.911	1.56	+/-0.926	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		1.77	+/-1.02	1.56	+/-1.05		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		1.09	+/-0.451	0.402	+/-0.492	1.00	pCi/L			LXP1	10/07/22	0935	2315712	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"	2315719	82.5	(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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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 ComplianceAP1

Client Sample ID: AP1GWA-2

Project: GPCC00100

Sample ID: 592396003

Client ID: GPCC001

Matrix: WG

Collect Date: 07-SEP-22

Receive Date: 08-SEP-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.919	+/-1.14	1.93	+/-1.16	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.49	+/-1.20	1.93	+/-1.22		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.571	+/-0.373	0.456	+/-0.383	1.00	pCi/L			LXP1	10/07/22	0935	2315712	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"	2315719	80.2	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: FB-01
Sample ID: 592396004
Matrix: WQ
Collect Date: 07-SEP-22
Receive Date: 08-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.0557	+/-0.855	1.65	+/-0.855	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.348	+/-0.897	1.65	+/-0.898		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.292	+/-0.271	0.400	+/-0.276	1.00	pCi/L			LXP1	10/07/22	0935	2315712	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"	2315719	69.7	(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 ComplianceAP1

Client Sample ID: AP1PZ-1
 Sample ID: 592396005
 Matrix: WG
 Collect Date: 07-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.24	+/-1.30	2.16	+/-1.34	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.33	+/-1.34	2.16	+/-1.38		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.0893	+/-0.327	0.643	+/-0.328	1.00	pCi/L			LXP1	10/07/22	0935	2315712	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"	2315719	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	

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 ComplianceAP1

Client Sample ID: AP1PZ-7
 Sample ID: 592396006
 Matrix: WG
 Collect Date: 07-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-0.267	+/-1.08	2.11	+/-1.08	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.479	+/-1.15	2.11	+/-1.16		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.479	+/-0.409	0.626	+/-0.418	1.00	pCi/L			LXP1	10/07/22	0935	2315712	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"	2315719	70.9	(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
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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-10

Project: GPCC00100

Sample ID: 592396007

Client ID: GPCC001

Matrix: WG

Collect Date: 07-SEP-22

Receive Date: 08-SEP-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.05	+/-1.16	1.94	+/-1.19	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.34	+/-1.21	1.94	+/-1.24		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.298	+/-0.358	0.602	+/-0.363	1.00	pCi/L			LXP1	10/07/22	0935	2315712	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"	2315719	76.7	(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	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: FB-02
 Sample ID: 592396008
 Matrix: WQ
 Collect Date: 07-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.647	+/-1.31	2.30	+/-1.32	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.02	+/-1.35	2.30	+/-1.36		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.378	+/-0.321	0.452	+/-0.325	1.00	pCi/L			LXP1	10/07/22	1013	2315712	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"	2315719	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 ComplianceAPI

Client Sample ID: AP1PZ-4
Sample ID: 592396009
Matrix: WG
Collect Date: 07-SEP-22
Receive Date: 08-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.73	+/-1.43	2.32	+/-1.49	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.32	+/-1.48	2.32	+/-1.54		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.590	+/-0.386	0.527	+/-0.397	1.00	pCi/L			LXP1	10/07/22	1013	2315712	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"	2315719	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
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: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: DUP-01
 Sample ID: 592396010
 Matrix: WG
 Collect Date: 07-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-0.991	+/-1.43	2.80	+/-1.43	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.374	+/-1.48	2.80	+/-1.48		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.374	+/-0.389	0.627	+/-0.393	1.00	pCi/L			LXP1	10/07/22	1013	2315712	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"	2315719	70.5	(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 ComplianceAP1

Client Sample ID: AP1PZ-9
 Sample ID: 592396011
 Matrix: WG
 Collect Date: 07-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-0.536	+/-0.860	1.83	+/-0.860	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.482	+/-0.923	1.83	+/-0.928		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.482	+/-0.334	0.444	+/-0.347	1.00	pCi/L			LXP1	10/07/22	1013	2315712	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"	2315719	67.2	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

- DF: Dilution Factor
- DL: Detection Limit
- Lc/LC: Critical Level
- MDA: Minimum Detectable Activity
- MDC: Minimum Detectable Concentration
- Mtd.: Method
- PF: Prep Factor
- RL: Reporting Limit
- TPU: Total Propagated Uncertainty

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-8
 Sample ID: 592396012
 Matrix: WG
 Collect Date: 07-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.419	+/-1.15	2.08	+/-1.16	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.958	+/-1.21	2.08	+/-1.22		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.539	+/-0.372	0.510	+/-0.382	1.00	pCi/L			LXP1	10/07/22	1013	2315712	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"	2315719	65.8	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: EB-02
 Sample ID: 592396013
 Matrix: WQ
 Collect Date: 07-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-0.0465	+/-1.37	2.51	+/-1.37	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.868	+/-1.43	2.51	+/-1.44		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.868	+/-0.410	0.350	+/-0.443	1.00	pCi/L			LXP1	10/07/22	1013	2315712	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"	2315719	83.5	(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 ComplianceAP1

Client Sample ID: AP1PZ-3
 Sample ID: 592396014
 Matrix: WG
 Collect Date: 07-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.61	+/-1.16	1.83	+/-1.23	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.43	+/-1.25	1.83	+/-1.32		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.825	+/-0.458	0.582	+/-0.480	1.00	pCi/L			LXP1	10/07/22	1013	2315712	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"	2315719	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	

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Report Date: December 7, 2022

Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-6
 Sample ID: 592396015
 Matrix: WG
 Collect Date: 07-SEP-22
 Receive Date: 08-SEP-22
 Collector: Client

Project: GPCC00100
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.312	+/-1.10	2.00	+/-1.10	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.959	+/-1.17	2.00	+/-1.18		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.647	+/-0.405	0.511	+/-0.417	1.00	pCi/L			LXP1	10/07/22	1048	2315712	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"	2315719	71.8	(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 ComplianceAP1

Client Sample ID: AP1PZ-11
 Sample ID: 592534001
 Matrix: WG
 Collect Date: 08-SEP-22
 Receive Date: 09-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	0.891	+/-1.41	2.42	+/-1.43	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.06	+/-1.42	2.42	+/-1.44		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.166	+/-0.200	0.319	+/-0.202	1.00	pCi/L			LXP1	10/06/22	0745	2317044	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	90.3	(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
- 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: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: DUP-02
 Sample ID: 592534002
 Matrix: WQ
 Collect Date: 08-SEP-22
 Receive Date: 09-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	-0.177	+/-0.924	1.78	+/-0.924	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.613	+/-0.993	1.78	+/-1.00		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.613	+/-0.364	0.419	+/-0.381	1.00	pCi/L			LXP1	10/06/22	0745	2317044	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	87.2	(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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Report Date: December 7, 2022

Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-2
 Sample ID: 592534003
 Matrix: WG
 Collect Date: 08-SEP-22
 Receive Date: 09-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	0.669	+/-1.44	2.52	+/-1.45	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.76	+/-1.52	2.52	+/-1.55		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		1.09	+/-0.484	0.563	+/-0.552	1.00	pCi/L			LXP1	10/06/22	0745	2317044	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	80.2	(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: December 7, 2022

Contact: Joju Abraham
 Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-5
 Sample ID: 592534004
 Matrix: WG
 Collect Date: 08-SEP-22
 Receive Date: 09-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	0.560	+/-1.48	2.63	+/-1.49	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.41	+/-1.57	2.63	+/-1.58		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.850	+/-0.507	0.680	+/-0.522	1.00	pCi/L			LXP1	10/06/22	0817	2317044	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	72	(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: 592396

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2315719										
QC1205189621	592396002 DUP										
Radium-228	U	0.673	U	1.22	pCi/L	0		N/A	JE1	10/05/22	09:17
	Uncert:	+/-0.911		+/-0.941							
	TPU:	+/-0.926		+/-0.989							
QC1205189622	LCS										
Radium-228	43.8			44.9	pCi/L		102	(75%-125%)	JE1	10/05/22	09:17
	Uncert:			+/-3.44							
	TPU:			+/-11.7							
QC1205189620	MB										
Radium-228			U	1.52	pCi/L				JE1	10/05/22	09:17
	Uncert:			+/-1.05							
	TPU:			+/-1.12							
Rad Ra-226											
Batch	2315712										
QC1205189608	592396002 DUP										
Radium-226		1.09		0.739	pCi/L	38.6		(0% - 100%)	LXP1	10/07/22	10:48
	Uncert:	+/-0.451		+/-0.365							
	TPU:	+/-0.492		+/-0.396							
QC1205189610	LCS										
Radium-226	26.5			22.8	pCi/L		86	(75%-125%)	LXP1	10/07/22	10:48
	Uncert:			+/-1.83							
	TPU:			+/-4.98							
QC1205189607	MB										
Radium-226			U	0.459	pCi/L				LXP1	10/07/22	10:48
	Uncert:			+/-0.337							
	TPU:			+/-0.347							
QC1205189609	592396002 MS										
Radium-226	131	1.09		116	pCi/L		87.5	(75%-125%)	LXP1	10/07/22	10:48
	Uncert:	+/-0.451		+/-9.92							
	TPU:	+/-0.492		+/-26.5							

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

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QC Summary

Workorder: 592396

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.

GEL LABORATORIES LLC

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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: 592534

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2317042										
QC1205192228	592399001 DUP										
Radium-228	U	1.57	U	0.794	pCi/L	0		N/A	JE1	10/04/2209:55	
	Uncert:	+/-1.49		+/-1.01							
	TPU:	+/-1.54		+/-1.03							
QC1205192229	LCS										
Radium-228	43.9			42.4	pCi/L		96.7	(75%-125%)	JE1	10/04/2209:55	
	Uncert:			+/-3.39							
	TPU:			+/-11.2							
QC1205192227	MB										
Radium-228			U	0.724	pCi/L				JE1	10/04/2209:55	
	Uncert:			+/-1.06							
	TPU:			+/-1.07							
Rad Ra-226											
Batch	2317044										
QC1205192207	592399001 DUP										
Radium-226		1.02		0.872	pCi/L	15.5		(0% - 100%)	LXP1	10/06/2208:17	
	Uncert:	+/-0.434		+/-0.501							
	TPU:	+/-0.491		+/-0.542							
QC1205192209	LCS										
Radium-226	26.5			26.2	pCi/L		98.7	(75%-125%)	LXP1	10/06/2208:17	
	Uncert:			+/-2.11							
	TPU:			+/-5.53							
QC1205192206	MB										
Radium-226			U	0.395	pCi/L				LXP1	10/06/2208:17	
	Uncert:			+/-0.379							
	TPU:			+/-0.384							
QC1205192208	592399001 MS										
Radium-226	130	1.02		143	pCi/L		109	(75%-125%)	LXP1	10/06/2208:17	
	Uncert:	+/-0.434		+/-10.6							
	TPU:	+/-0.491		+/-26.3							

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded

GEL LABORATORIES LLC

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

QC Summary

Workorder: 592534

Page 2 of 2

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
J										
J										
K										
L										
M										
M										
N/A										
N1										
ND										
NJ										
Q										
R										
U										
UI										
UJ										
UL										
X										
Y										
^										
h										

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

** Indicates analyte is a surrogate/tracer compound.

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

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

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

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 592396**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

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

Analytical Batch: 2315718

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592396001	EB-01
592396002	AP1GWA-1
592396003	AP1GWA-2
592396004	FB-01
592396005	AP1PZ-1
592396006	AP1PZ-7
592396007	AP1PZ-10
592396008	FB-02
592396009	AP1PZ-4
592396010	DUP-01
592396011	AP1PZ-9
592396012	AP1PZ-8
592396013	EB-02
592396014	AP1PZ-3
592396015	AP1PZ-6

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: 2315719

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592396001	EB-01
592396002	AP1GWA-1
592396003	AP1GWA-2
592396004	FB-01
592396005	AP1PZ-1

592396006	AP1PZ-7
592396007	AP1PZ-10
592396008	FB-02
592396009	AP1PZ-4
592396010	DUP-01
592396011	AP1PZ-9
592396012	AP1PZ-8
592396013	EB-02
592396014	AP1PZ-3
592396015	AP1PZ-6
1205189620	Method Blank (MB)
1205189621	592396002(APIGWA-1) Sample Duplicate (DUP)
1205189622	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: 2315712

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592396001	EB-01
592396002	APIGWA-1
592396003	APIGWA-2
592396004	FB-01
592396005	AP1PZ-1
592396006	AP1PZ-7
592396007	AP1PZ-10
592396008	FB-02
592396009	AP1PZ-4
592396010	DUP-01
592396011	AP1PZ-9
592396012	AP1PZ-8
592396013	EB-02
592396014	AP1PZ-3
592396015	AP1PZ-6
1205189607	Method Blank (MB)
1205189608	592396002(APIGWA-1) Sample Duplicate (DUP)
1205189609	592396002(APIGWA-1) Matrix Spike (MS)
1205189610	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 #: 592534**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

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

Analytical Batch: 2317952

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592534001	AP1PZ-11
592534002	DUP-02
592534003	AP1PZ-2
592534004	AP1PZ-5

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-063 REV# 5

Analytical Batch: 2317042

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592534001	AP1PZ-11
592534002	DUP-02
592534003	AP1PZ-2
592534004	AP1PZ-5
1205192227	Method Blank (MB)
1205192228	592399001(ARGWC-22) Sample Duplicate (DUP)
1205192229	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

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

Analytical Batch: 2317044

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
592534001	AP1PZ-11
592534002	DUP-02
592534003	AP1PZ-2
592534004	AP1PZ-5
1205192206	Method Blank (MB)
1205192207	592399001(ARGWC-22) Sample Duplicate (DUP)
1205192208	592399001(ARGWC-22) Matrix Spike (MS)
1205192209	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

The matrix spike, 1205192208 (ARGWC-22MS), aliquot was reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.



GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Chain of Custody and Analytical Request
GEL Work Order Number: 592388 GEL Project Manager: Erin Trent
 Client Name: Georgia Power
 Project/Site Name: Plant Arkwright AP-1
 Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
 Collected By: John Myer, Emily Scheiben,
 Jackson Bankston
 Send Results To: jahraham@southemco.com EDD@stantec.com
 brian.steele@stantec.com edgar.smith@stantec.com
 Phone # (937) 344-6533
 Fax #

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (b)	Field Filtered (b)	Sample Matrix (e)	Sample Analysis Requested (6) (Fill in the number of containers for each test)							Comments	
						Should this sample be considered: (f) Yes, please supply isotopic info	Radioactive (If possible Hazards (7) Known or	Total number of containers	Metals App. IV (6020B)	Metals App. IV (6020B) (Co only)	Ag (App. I) (6020B)	Alkalinity (300.0 R2.1)		Metals Al, K, Mg, Na, Fe, Mn (6020B)
EB-01	09/07/22	0905	EB	N	WQ		X	X	X	X	X	X	NA	
APIGWA-1	09/07/22	1020	N	N	WG		X	X	X	X	X	X	pH: 5.42	
APIGWA-2	09/07/22	1155	N	N	WG		X	X	X	X	X	X	pH: 6.00	
FB-01	09/07/22	1210	FB	N	WQ		X	X	X	X	X	X	NA	
APIPZ-1	09/07/22	1350	N	N	WG		X	X	X	X	X	X	pH: 6.41	
APIPZ-7	09/07/22	1400	N	N	WG		X	X	X	X	X	X	pH: 6.21	
APIPZ-10	09/07/22	1430	N	N	WG		X	X	X	X	X	X	pH: 6.55	
FB-02	09/07/22	1445	FB	N	WQ		X	X	X	X	X	X	NA	
APIPZ-4	09/07/22	1545	N	N	WG		X	X	X	X	X	X	pH: 6.37	
DUP-01	09/07/22	NA	FD	N	WQ		X	X	X	X	X	X	NA	

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<i>[Signature]</i>	9/19/22	910	<i>[Signature]</i>	9/22/22	810
<i>[Signature]</i>	9/22/22	1243	<i>[Signature]</i>	9/22/22	1243

Relinquished By (Signed) Date Time Received by (signed) Date Time

1. *[Signature]* 9/19/22 910 *[Signature]* 9/22/22 810

2. *[Signature]* 9/22/22 1243 *[Signature]* 9/22/22 1243

3. *[Signature]* 9/22/22 1243 *[Signature]* 9/22/22 1243

TAT Requested: Normal: X Rush: Specify: (Subject to Surcharge)

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: °C

Sample Collection Time Zone: Eastern Pacific 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=Faecal, N=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals	Hg= Mercury	Se= Selenium	Ag= Silver
As = Arsenic			
Ba = Barium			
Cd = Cadmium			
Cr = Chromium			
Pb = Lead			

Characteristic Hazards

FL = Flammable/Ignitable
 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.)

SAMPLE RECEIPT & REVIEW FORM

E.T

Client: <u>GACC</u>		SDG/AR/COC/Work Order: <u>592388 / 592396</u>	
Received By: <u>Shanequa Patterson</u>		Date Received: <u>9/8/22</u>	
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS <u>Field Services</u> <u>Courier</u> 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"/>
B) Did the client designate the samples are to be received as radioactive?			<input checked="" type="checkbox"/>
C) Did the RSO classify the samples as radioactive?			<input checked="" type="checkbox"/>
D) Did the client designate samples are hazardous?			<input checked="" type="checkbox"/>
E) Did the RSO identify possible hazards?			<input checked="" type="checkbox"/>
Sample Receipt Criteria		Yes	NA
		No	
Comments/Qualifiers (Required for Non-Conforming Items)			
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	
3	Samples requiring cold preservation within (0 < 6 deg. C)?*	<input checked="" type="checkbox"/>	
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	
7	Do any samples require Volatile Analysis?		<input checked="" type="checkbox"/>
8	Samples received within holding time?	<input checked="" type="checkbox"/>	
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	
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"/>	
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials AW Date 9/9/22 Page of

SAMPLE RECEIPT & REVIEW FORM

ent

Client: <u>GPPCC</u>		SDG/AR/COC/Work Order: <u>592529 592534</u>			
Received By: <u>Shanequa Patterson</u>		Date Received: <u>9/9/22</u>			
Carrier and Tracking Number		Circle Applicable: <u>FedEx Express</u> FedEx Ground UPS Field Services Courier Other			
Suspected Hazard Information		*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.			
A) Shipped as a DOT Hazardous?		Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___			
B) Did the client designate the samples are to be received as radioactive?		COC notation or radioactive stickers on containers equal client designation.			
C) Did the RSO classify the samples as radioactive?		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): _____ CPM / mR/Hr Classified as: <u>Rad 1 Rad 2 Rad 3</u>			
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"/>			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: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>3.2</u>
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>IR2-22</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>			If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
					Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
					Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8	Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>			
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):					

PM (or PMA) review: Initials AM Date 9/13/22 Page 1 of 1

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

August 29, 2022

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

RE: Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

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.: 92621107

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.: 92621107

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92621107001	OR-0.8	Water	08/16/22 10:15	08/17/22 13:00
92621107002	OR-0.3	Water	08/16/22 11:00	08/17/22 13:00
92621107003	OR-0.1	Water	08/16/22 11:25	08/17/22 13:00
92621107004	OR+0.25	Water	08/16/22 12:30	08/17/22 13:00
92621107005	BC-0.1	Water	08/16/22 12:20	08/17/22 13:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92621107001	OR-0.8	EPA 245.1	VB	1	PASI-GA
		EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
92621107002	OR-0.3	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 245.1	VB	1	PASI-GA
		EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
92621107003	OR-0.1	SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 245.1	VB	1	PASI-GA
		EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
92621107004	OR+0.25	SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 245.1	VB	1	PASI-GA
		EPA 6010D	KH	4	PASI-GA
92621107005	BC-0.1	EPA 6020B	CW1	13	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 245.1	VB	1	PASI-GA

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.: 92621107

Sample: OR-0.8	Lab ID: 92621107001	Collected: 08/16/22 10:15	Received: 08/17/22 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	08/22/22 09:00	08/22/22 15:11	7439-97-6	
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	3.1	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:15	7440-09-7	
Sodium	8.0	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:15	7440-23-5	
Calcium	7.6	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:15	7440-70-2	
Magnesium	2.2	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:15	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 15:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 15:55	7440-38-2	
Barium	0.021	mg/L	0.0050	1	08/22/22 15:10	08/23/22 15:55	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 15:55	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 15:55	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 15:55	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 15:55	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 15:55	7440-48-4	
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 15:55	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 15:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 15:55	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 15:55	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 15:55	7440-28-0	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	56.9	mg/L	25.0	1		08/19/22 08:46		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	30.2	mg/L	10.0	1		08/25/22 20:46		
Alkalinity, Bicarbonate (CaCO ₃)	30.2	mg/L	10.0	1		08/25/22 20:46		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	7.8	mg/L	1.0	1		08/19/22 19:21	16887-00-6	
Fluoride	0.12	mg/L	0.10	1		08/19/22 19:21	16984-48-8	
Sulfate	5.1	mg/L	1.0	1		08/19/22 19:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

Sample: OR-0.3	Lab ID: 92621107002	Collected: 08/16/22 11:00	Received: 08/17/22 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	08/22/22 09:00	08/22/22 15:22	7439-97-6	
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	3.1	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:20	7440-09-7	
Sodium	8.2	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:20	7440-23-5	
Calcium	7.7	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:20	7440-70-2	
Magnesium	2.2	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:20	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 16:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:01	7440-38-2	
Barium	0.022	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:01	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:01	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 16:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:01	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:01	7440-48-4	
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:01	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 16:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 16:01	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:01	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:01	7440-28-0	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	103	mg/L	25.0	1		08/19/22 08:46		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	30.5	mg/L	10.0	1		08/25/22 21:06		
Alkalinity, Bicarbonate (CaCO ₃)	30.5	mg/L	10.0	1		08/25/22 21:06		
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 20:34	16887-00-6	
Fluoride	0.12	mg/L	0.10	1		08/19/22 20:34	16984-48-8	
Sulfate	5.2	mg/L	1.0	1		08/19/22 20:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

Sample: OR-0.1	Lab ID: 92621107003	Collected: 08/16/22 11:25	Received: 08/17/22 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	08/22/22 09:00	08/22/22 15:29	7439-97-6	
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	3.1	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:25	7440-09-7	
Sodium	8.0	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:25	7440-23-5	
Calcium	7.6	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:25	7440-70-2	
Magnesium	2.2	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:25	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 16:46	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:46	7440-38-2	
Barium	0.022	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:46	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:46	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 16:46	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:46	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:46	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:46	7440-48-4	
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:46	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 16:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 16:46	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:46	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:46	7440-28-0	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	45.9	mg/L	25.0	1		08/19/22 08:46		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	30.3	mg/L	10.0	1		08/25/22 21:12		
Alkalinity, Bicarbonate (CaCO ₃)	30.3	mg/L	10.0	1		08/25/22 21:12		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	6.9	mg/L	1.0	1		08/19/22 20:48	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/19/22 20:48	16984-48-8	
Sulfate	7.1	mg/L	1.0	1		08/19/22 20:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

Sample: OR+0.25		Lab ID: 92621107004		Collected: 08/16/22 12:30		Received: 08/17/22 13:00		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
245.1 Mercury									
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	1	08/22/22 09:00	08/22/22 15:32	7439-97-6		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Potassium	3.1	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:30	7440-09-7		
Sodium	8.0	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:30	7440-23-5		
Calcium	7.5	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:30	7440-70-2		
Magnesium	2.1	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:30	7439-95-4		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 16:52	7440-36-0		
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:52	7440-38-2		
Barium	0.021	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:52	7440-39-3		
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:52	7440-41-7		
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 16:52	7440-42-8		
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:52	7440-43-9		
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:52	7440-47-3		
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:52	7440-48-4		
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:52	7439-92-1		
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 16:52	7439-93-2		
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 16:52	7439-98-7		
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:52	7782-49-2		
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:52	7440-28-0		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	43.9	mg/L	25.0	1		08/19/22 08:46			
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO ₃	29.7	mg/L	10.0	1		08/25/22 21:17			
Alkalinity, Bicarbonate (CaCO ₃)	29.7	mg/L	10.0	1		08/25/22 21:17			
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 21:02	16887-00-6		
Fluoride	0.12	mg/L	0.10	1		08/19/22 21:02	16984-48-8		
Sulfate	5.2	mg/L	1.0	1		08/19/22 21:02	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

Sample: BC-0.1	Lab ID: 92621107005	Collected: 08/16/22 12:20	Received: 08/17/22 13:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	08/22/22 09:00	08/22/22 15:35	7439-97-6	
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.4	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:44	7440-09-7	
Sodium	7.5	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:44	7440-23-5	
Calcium	10.3	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:44	7440-70-2	
Magnesium	4.3	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:44	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 16:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:58	7440-38-2	
Barium	0.070	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:58	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:58	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 16:58	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:58	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:58	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:58	7440-48-4	
Lead	0.0012	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:58	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 16:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 16:58	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:58	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:58	7440-28-0	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	85.9	mg/L	25.0	1		08/19/22 08:47		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	44.8	mg/L	10.0	1		08/25/22 21:23		
Alkalinity, Bicarbonate (CaCO ₃)	44.8	mg/L	10.0	1		08/25/22 21:23		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	7.0	mg/L	1.0	1		08/19/22 21:17	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/19/22 21:17	16984-48-8	
Sulfate	7.1	mg/L	1.0	1		08/19/22 21:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

QC Batch: 718660 Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

METHOD BLANK: 3746036 Matrix: Water
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	08/22/22 14:58	

LABORATORY CONTROL SAMPLE: 3746037

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0022	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746038 3746039

Parameter	Units	92621107001		3746039		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0020	0.0021	81	84	70-130	4	20

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

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: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

METHOD BLANK: 3745239 Matrix: Water
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	08/19/22 22:26	
Magnesium	mg/L	ND	0.050	08/19/22 22:26	
Potassium	mg/L	ND	0.20	08/19/22 22:26	
Sodium	mg/L	ND	1.0	08/19/22 22:26	

LABORATORY CONTROL SAMPLE: 3745240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.0	105	80-120	
Potassium	mg/L	1	1.1	112	80-120	
Sodium	mg/L	1	.98J	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745241 3745242

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618822019 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	585	1	1	578	584	-696	-94	75-125	1	20 M1
Magnesium	mg/L	54.4	1	1	54.7	53.9	22	-53	75-125	1	20 M1
Potassium	mg/L	11.9	1	1	12.9	12.7	102	84	75-125	1	20
Sodium	mg/L	11.7	1	1	12.7	12.5	94	80	75-125	1	20

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

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: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

METHOD BLANK: 3746438 Matrix: Water
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	08/23/22 14:54	
Arsenic	mg/L	ND	0.0050	08/23/22 14:54	
Barium	mg/L	ND	0.0050	08/23/22 14:54	
Beryllium	mg/L	ND	0.00050	08/23/22 14:54	
Boron	mg/L	ND	0.040	08/23/22 14:54	
Cadmium	mg/L	ND	0.00050	08/23/22 14:54	
Chromium	mg/L	ND	0.0050	08/23/22 14:54	
Cobalt	mg/L	ND	0.0050	08/23/22 14:54	
Lead	mg/L	ND	0.0010	08/23/22 14:54	
Lithium	mg/L	ND	0.030	08/23/22 14:54	
Molybdenum	mg/L	ND	0.010	08/23/22 14:54	
Selenium	mg/L	ND	0.0050	08/23/22 14:54	
Thallium	mg/L	ND	0.0010	08/23/22 14:54	

LABORATORY CONTROL SAMPLE: 3746439

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.096	96	80-120	
Molybdenum	mg/L	0.1	0.10	105	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746747 3746748

Parameter	Units	92620540002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.11	0.1	0.11	113	113	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.10	0.1	0.10	100	102	75-125	2	20	

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92621107

Parameter	Units	92620540002		3746747		3746748		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Barium	mg/L	57.0 ug/L	0.1	0.1	0.16	0.16	105	106	75-125	1	20			
Beryllium	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20			
Boron	mg/L	6870 ug/L	1	1	7.9	7.8	100	95	75-125	1	20			
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	99	102	75-125	2	20			
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	98	97	75-125	1	20			
Cobalt	mg/L	26.1 ug/L	0.1	0.1	0.12	0.12	96	97	75-125	0	20			
Lead	mg/L	ND	0.1	0.1	0.088	0.090	88	90	75-125	2	20			
Lithium	mg/L	ND	0.1	0.1	0.10	0.11	96	98	75-125	2	20			
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20			
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	99	102	75-125	2	20			
Thallium	mg/L	ND	0.1	0.1	0.092	0.093	92	93	75-125	2	20			

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

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: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

METHOD BLANK: 3744034 Matrix: Water
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	08/19/22 08:45	

LABORATORY CONTROL SAMPLE: 3744035

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	380	95	80-120	

SAMPLE DUPLICATE: 3744037

Parameter	Units	92621116005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	105	108	3	25	

SAMPLE DUPLICATE: 3744488

Parameter	Units	92621107001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	56.9	62.9	10	25	

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

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: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

METHOD BLANK: 2444373 Matrix: Water
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	08/25/22 20:22	

LABORATORY CONTROL SAMPLE: 2444374

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	200	207	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2444375 2444376

Parameter	Units	2444375		2444376		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92621107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Alkalinity, Total as CaCO3	mg/L	30.2	200	200	237	238	104	104	80-120	0	20	

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92621107

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: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

METHOD BLANK: 3744375 Matrix: Water
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	08/19/22 18:52	
Fluoride	mg/L	ND	0.10	08/19/22 18:52	
Sulfate	mg/L	ND	1.0	08/19/22 18:52	

LABORATORY CONTROL SAMPLE: 3744376

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.4	95	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744377 3744378

Parameter	Units	92621107001		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	7.8	50	50	58.8	59.0	102	102	90-110	0	10			
Fluoride	mg/L	0.12	2.5	2.5	2.5	2.5	94	96	90-110	2	10			
Sulfate	mg/L	5.1	50	50	56.2	56.4	102	102	90-110	0	10			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744379 3744380

Parameter	Units	92621116006		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	3.9	50	50	54.7	55.0	102	102	90-110	1	10			
Fluoride	mg/L	0.12	2.5	2.5	2.4	2.4	92	93	90-110	1	10			
Sulfate	mg/L	38.1	50	50	88.9	89.2	102	102	90-110	0	10			

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QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92621107

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.: 92621107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92621107001	OR-0.8	EPA 245.1	718660	EPA 245.1	718713
92621107002	OR-0.3	EPA 245.1	718660	EPA 245.1	718713
92621107003	OR-0.1	EPA 245.1	718660	EPA 245.1	718713
92621107004	OR+0.25	EPA 245.1	718660	EPA 245.1	718713
92621107005	BC-0.1	EPA 245.1	718660	EPA 245.1	718713
92621107001	OR-0.8	EPA 3010A	718462	EPA 6010D	718518
92621107002	OR-0.3	EPA 3010A	718462	EPA 6010D	718518
92621107003	OR-0.1	EPA 3010A	718462	EPA 6010D	718518
92621107004	OR+0.25	EPA 3010A	718462	EPA 6010D	718518
92621107005	BC-0.1	EPA 3010A	718462	EPA 6010D	718518
92621107001	OR-0.8	EPA 3005A	718742	EPA 6020B	718842
92621107002	OR-0.3	EPA 3005A	718742	EPA 6020B	718842
92621107003	OR-0.1	EPA 3005A	718742	EPA 6020B	718842
92621107004	OR+0.25	EPA 3005A	718742	EPA 6020B	718842
92621107005	BC-0.1	EPA 3005A	718742	EPA 6020B	718842
92621107001	OR-0.8	SM 2540C-2015	718207		
92621107002	OR-0.3	SM 2540C-2015	718207		
92621107003	OR-0.1	SM 2540C-2015	718207		
92621107004	OR+0.25	SM 2540C-2015	718207		
92621107005	BC-0.1	SM 2540C-2015	718207		
92621107001	OR-0.8	SM 2320B	424462		
92621107002	OR-0.3	SM 2320B	424462		
92621107003	OR-0.1	SM 2320B	424462		
92621107004	OR+0.25	SM 2320B	424462		
92621107005	BC-0.1	SM 2320B	424462		
92621107001	OR-0.8	EPA 300.0 Rev 2.1 1993	718269		
92621107002	OR-0.3	EPA 300.0 Rev 2.1 1993	718269		
92621107003	OR-0.1	EPA 300.0 Rev 2.1 1993	718269		
92621107004	OR+0.25	EPA 300.0 Rev 2.1 1993	718269		
92621107005	BC-0.1	EPA 300.0 Rev 2.1 1993	718269		

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Arcadis

Project #:

WO#: 92621107

PM: MP

Due Date: 08/24/22

CLIENT: GA-ArcadAtI

Courier: Fed Ex UPS USPS Client Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *8/17/22*
COB

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

TR Gun ID:

214

Type of Ice:

Wet Blue None

Cooler Temp:

4.8

Correction Factor:

Add/Subtract (°C) *0.0*

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): *4.8*

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9. <i>Sample BC - 0.3 Not present</i>
-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 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92621107

Project #

PM: MP

Due Date: 08/24/22

CLIENT: GA-ArcadAt1

*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-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1	2	1																											
2	2	1																											
3	2	1																											
4	2	1																											
5	1	1																											
6																													
7																													
8																													
9																													
10																													
11																													
12																													

BRIN

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.

December 12, 2022

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

RE: Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621114

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 - Greensburg

(Greensburg, Pa) - Revision 1 - This report replaces the September 12, 2022 report. This project was revised on December 12, 2022 to add Radium Calculations.

Rev. 1 - This replaces the September 12, 2022 final report. This report was revised to report Radium 226+228, per client request. No other changes were made to this report.

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

Sincerely,



Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Ben Hodges, Georgia Power
Warren Johnson, ARCADIS - Atlanta
Laura Midkiff, Georgia Power

Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621114

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621114

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92621114001	OR-0.8	Water	08/16/22 10:15	08/17/22 13:00
92621114002	OR-0.3	Water	08/16/22 11:00	08/17/22 13:00
92621114003	OR-0.1	Water	08/16/22 11:25	08/17/22 13:00
92621114004	OR+0.25	Water	08/16/22 12:30	08/17/22 13:00
92621114005	BC-0.1	Water	08/16/22 12:20	08/17/22 13:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621114

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92621114001	OR-0.8	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92621114002	OR-0.3	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92621114003	OR-0.1	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92621114004	OR+0.25	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92621114005	BC-0.1	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621114

Sample: OR-0.8 **Lab ID: 92621114001** Collected: 08/16/22 10:15 Received: 08/17/22 13:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	-0.240 ± 0.470 (1.13) C:NA T:101%	pCi/L	09/03/22 16:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.160 ± 0.405 (0.909) C:75% T:86%	pCi/L	09/09/22 18:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.160 ± 0.875 (2.04)	pCi/L	12/12/22 09:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621114

Sample: OR-0.3 **Lab ID: 92621114002** Collected: 08/16/22 11:00 Received: 08/17/22 13:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	0.222 ± 0.523 (0.969) C:NA T:96%	pCi/L	09/03/22 16:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.223 ± 0.541 (1.21) C:65% T:86%	pCi/L	09/09/22 18:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.445 ± 1.06 (2.18)	pCi/L	12/12/22 09:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621114

Sample: OR-0.1 **Lab ID: 92621114003** Collected: 08/16/22 11:25 Received: 08/17/22 13:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.367 ± 0.559 (0.962) C:NA T:104%	pCi/L	09/03/22 16:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.341 ± 0.419 (0.886) C:68% T:82%	pCi/L	09/09/22 15:02	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.708 ± 0.978 (1.85)	pCi/L	12/12/22 09:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621114

Sample: OR+0.25 **Lab ID: 92621114004** Collected: 08/16/22 12:30 Received: 08/17/22 13:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	-0.606 ± 0.475 (1.26) C:NA T:105%	pCi/L	09/03/22 16:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.148 ± 0.383 (0.854) C:74% T:87%	pCi/L	09/09/22 15:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.148 ± 0.858 (2.11)	pCi/L	12/12/22 09:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621114

Sample: BC-0.1 **Lab ID: 92621114005** Collected: 08/16/22 12:20 Received: 08/17/22 13:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	0.000 ± 0.537 (1.12) C:NA T:104%	pCi/L	09/03/22 16:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.474 ± 0.412 (0.829) C:71% T:86%	pCi/L	09/09/22 15:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.474 ± 0.949 (1.95)	pCi/L	12/12/22 09:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621114

QC Batch: 528128

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92621114001, 92621114002, 92621114003, 92621114004, 92621114005

METHOD BLANK: 2562215

Matrix: Water

Associated Lab Samples: 92621114001, 92621114002, 92621114003, 92621114004, 92621114005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0561 ± 0.256 (0.152) C:NA T:97%	pCi/L	09/03/22 16:15	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621114

QC Batch: 528130

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92621114001, 92621114002, 92621114003, 92621114004, 92621114005

METHOD BLANK: 2562222

Matrix: Water

Associated Lab Samples: 92621114001, 92621114002, 92621114003, 92621114004, 92621114005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.344 ± 0.314 (0.636) C:78% T:95%	pCi/L	09/09/22 15:02	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621114

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621114

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92621114001	OR-0.8	EPA 903.1	528128		
92621114002	OR-0.3	EPA 903.1	528128		
92621114003	OR-0.1	EPA 903.1	528128		
92621114004	OR+0.25	EPA 903.1	528128		
92621114005	BC-0.1	EPA 903.1	528128		
92621114001	OR-0.8	EPA 904.0	528130		
92621114002	OR-0.3	EPA 904.0	528130		
92621114003	OR-0.1	EPA 904.0	528130		
92621114004	OR+0.25	EPA 904.0	528130		
92621114005	BC-0.1	EPA 904.0	528130		
92621114001	OR-0.8	Total Radium Calculation	553014		
92621114002	OR-0.3	Total Radium Calculation	553014		
92621114003	OR-0.1	Total Radium Calculation	553014		
92621114004	OR+0.25	Total Radium Calculation	553014		
92621114005	BC-0.1	Total Radium Calculation	553014		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Arcadis

Project #

WO#: 92621114

PM: MP

Due Date: 09/08/22

CLIENT: GA-ArcadAt1

Courier: Fed Ex UPS USPS Client Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *8/17/22*
COH

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID: 214

Type of Ice: Wet Blue None

Cooler Temp: 4.8

Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 4.8

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9.	<i>BB = 0.3 not present</i>
-Includes Date/Time/ID/Analysis Matrix: <i>W 8/17/22</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: _____



Effective Date: 05/12/2022

WO#: 92621114

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

PM: MP Due Date: 09/08/22

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT: GA-ArcadAt1

**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-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		2	1																										
2		2	1																										
3		1	1																										
4		2	1																										
5		1	1																										
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	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 02, 2023

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

RE: Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Dear Kelley Sharpe:

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

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Green Bay
- Pace Analytical Services - Peachtree Corners, GA

Rev. 1 - This replaces the August 26, 2022 final report. This report was revised to report Cobalt (EPA 6020/Metals) per client request. No other changes were made to this report.

Rev. 2 - This replaces the January 24, 2023 final report. This report was revised to report additional Metals (EPA 6020) per client request. No other changes were made to this report.

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

Sincerely,



Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Ben Hodges, Georgia Power

Warren Johnson, ARCADIS - Atlanta
Laura Midkiff, Georgia Power



REPORT OF LABORATORY ANALYSIS

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February 02, 2023
Page 2

cc: Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150

South Carolina Certification #: 83006001
Texas Certification #: T104704529-21-8
Virginia VELAP Certification ID: 11873
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-21-00008
Federal Fish & Wildlife Permit #: 51774A

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92621120001	BC-0.8a	Water	08/16/22 15:55	08/17/22 13:00
92621120002	BC-0.3	Water	08/16/22 11:55	08/17/22 13:00
92621120003	BC-0.5.5	Water	08/16/22 16:15	08/17/22 13:00
92621120004	BC-0.5.6	Water	08/16/22 16:05	08/17/22 13:00
92621120005	BC-0.5.7	Water	08/16/22 16:25	08/17/22 13:00
92621120006	BC-BR	Water	08/16/22 17:00	08/17/22 13:00

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92621120001	BC-0.8a	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120002	BC-0.3	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120003	BC-0.5.5	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120004	BC-0.5.6	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120005	BC-0.5.7	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120006	BC-BR	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-G = Pace Analytical Services - Green Bay

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-0.8a		Lab ID: 92621120001		Collected: 08/16/22 15:55	Received: 08/17/22 13:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	2.3	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:17	7440-09-7	
Sodium	8.7	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:17	7440-23-5	
Calcium	9.7	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:17	7440-70-2	
Magnesium	4.3	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:17	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 17:40	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 17:40	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 17:40	7439-93-2	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	89.9	mg/L	25.0	1		08/19/22 08:47		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Green Bay						
Alkalinity, Total as CaCO ₃	46.5	mg/L	10.0	1		08/25/22 22:18		
Alkalinity, Bicarbonate (CaCO ₃)	46.5	mg/L	10.0	1		08/25/22 22:18		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	7.7	mg/L	1.0	1		08/20/22 10:29	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/20/22 10:29	16984-48-8	
Sulfate	4.1	mg/L	1.0	1		08/20/22 10:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

Sample: BC-0.3		Lab ID: 92621120002	Collected: 08/16/22 11:55	Received: 08/17/22 13:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	2.3	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:22	7440-09-7	
Sodium	7.5	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:22	7440-23-5	
Calcium	9.6	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:22	7440-70-2	
Magnesium	4.1	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:22	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 18:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-38-2	
Barium	0.028	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 18:02	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:02	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 18:02	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-48-4	
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 18:02	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 18:02	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 18:02	7440-28-0	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	90.9	mg/L	25.0	1		08/19/22 08:47		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Green Bay						
Alkalinity, Total as CaCO ₃	44.6	mg/L	10.0	1		08/25/22 22:24		
Alkalinity, Bicarbonate (CaCO ₃)	44.6	mg/L	10.0	1		08/25/22 22:24		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	7.0	mg/L	1.0	1		08/20/22 10:44	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/20/22 10:44	16984-48-8	
Sulfate	5.4	mg/L	1.0	1		08/20/22 10:44	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-0.5.5		Lab ID: 92621120003		Collected: 08/16/22 16:15	Received: 08/17/22 13:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	2.4	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:27	7440-09-7	
Sodium	8.6	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:27	7440-23-5	
Calcium	10.3	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:27	7440-70-2	
Magnesium	4.5	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:27	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:08	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:08	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:08	7439-93-2	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	85.9	mg/L	25.0	1		08/19/22 08:47		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Green Bay						
Alkalinity, Total as CaCO ₃	48.5	mg/L	10.0	1		08/25/22 22:30		
Alkalinity, Bicarbonate (CaCO ₃)	48.5	mg/L	10.0	1		08/25/22 22:30		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	7.7	mg/L	1.0	1		08/20/22 10:58	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/20/22 10:58	16984-48-8	
Sulfate	5.6	mg/L	1.0	1		08/20/22 10:58	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-0.5.6		Lab ID: 92621120004		Collected: 08/16/22 16:05	Received: 08/17/22 13:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	2.4	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:41	7440-09-7	
Sodium	8.7	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:41	7440-23-5	
Calcium	10.5	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:41	7440-70-2	
Magnesium	4.6	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:41	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:14	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:14	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:14	7439-93-2	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	83.9	mg/L	25.0	1		08/19/22 08:48		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Green Bay						
Alkalinity, Total as CaCO ₃	47.3	mg/L	10.0	1		08/25/22 22:35		
Alkalinity, Bicarbonate (CaCO ₃)	47.3	mg/L	10.0	1		08/25/22 22:35		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	7.9	mg/L	1.0	1		08/20/22 11:13	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/20/22 11:13	16984-48-8	
Sulfate	6.2	mg/L	1.0	1		08/20/22 11:13	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-0.5.7		Lab ID: 92621120005		Collected: 08/16/22 16:25	Received: 08/17/22 13:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	2.4	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:46	7440-09-7	
Sodium	8.5	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:46	7440-23-5	
Calcium	10.1	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:46	7440-70-2	
Magnesium	4.4	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:46	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:20	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:20	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:20	7439-93-2	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	90.9	mg/L	25.0	1		08/19/22 08:49		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Green Bay						
Alkalinity, Total as CaCO ₃	47.6	mg/L	10.0	1		08/25/22 22:55		
Alkalinity, Bicarbonate (CaCO ₃)	47.6	mg/L	10.0	1		08/25/22 22:55		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	7.7	mg/L	1.0	1		08/20/22 11:27	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/20/22 11:27	16984-48-8	
Sulfate	4.3	mg/L	1.0	1		08/20/22 11:27	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

Sample: BC-BR		Lab ID: 92621120006	Collected: 08/16/22 17:00	Received: 08/17/22 13:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.4	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:50	7440-09-7	
Sodium	8.2	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:50	7440-23-5	
Calcium	10.2	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:50	7440-70-2	
Magnesium	4.5	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:50	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:26	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:26	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:26	7439-93-2	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	84.9	mg/L	25.0	1		08/19/22 08:49		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	49.8	mg/L	10.0	1		08/25/22 23:00		
Alkalinity,Bicarbonate (CaCO ₃)	49.8	mg/L	10.0	1		08/25/22 23:00		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	7.7	mg/L	1.0	1		08/20/22 11:42	16887-00-6	
Fluoride	0.11	mg/L	0.10	1		08/20/22 11:42	16984-48-8	
Sulfate	5.8	mg/L	1.0	1		08/20/22 11:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

QC Batch: 718462 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3745239 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	08/19/22 22:26	
Magnesium	mg/L	ND	0.050	08/19/22 22:26	
Potassium	mg/L	ND	0.20	08/19/22 22:26	
Sodium	mg/L	ND	1.0	08/19/22 22:26	

LABORATORY CONTROL SAMPLE: 3745240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.0	105	80-120	
Potassium	mg/L	1	1.1	112	80-120	
Sodium	mg/L	1	.98J	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745241 3745242

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618822019 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	585	1	1	578	584	-696	-94	75-125	1	20 M1
Magnesium	mg/L	54.4	1	1	54.7	53.9	22	-53	75-125	1	20 M1
Potassium	mg/L	11.9	1	1	12.9	12.7	102	84	75-125	1	20
Sodium	mg/L	11.7	1	1	12.7	12.5	94	80	75-125	1	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

QC Batch: 718742 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3746438 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	08/23/22 14:54	
Arsenic	mg/L	ND	0.0050	08/23/22 14:54	
Barium	mg/L	ND	0.0050	08/23/22 14:54	
Beryllium	mg/L	ND	0.00050	08/23/22 14:54	
Boron	mg/L	ND	0.040	08/23/22 14:54	
Cadmium	mg/L	ND	0.00050	08/23/22 14:54	
Chromium	mg/L	ND	0.0050	08/23/22 14:54	
Cobalt	mg/L	ND	0.0050	08/23/22 14:54	
Lead	mg/L	ND	0.0010	08/23/22 14:54	
Lithium	mg/L	ND	0.030	08/23/22 14:54	
Molybdenum	mg/L	ND	0.010	08/23/22 14:54	
Selenium	mg/L	ND	0.0050	08/23/22 14:54	
Thallium	mg/L	ND	0.0010	08/23/22 14:54	

LABORATORY CONTROL SAMPLE: 3746439

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.096	96	80-120	
Molybdenum	mg/L	0.1	0.10	105	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746747 3746748

Parameter	Units	92620540002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.11	0.1	0.11	113	113	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.10	0.1	0.10	100	102	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746747 3746748												
Parameter	Units	92620540002		MS	MSD	MS		MSD		% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec			
Barium	mg/L	57.0 ug/L	0.1	0.1	0.16	0.16	105	106	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20	
Boron	mg/L	6870 ug/L	1	1	7.9	7.8	100	95	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	99	102	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	98	97	75-125	1	20	
Cobalt	mg/L	26.1 ug/L	0.1	0.1	0.12	0.12	96	97	75-125	0	20	
Lead	mg/L	ND	0.1	0.1	0.088	0.090	88	90	75-125	2	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.11	96	98	75-125	2	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	0	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	99	102	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.092	0.093	92	93	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

QC Batch: 718207 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3744034 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	08/19/22 08:45	

LABORATORY CONTROL SAMPLE: 3744035

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	380	95	80-120	

SAMPLE DUPLICATE: 3744037

Parameter	Units	92621116005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	105	108	3	25	

SAMPLE DUPLICATE: 3744488

Parameter	Units	92621107001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	56.9	62.9	10	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

QC Batch: 424462 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 2444373 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	08/25/22 20:22	

LABORATORY CONTROL SAMPLE: 2444374

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	200	207	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2444375 2444376

Parameter	Units	2444375		2444376		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92621107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO3	mg/L	30.2	200	200	237	238	104	104	80-120	0	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92621120

QC Batch: 718269 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3744375 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	08/19/22 18:52	
Fluoride	mg/L	ND	0.10	08/19/22 18:52	
Sulfate	mg/L	ND	1.0	08/19/22 18:52	

LABORATORY CONTROL SAMPLE: 3744376

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.4	95	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744377 3744378

Parameter	Units	92621107001		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	7.8	50	50	58.8	59.0	102	102	90-110	0	10			
Fluoride	mg/L	0.12	2.5	2.5	2.5	2.5	94	96	90-110	2	10			
Sulfate	mg/L	5.1	50	50	56.2	56.4	102	102	90-110	0	10			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744379 3744380

Parameter	Units	92621116006		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	3.9	50	50	54.7	55.0	102	102	90-110	1	10			
Fluoride	mg/L	0.12	2.5	2.5	2.4	2.4	92	93	90-110	1	10			
Sulfate	mg/L	38.1	50	50	88.9	89.2	102	102	90-110	0	10			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92621120

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92621120001	BC-0.8a	EPA 3010A	718462	EPA 6010D	718518
92621120002	BC-0.3	EPA 3010A	718462	EPA 6010D	718518
92621120003	BC-0.5.5	EPA 3010A	718462	EPA 6010D	718518
92621120004	BC-0.5.6	EPA 3010A	718462	EPA 6010D	718518
92621120005	BC-0.5.7	EPA 3010A	718462	EPA 6010D	718518
92621120006	BC-BR	EPA 3010A	718462	EPA 6010D	718518
92621120001	BC-0.8a	EPA 3005A	718742	EPA 6020B	718842
92621120002	BC-0.3	EPA 3005A	718742	EPA 6020B	718842
92621120003	BC-0.5.5	EPA 3005A	718742	EPA 6020B	718842
92621120004	BC-0.5.6	EPA 3005A	718742	EPA 6020B	718842
92621120005	BC-0.5.7	EPA 3005A	718742	EPA 6020B	718842
92621120006	BC-BR	EPA 3005A	718742	EPA 6020B	718842
92621120001	BC-0.8a	SM 2540C-2015	718207		
92621120002	BC-0.3	SM 2540C-2015	718207		
92621120003	BC-0.5.5	SM 2540C-2015	718207		
92621120004	BC-0.5.6	SM 2540C-2015	718207		
92621120005	BC-0.5.7	SM 2540C-2015	718207		
92621120006	BC-BR	SM 2540C-2015	718207		
92621120001	BC-0.8a	SM 2320B	424462		
92621120002	BC-0.3	SM 2320B	424462		
92621120003	BC-0.5.5	SM 2320B	424462		
92621120004	BC-0.5.6	SM 2320B	424462		
92621120005	BC-0.5.7	SM 2320B	424462		
92621120006	BC-BR	SM 2320B	424462		
92621120001	BC-0.8a	EPA 300.0 Rev 2.1 1993	718269		
92621120002	BC-0.3	EPA 300.0 Rev 2.1 1993	718269		
92621120003	BC-0.5.5	EPA 300.0 Rev 2.1 1993	718269		
92621120004	BC-0.5.6	EPA 300.0 Rev 2.1 1993	718269		
92621120005	BC-0.5.7	EPA 300.0 Rev 2.1 1993	718269		
92621120006	BC-BR	EPA 300.0 Rev 2.1 1993	718269		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Arcadis

Project #

WO#: 92621120

PM: MP

Due Date: 08/24/22

CLIENT: GA-ArcadAtI

Courier: Fed Ex UPS USPS Client Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *8/17/22*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID: *214*

Type of Ice: Wet Blue None

Cooler Temp: *4.8* Correction Factor: Add/Subtract (°C) *0.0*

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): *4.8*

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <i>W</i>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____

*Check mark top half of box if pH and/or dechlorination is verified and Project #

within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	1	2	3	4	5	6	7	8	9	10	11	12
BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	2											
BP3U-250 mL Plastic Unpreserved (N/A)	2											
BP2U-500 mL Plastic Unpreserved (N/A)	1											
BP1U-1 liter Plastic Unpreserved (N/A)	1											
BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	1											
BP3N-250 mL plastic HNO3 (pH < 2)	1											
BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	1											
BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	1											
WGFU-Wide-mouthed Glass Jar Unpreserved												
AG1U-1 liter Amber Unpreserved (N/A) (Cl-)												
AG1H-1 liter Amber HCl (pH < 2)												
AG3U-250 mL Amber Unpreserved (N/A) (Cl-)												
AG1S-1 liter Amber H2SO4 (pH < 2)												
AG3S-250 mL Amber H2SO4 (pH < 2)												
DG94-250 mL Amber NH4Cl (N/A)(Cl-)												
DG9H-40 mL VOA HCl (N/A)												
VG9T-40 mL VOA Na2S2O3 (N/A)												
VG9U-40 mL VOA Unpreserved (N/A)												
DG9V-40 mL VOA H3PO4 (N/A)												
DG9S-40 mL VOA H2SO4 (N/A)												
V/GK (3 vials per kit)-VPH/Gas kit (N/A)												
SP5T-125 mL Sterile Plastic (N/A - lab)												
SP2T-250 mL Sterile Plastic (N/A - lab)												
BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)												
AG0U-100 mL Amber Unpreserved (N/A) (Cl-)												
VSGU-20 mL Scintillation vials (N/A)												
DG9U-40 mL Amber Unpreserved vials (N/A)												

pH Adjustment Log for Preserved Samples

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

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

February 17, 2023

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

Re: Arkwright CCR Groundwater Compliance AP1
Work Order: 609413

Dear Joju Abraham:

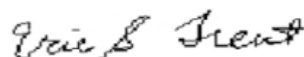
GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 03, 2023. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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,



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: 609413 GEL Work Order: 609413

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 _____

Erin L. Trent

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 ComplianceAP1

Client Sample ID: ARK-AP1-FB-02 Project: GPCC00100
Sample ID: 609413001 Client ID: GPCC001
Matrix: WQ
Collect Date: 01-FEB-23 09:30
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	U	ND	0.0670	0.200	mg/L		1	HXC1	02/03/23	1941	2378595	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		0.504	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	1120	2378873	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/11/23	2201	2378597	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
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	02/08/23	1114	2379677	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378872

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 ComplianceAP1

Client Sample ID: ARK-AP1-FB-02
Sample ID: 609413001

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	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 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 ComplianceAP1

Client Sample ID: ARK-AP1GWA-1 Project: GPCC00100
Sample ID: 609413002 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 10:10
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		5.55			SU			EOS1	02/01/23	1010	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		1.98	0.0670	0.200	mg/L		1	HXC1	02/03/23	2010	2378595	2
Fluoride		0.288	0.0330	0.100	mg/L		1					
Sulfate		43.6	0.665	2.00	mg/L		5	HXC1	02/04/23	1006	2378595	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	1121	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/13/23	1608	2378597	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0571	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.00103	0.000200	0.000500	mg/L	1.00	1					
Boron		0.0954	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		16.7	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00448	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00334	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00633	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	J	0.00304	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		112	2.38	10.0	mg/L			CH6	02/08/23	1114	2379677	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378872

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 ComplianceAPI

Client Sample ID: ARK-AP1GWA-1
Sample ID: 609413002

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 7470A											
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 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 ComplianceAP1

Client Sample ID: ARK-AP1-EB-02 Project: GPCC00100
Sample ID: 609413003 Client ID: GPCC001
Matrix: WQ
Collect Date: 01-FEB-23 10:45
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	U	ND	0.0670	0.200	mg/L		1	HXC1	02/03/23	2040	2378595	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	1123	2378873	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/11/23	2230	2378597	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
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 02/08/23 1114 2379677 4

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	2378872
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596

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 ComplianceAP1

Client Sample ID: ARK-AP1-EB-02
Sample ID: 609413003

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	SM 2540C										

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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-1 Project: GPCC00100
Sample ID: 609413004 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 11:50
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	02/01/23	1150	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		106	1.33	4.00	mg/L		10	HXC1	02/04/23	1036	2378595	2
Chloride		2.45	0.0670	0.200	mg/L		1	HXC1	02/03/23	2110	2378595	3
Fluoride		0.141	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	1128	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.348	0.0260	0.0750	mg/L	1.00	5	PRB	02/11/23	2234	2378597	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/11/23	2350	2378597	6
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0417	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		32.9	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000836	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00412	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000721	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		207	2.38	10.0	mg/L			CH6	02/08/23	1114	2379677	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378872

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 ComplianceAP1

Client Sample ID: ARK-AP1GWA-2 Project: GPCC00100
Sample ID: 609413005 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 11:55
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		6.08			SU			EOS1	02/01/23	1155	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.09	0.0670	0.200	mg/L		1	HXC1	02/03/23	2140	2378595	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		1.67	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	1130	2378873	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	02/12/23	1248	2378597	4
Boron	J	0.00973	0.00520	0.0150	mg/L	1.00	1					
Calcium		4.50	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00868	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/11/23	2238	2378597	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0302	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		0.00146	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		38.0	2.38	10.0	mg/L			CH6	02/08/23	1114	2379677	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378872

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 ComplianceAPI

Client Sample ID: ARK-AP1GWA-2
Sample ID: 609413005

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	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

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 ComplianceAP1

Client Sample ID: ARK-AP1-FD-01 Project: GPCC00100
Sample ID: 609413006 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 12:00
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"												
Sulfate		2410	26.6	80.0	mg/L		200	HXC1	02/04/23	1449	2378595	1
Chloride		8.08	0.0670	0.200	mg/L		1	HXC1	02/03/23	2210	2378595	2
Fluoride	J	0.0619	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	1132	2378873	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		7.66	0.520	1.50	mg/L	1.00	100	PRB	02/11/23	2241	2378597	4
Calcium		476	8.00	20.0	mg/L	1.00	100					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/11/23	2354	2378597	5
Arsenic	J	0.00236	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0215	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.000776	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		0.405	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00895	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		3120	23.8	100	mg/L			CH6	02/08/23	1114	2379677	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	2378872
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596

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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 ComplianceAPI

Client Sample ID: ARK-API-FD-01
Sample ID: 609413006

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
The following Analytical Methods were performed:												
Method	Description		Analyst Comments									
1	EPA 300.0											
2	EPA 300.0											
3	SW846 7470A											
4	SW846 3005A/6020B											
5	SW846 3005A/6020B											
6	SM 2540C											

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: February 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 ComplianceAP1

Client Sample ID: ARK-AP1-FD-02 Project: GPCC00100
Sample ID: 609413007 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 12:00
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"												
Sulfate		1380	26.6	80.0	mg/L		200	HXC1	02/04/23	1519	2378595	1
Chloride		5.07	0.0670	0.200	mg/L		1	HXC1	02/03/23	2240	2378595	2
Fluoride		0.202	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	1134	2378873	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		4.01	0.520	1.50	mg/L	1.00	100	PRB	02/11/23	2245	2378597	4
Calcium		394	8.00	20.0	mg/L	1.00	100					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/11/23	2357	2378597	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0390	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	0.000739	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00628	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00350	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		2120	7.93	33.3	mg/L			CH6	02/08/23	1114	2379677	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378872

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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 ComplianceAP1

Client Sample ID: ARK-AP1-FD-02
Sample ID: 609413007

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	EPA 300.0		
3	SW846 7470A		
4	SW846 3005A/6020B		
5	SW846 3005A/6020B		
6	SM 2540C		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: February 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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-2 Project: GPCC00100
Sample ID: 609413008 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 13:45
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		6.28			SU			EOS1	02/01/23	1345	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		574	6.65	20.0	mg/L		50	HXC1	02/04/23	1549	2378595	2
Chloride		3.31	0.0670	0.200	mg/L		1	HXC1	02/04/23	0139	2378595	3
Fluoride	J	0.0811	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	1135	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/12/23	0001	2378597	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0193	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	J	0.000348	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0858	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0153	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.385	0.0520	0.150	mg/L	1.00	10	PRB	02/11/23	2249	2378597	6
Calcium		142	0.800	2.00	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		851	2.38	10.0	mg/L			CH6	02/08/23	1114	2379677	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378872

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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 ComplianceAPI

Client Sample ID: ARK-AP1PZ-2
Sample ID: 609413008

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 7470A										
5	SW846 3005A/6020B										
6	SW846 3005A/6020B										
7	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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-6 Project: GPCC00100
Sample ID: 609413009 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 13:55
Receive Date: 03-FEB-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.45			SU			EOS1	02/01/23	1355	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		2380	26.6	80.0	mg/L	200	HXC1	02/04/23	1619	2378595		2
Chloride		8.13	0.0670	0.200	mg/L	1	HXC1	02/04/23	0209	2378595		3
Fluoride	J	0.0718	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	1137	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/12/23	0005	2378597	5
Arsenic	J	0.00249	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0225	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.000829	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		0.421	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00849	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		7.69	0.520	1.50	mg/L	1.00	100	PRB	02/11/23	2252	2378597	6
Calcium		494	8.00	20.0	mg/L	1.00	100					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		3800	23.8	100	mg/L			CH6	02/08/23	1115	2380460	7

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	2378872
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596

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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-10	Project: GPCC00100
Sample ID: 609413010	Client ID: GPCC001
Matrix: WG	
Collect Date: 01-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		6.38			SU			EOS1	02/01/23	1428	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		238	2.66	8.00	mg/L		20	HXC1	02/04/23	1649	2378595	2
Chloride		8.01	0.0670	0.200	mg/L		1	HXC1	02/04/23	0238	2378595	3
Fluoride		0.482	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	1139	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.349	0.0520	0.150	mg/L	1.00	10	PRB	02/11/23	2256	2378597	5
Calcium		85.9	0.800	2.00	mg/L	1.00	10					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/12/23	0008	2378597	6
Arsenic	J	0.00294	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0316	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		0.00125	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0148	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00257	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		498	2.38	10.0	mg/L			CH6	02/08/23	1115	2380460	7

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	2378872
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596

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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 ComplianceAPI

Client Sample ID: ARK-AP1PZ-10
Sample ID: 609413010

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	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		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: 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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-4 Project: GPCC00100
Sample ID: 609413011 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 15:40
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		6.47			SU			EOS1	02/01/23	1540	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		1380	26.6	80.0	mg/L		200	HXC1	02/04/23	1719	2378595	2
Chloride		5.15	0.0670	0.200	mg/L		1	HXC1	02/04/23	0308	2378595	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	1140	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/12/23	0019	2378597	5
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					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000752	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00621	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00360	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		3.99	0.260	0.750	mg/L	1.00	50	PRB	02/11/23	2259	2378597	6
Calcium		394	4.00	10.0	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2190	7.93	33.3	mg/L			CH6	02/08/23	1115	2380460	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378872

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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 ComplianceAPI

Client Sample ID: ARK-AP1PZ-4
Sample ID: 609413011

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	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		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: 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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-11 Project: GPCC00100
Sample ID: 609413012 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 15:48
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		6.83			SU			EOS1	02/01/23	1548	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		1.16	0.0670	0.200	mg/L	1	HXC1	02/04/23	0338	2378595		2
Fluoride		0.124	0.0330	0.100	mg/L	1						
Sulfate		44.7	0.665	2.00	mg/L	5	HXC1	02/04/23	1748	2378595		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	1142	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/11/23	2310	2378597	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0196	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron		0.166	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		24.6	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		0.00170	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		170	2.38	10.0	mg/L			CH6	02/08/23	1115	2380460	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378872

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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 ComplianceAPI

Client Sample ID: ARK-AP1PZ-11
Sample ID: 609413012

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	SM 4500-H B/SW846 9040C, SM 2550B		
2	EPA 300.0		
3	EPA 300.0		
4	SW846 7470A		
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 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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-7 Project: GPCC00100
Sample ID: 609413013 Client ID: GPCC001
Matrix: WG
Collect Date: 01-FEB-23 16:00
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		6.51			SU			EOS1	02/01/23	1600	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.83	0.0670	0.200	mg/L		1	HXC1	02/04/23	0408	2378595	2
Fluoride	J	0.0931	0.0330	0.100	mg/L		1					
Sulfate		1390	13.3	40.0	mg/L		100	HXC1	02/04/23	1818	2378595	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	1144	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		2.53	0.260	0.750	mg/L	1.00	50	PRB	02/11/23	2318	2378597	5
Calcium		347	4.00	10.0	mg/L	1.00	50					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/12/23	0023	2378597	6
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0409	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		0.00204	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		2060	7.93	33.3	mg/L			CH6	02/08/23	1115	2380460	7

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	2378872
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596

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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 ComplianceAPI

Client Sample ID: ARK-AP1PZ-7
Sample ID: 609413013

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 7470A											
5	SW846 3005A/6020B											
6	SW846 3005A/6020B											
7	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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-8 Project: GPCC00100
Sample ID: 609413014 Client ID: GPCC001
Matrix: WG
Collect Date: 02-FEB-23 10:10
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		6.60			SU			EOS1	02/02/23	1010	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.67	0.0670	0.200	mg/L	1	HXC1	02/04/23	0438	2378595		2
Fluoride		0.215	0.0330	0.100	mg/L	1						
Sulfate		702	13.3	40.0	mg/L	100	HXC1	02/04/23	1848	2378595		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	1149	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/12/23	0026	2378597	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0464	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	0.000677	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00351	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.510	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		2.90	0.260	0.750	mg/L	1.00	50	PRB	02/11/23	2321	2378597	6
Calcium		305	4.00	10.0	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2800	4.76	20.0	mg/L			CH6	02/09/23	1328	2381199	7

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	2378872
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596

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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 ComplianceAPI

Client Sample ID: ARK-AP1PZ-8
Sample ID: 609413014

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 7470A											
5	SW846 3005A/6020B											
6	SW846 3005A/6020B											
7	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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-9 Project: GPCC00100
Sample ID: 609413015 Client ID: GPCC001
Matrix: WG
Collect Date: 02-FEB-23 10:13
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		4.62			SU			EOS1	02/02/23	1013	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		336	5.32	16.0	mg/L	40	HXC1	02/04/23	2118	2378595		2
Chloride		6.96	0.0670	0.200	mg/L	1	HXC1	02/04/23	0737	2378595		3
Fluoride		0.733	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	1151	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.742	0.0520	0.150	mg/L	1.00	10	PRB	02/11/23	2325	2378597	5
Calcium		71.0	0.800	2.00	mg/L	1.00	10					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/12/23	0030	2378597	6
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0247	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.000670	0.000200	0.000500	mg/L	1.00	1					
Cadmium		0.00113	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.113	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.159	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000667	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		563	2.38	10.0	mg/L			CH6	02/09/23	1400	2381200	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	02/06/23	1118	2378872

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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 ComplianceAPI

Client Sample ID: ARK-AP1PZ-9
Sample ID: 609413015

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	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		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: 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 ComplianceAP1

Client Sample ID: ARK-AP1-FB-01 Project: GPCC00100
Sample ID: 609413016 Client ID: GPCC001
Matrix: WQ
Collect Date: 02-FEB-23 10:45
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	U	ND	0.0670	0.200	mg/L		1	HXC1	02/04/23	0807	2378595	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	1153	2378873	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/11/23	2328	2378597	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
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 4

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	2378872
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596

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 ComplianceAP1

Client Sample ID: ARK-AP1-FB-01
Sample ID: 609413016

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	SM 2540C											

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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-5 Project: GPCC00100
Sample ID: 609413017 Client ID: GPCC001
Matrix: WG
Collect Date: 02-FEB-23 12:33
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	1233	2378396	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		2060	26.6	80.0	mg/L		200	HXC1	02/04/23	2147	2378595	2
Chloride		7.86	0.0670	0.200	mg/L		1	HXC1	02/04/23	0837	2378595	3
Fluoride		0.258	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	1154	2378873	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/12/23	0034	2378597	5
Arsenic	J	0.00353	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0425	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0258	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.256	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.0323	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		7.22	0.520	1.50	mg/L	1.00	100	PRB	02/11/23	2332	2378597	6
Calcium		593	8.00	20.0	mg/L	1.00	100					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		3140	23.8	100	mg/L			CH6	02/09/23	1400	2381200	7

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	2378872
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596

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 ComplianceAPI

Client Sample ID: ARK-AP1PZ-5
Sample ID: 609413017

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 7470A											
5	SW846 3005A/6020B											
6	SW846 3005A/6020B											
7	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

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 ComplianceAP1

Client Sample ID: ARK-AP1-EB-01 Project: GPCC00100
Sample ID: 609413018 Client ID: GPCC001
Matrix: WQ
Collect Date: 02-FEB-23 13:10
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	U	ND	0.0670	0.200	mg/L		1	HXC1	02/04/23	0907	2378595	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	1156	2378873	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	02/11/23	2336	2378597	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
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 4

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	2378872
SW846 3005A	ICP-MS 3005A PREP	LG2	02/06/23	0840	2378596

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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 ComplianceAPI

Client Sample ID: ARK-API-EB-01
Sample ID: 609413018

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	SM 2540C										

Notes:

Column headers are defined as follows:

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

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QC Summary

Report Date: 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: 609413

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2378595										
QC1205311615	609413004	DUP									
Chloride		2.45		2.44	mg/L	0.209		(0%-20%)	HXC1	02/04/23	00:39
Fluoride		0.141		0.133	mg/L	5.85	^	(+/-0.100)			
Sulfate		106		106	mg/L	0.0179		(0%-20%)		02/04/23	11:06
QC1205311617	609413014	DUP									
Chloride		2.67		2.67	mg/L	0.0412		(0%-20%)		02/04/23	05:08
Fluoride		0.215		0.203	mg/L	6.08	^	(+/-0.100)			
Sulfate		702		700	mg/L	0.193		(0%-20%)		02/04/23	19:18
QC1205311614	LCS										
Chloride	5.00			4.85	mg/L			96.9 (90%-110%)		02/03/23	18:41
Fluoride	2.50			2.62	mg/L			105 (90%-110%)			
Sulfate	10.0			10.0	mg/L			100 (90%-110%)			
QC1205311613	MB										
Chloride			U	ND	mg/L					02/03/23	18:11
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205311616	609413004	PS									
Chloride	5.00	2.45		7.65	mg/L			104 (90%-110%)		02/04/23	01:09

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QC Summary

Workorder: 609413

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2378595										
Fluoride	2.50	0.141		2.65	mg/L		100	(90%-110%)	HXC1	02/04/23	01:09
Sulfate	10.0	10.6		21.4	mg/L		108	(90%-110%)		02/04/23	11:36
QC1205311618	609413014 PS										
Chloride	5.00	2.67		7.86	mg/L		104	(90%-110%)		02/04/23	07:07
Fluoride	2.50	0.215		2.71	mg/L		99.6	(90%-110%)			
Sulfate	10.0	7.02		17.6	mg/L		106	(90%-110%)		02/04/23	20:48
Metals Analysis - ICPMS											
Batch	2378597										
QC1205311620	LCS										
Antimony	0.0500			0.0490	mg/L		97.9	(80%-120%)	PRB	02/11/23	21:58
Arsenic	0.0500			0.0489	mg/L		97.7	(80%-120%)			
Barium	0.0500			0.0481	mg/L		96.2	(80%-120%)			
Beryllium	0.0500			0.0553	mg/L		111	(80%-120%)			
Boron	0.100			0.106	mg/L		106	(80%-120%)			
Cadmium	0.0500			0.0501	mg/L		100	(80%-120%)			
Calcium	2.00			2.06	mg/L		103	(80%-120%)			
Chromium	0.0500			0.0494	mg/L		98.9	(80%-120%)			
Cobalt	0.0500			0.0491	mg/L		98.2	(80%-120%)			

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QC Summary

Workorder: 609413

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378597										
Lead	0.0500			0.0501	mg/L		100	(80%-120%)	PRB	02/11/23	21:58
Lithium	0.0500			0.0515	mg/L		103	(80%-120%)			
Molybdenum	0.0500			0.0506	mg/L		101	(80%-120%)			
Selenium	0.0500			0.0486	mg/L		97.2	(80%-120%)			
Thallium	0.0500			0.0494	mg/L		98.9	(80%-120%)			
QC1205311619 MB											
Antimony			U	ND	mg/L					02/11/23	21:54
Arsenic			U	ND	mg/L						
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L						
Boron			U	ND	mg/L						
Cadmium			U	ND	mg/L						
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						
Cobalt			U	ND	mg/L						
Lead			U	ND	mg/L						

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QC Summary

Workorder: 609413

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378597										
Lithium			U	ND	mg/L				PRB	02/11/23	21:54
Molybdenum			U	ND	mg/L						
Selenium			U	ND	mg/L						
Thallium			U	ND	mg/L						
QC1205311621 609413002 MS											
Antimony	0.0500	U	ND	0.0504	mg/L		101	(75%-125%)		02/13/23	16:20
Arsenic	0.0500	U	ND	0.0526	mg/L		102	(75%-125%)			
Barium	0.0500		0.0571	0.116	mg/L		118	(75%-125%)			
Beryllium	0.0500		0.00103	0.0562	mg/L		110	(75%-125%)			
Boron	0.100		0.0954	0.205	mg/L		109	(75%-125%)			
Cadmium	0.0500	U	ND	0.0527	mg/L		105	(75%-125%)			
Calcium	2.00		16.7	19.2	mg/L		N/A	(75%-125%)			
Chromium	0.0500	J	0.00448	0.0553	mg/L		102	(75%-125%)			
Cobalt	0.0500		0.00334	0.0555	mg/L		104	(75%-125%)			
Lead	0.0500	U	ND	0.0527	mg/L		105	(75%-125%)			
Lithium	0.0500	J	0.00633	0.0589	mg/L		105	(75%-125%)			

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QC Summary

Workorder: 609413

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378597										
Molybdenum	0.0500	U	ND	0.0560	mg/L		112	(75%-125%)	PRB	02/13/23	16:20
Selenium	0.0500	J	0.00304	0.0506	mg/L		95	(75%-125%)			
Thallium	0.0500	U	ND	0.0518	mg/L		104	(75%-125%)			
QC1205311622	609413002 MSD										
Antimony	0.0500	U	ND	0.0511	mg/L	1.32	102	(0%-20%)		02/13/23	16:16
Arsenic	0.0500	U	ND	0.0529	mg/L	0.654	103	(0%-20%)			
Barium	0.0500		0.0571	0.116	mg/L	0.0069	118	(0%-20%)			
Beryllium	0.0500		0.00103	0.0574	mg/L	2.24	113	(0%-20%)			
Boron	0.100		0.0954	0.204	mg/L	0.154	109	(0%-20%)			
Cadmium	0.0500	U	ND	0.0526	mg/L	0.203	105	(0%-20%)			
Calcium	2.00		16.7	19.2	mg/L	0.0458	N/A	(0%-20%)			
Chromium	0.0500	J	0.00448	0.0556	mg/L	0.577	102	(0%-20%)			
Cobalt	0.0500		0.00334	0.0550	mg/L	0.889	103	(0%-20%)			
Lead	0.0500	U	ND	0.0524	mg/L	0.544	105	(0%-20%)			
Lithium	0.0500	J	0.00633	0.0579	mg/L	1.64	103	(0%-20%)			
Molybdenum	0.0500	U	ND	0.0557	mg/L	0.383	111	(0%-20%)			

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QC Summary

Workorder: 609413

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378597										
Selenium	0.0500	J	0.00304	0.0522	mg/L	3.28	98.4	(0%-20%)	PRB	02/13/23	16:16
Thallium	0.0500	U	ND	0.0517	mg/L	0.212	103	(0%-20%)			
QC1205311623	609413002	SDILT									
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		02/13/23	16:23
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Barium			57.1	10.7	ug/L	6.19		(0%-20%)			
Beryllium			1.03	U	ND	ug/L	N/A	(0%-20%)			
Boron			95.4	22.6	ug/L	18.6		(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Calcium			16700	3210	ug/L	3.67		(0%-20%)			
Chromium		J	4.48	U	ND	ug/L	N/A	(0%-20%)			
Cobalt			3.34	J	0.639	ug/L	4.43	(0%-20%)			
Lead		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Lithium		J	6.33	U	ND	ug/L	N/A	(0%-20%)			
Molybdenum		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Selenium		J	3.04	U	ND	ug/L	N/A	(0%-20%)			

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QC Summary

Workorder: 609413

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2378597										
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)	PRB	02/13/23	16:23
Metals Analysis-Mercury											
Batch	2378873										
QC1205312123	609382001	DUP									
Mercury	U	ND	U	ND	mg/L	N/A			JP2	02/07/23	11:13
QC1205312122	LCS										
Mercury	0.00200			0.00208	mg/L		104	(80%-120%)		02/07/23	11:09
QC1205312121	MB										
Mercury			U	ND	mg/L					02/07/23	11:07
QC1205312124	609382001	MS									
Mercury	0.00200	U	ND	0.00201	mg/L		100	(75%-125%)		02/07/23	11:14
QC1205312125	609382001	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		02/07/23	11:16
Solids Analysis											
Batch	2379677										
QC1205313479	609435002	DUP									
Total Dissolved Solids			857	820	mg/L	4.37		(0%-5%)	CH6	02/08/23	11:14
QC1205314103	609211001	DUP									
Total Dissolved Solids			597	602	mg/L	0.834		(0%-5%)		02/08/23	11:14
QC1205313478	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)		02/08/23	11:14
QC1205313477	MB										
Total Dissolved Solids			U	ND	mg/L					02/08/23	11:14

GEL LABORATORIES LLC

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

QC Summary

Workorder: 609413

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2380460	<hr/>									
QC1205314545	609745006	DUP									
Total Dissolved Solids		265		259	mg/L	2.29		(0%-5%)	CH6	02/08/23	11:15
QC1205314544	LCS										
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)		02/08/23	11:15
QC1205314543	MB										
Total Dissolved Solids			U	ND	mg/L					02/08/23	11:15
Batch	2381199	<hr/>									
QC1205315841	609405005	DUP									
Total Dissolved Solids		216		209	mg/L	3.29		(0%-5%)	CH6	02/09/23	13:28
QC1205315840	LCS										
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)		02/09/23	13:28
QC1205315839	MB										
Total Dissolved Solids			U	ND	mg/L					02/09/23	13:28
Batch	2381200	<hr/>									
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

Notes:

The Qualifiers in this report are defined as follows:

GEL LABORATORIES LLC

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

QC Summary

Workorder: 609413

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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									
N1		See case narrative									
Y		Other specific qualifiers were required to properly define the results. Consult case narrative.									
R		Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.									
B		The target analyte was detected in the associated blank.									
e		5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes									
J		See case narrative for an explanation									

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

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

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

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

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

**Technical Case Narrative
Georgia Power Company
SDG #: 609413**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

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

Analytical Batch: 2378597

Preparation Method: SW846 3005A

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

Preparation Batch: 2378596

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609413001	ARK-AP1-FB-02
609413002	ARK-AP1GWA-1
609413003	ARK-AP1-EB-02
609413004	ARK-AP1PZ-1
609413005	ARK-AP1GWA-2
609413006	ARK-AP1-FD-01
609413007	ARK-AP1-FD-02
609413008	ARK-AP1PZ-2
609413009	ARK-AP1PZ-6
609413010	ARK-AP1PZ-10
609413011	ARK-AP1PZ-4
609413012	ARK-AP1PZ-11
609413013	ARK-AP1PZ-7
609413014	ARK-AP1PZ-8
609413015	ARK-AP1PZ-9
609413016	ARK-AP1-FB-01
609413017	ARK-AP1PZ-5
609413018	ARK-AP1-EB-01
1205311619	Method Blank (MB) ICP-MS
1205311620	Laboratory Control Sample (LCS)
1205311623	609413002(ARK-AP1GWA-1L) Serial Dilution (SD)
1205311621	609413002(ARK-AP1GWA-1S) Matrix Spike (MS)
1205311622	609413002(ARK-AP1GWA-1SD) 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 609413004 (ARK-AP1PZ-1), 609413006 (ARK-AP1-FD-01), 609413007 (ARK-AP1-FD-02), 609413008 (ARK-AP1PZ-2), 609413009 (ARK-AP1PZ-6), 609413010 (ARK-AP1PZ-10), 609413011 (ARK-AP1PZ-4), 609413013 (ARK-AP1PZ-7), 609413014 (ARK-AP1PZ-8), 609413015 (ARK-AP1PZ-9) and 609413017 (ARK-AP1PZ-5) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	609413									
	004	006	007	008	009	010	011	013	014	015
Boron	5X	100X	100X	10X	100X	10X	50X	50X	50X	10X
Calcium	1X	100X	100X	10X	100X	10X	50X	50X	50X	10X

Analyte	609413
	017
Boron	100X
Calcium	100X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

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

Analytical Batch: 2378873

Preparation Method: SW846 7470A Prep

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

Preparation Batch: 2378872

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609413001	ARK-AP1-FB-02
609413002	ARK-AP1GWA-1
609413003	ARK-AP1-EB-02
609413004	ARK-AP1PZ-1
609413005	ARK-AP1GWA-2
609413006	ARK-AP1-FD-01
609413007	ARK-AP1-FD-02
609413008	ARK-AP1PZ-2
609413009	ARK-AP1PZ-6
609413010	ARK-AP1PZ-10
609413011	ARK-AP1PZ-4
609413012	ARK-AP1PZ-11

609413013	ARK-APIPZ-7
609413014	ARK-APIPZ-8
609413015	ARK-APIPZ-9
609413016	ARK-API-FB-01
609413017	ARK-APIPZ-5
609413018	ARK-API-EB-01
1205312121	Method Blank (MB)CVAA
1205312122	Laboratory Control Sample (LCS)
1205312125	609382001(NonSDGL) Serial Dilution (SD)
1205312123	609382001(NonSDGD) Sample Duplicate (DUP)
1205312124	609382001(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: 2378595

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609413001	ARK-API-FB-02
609413002	ARK-APIGWA-1
609413003	ARK-API-EB-02
609413004	ARK-APIPZ-1
609413005	ARK-APIGWA-2
609413006	ARK-API-FD-01
609413007	ARK-API-FD-02
609413008	ARK-APIPZ-2
609413009	ARK-APIPZ-6
609413010	ARK-APIPZ-10
609413011	ARK-APIPZ-4
609413012	ARK-APIPZ-11
609413013	ARK-APIPZ-7
609413014	ARK-APIPZ-8
609413015	ARK-APIPZ-9
609413016	ARK-API-FB-01
609413017	ARK-APIPZ-5
609413018	ARK-API-EB-01
1205311613	Method Blank (MB)
1205311614	Laboratory Control Sample (LCS)
1205311615	609413004(ARK-APIPZ-1) Sample Duplicate (DUP)
1205311616	609413004(ARK-APIPZ-1) Post Spike (PS)
1205311617	609413014(ARK-APIPZ-8) Sample Duplicate (DUP)

1205311618

609413014(ARK-AP1PZ-8) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1205311615 (ARK-AP1PZ-1DUP), 1205311616 (ARK-AP1PZ-1PS), 1205311617 (ARK-AP1PZ-8DUP), 1205311618 (ARK-AP1PZ-8PS), 609413002 (ARK-AP1GWA-1), 609413004 (ARK-AP1PZ-1), 609413006 (ARK-AP1-FD-01), 609413007 (ARK-AP1-FD-02), 609413008 (ARK-AP1PZ-2), 609413009 (ARK-AP1PZ-6), 609413010 (ARK-AP1PZ-10), 609413011 (ARK-AP1PZ-4), 609413012 (ARK-AP1PZ-11), 609413013 (ARK-AP1PZ-7), 609413014 (ARK-AP1PZ-8), 609413015 (ARK-AP1PZ-9) and 609413017 (ARK-AP1PZ-5) 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	609413									
	002	004	006	007	008	009	010	011	012	013
Sulfate	5X	10X	200X	200X	50X	200X	20X	200X	5X	100X

Analyte	609413		
	014	015	017
Sulfate	100X	40X	200X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

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

Analytical Batch: 2379677

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

GEL Sample ID#

Client Sample Identification

609413001	ARK-AP1-FB-02
609413002	ARK-AP1GWA-1
609413003	ARK-AP1-EB-02
609413004	ARK-AP1PZ-1
609413005	ARK-AP1GWA-2
609413006	ARK-AP1-FD-01
609413007	ARK-AP1-FD-02
609413008	ARK-AP1PZ-2
1205313477	Method Blank (MB)
1205313478	Laboratory Control Sample (LCS)
1205313479	609435002(ARK-ARAMW-9) Sample Duplicate (DUP)
1205314103	609211001(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

Sample filtration took > 10 minutes; therefore as prescribed in the method, a reduced aliquot was used. 1205314103 (Non SDG 609211001DUP), 609413006 (ARK-AP1-FD-01) and 609413007 (ARK-AP1-FD-02).

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

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

Analytical Batch: 2380460

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609413009	ARK-APIPZ-6
609413010	ARK-APIPZ-10
609413011	ARK-APIPZ-4
609413012	ARK-APIPZ-11
609413013	ARK-APIPZ-7
1205314543	Method Blank (MB)
1205314544	Laboratory Control Sample (LCS)
1205314545	609745006(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

Sample filtration took > 10 minutes; therefore as prescribed in the method, a reduced aliquot was used. 609413009 (ARK-APIPZ-6), 609413011 (ARK-APIPZ-4) and 609413013 (ARK-APIPZ-7).

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

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

Analytical Batch: 2381199

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609413014	ARK-APIPZ-8
1205315839	Method Blank (MB)
1205315840	Laboratory Control Sample (LCS)
1205315841	609405005(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

Sample filtration took > 10 minutes; therefore as prescribed in the method, a reduced aliquot was used.
609413014 (ARK-APIPZ-8).

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>
609413015	ARK-APIPZ-9
609413016	ARK-API-FB-01
609413017	ARK-APIPZ-5
609413018	ARK-API-EB-01
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.
609413017 (ARK-AP1PZ-5).

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: G PCC - ARK	SDG/AR/COC/Work Order: 609413
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, Lint#: 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"/>	Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			ID's and containers affected:
10 Date & time on COC match date & time on bottles?			<input checked="" type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) 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):

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



March 01, 2023

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

Re: Arkwright CCR Groundwater Compliance AP1
Work Order: 609415

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. 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: 609415 GEL Work Order: 609415

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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-API-FB-02
Sample ID: 609415001
Matrix: WQ
Collect Date: 01-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	-0.514	+/-0.952	1.97	+/-0.952	3.00	pCi/L			JE1	02/28/23	0844	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.987	+/-1.03	1.97	+/-1.06		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.987	+/-0.394	0.291	+/-0.458	1.00	pCi/L			LXP1	02/27/23	0747	2378760	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"	2378772	64.4	(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
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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1GWA-1

Project: GPCC00100

Sample ID: 609415002

Client ID: GPCC001

Matrix: WG

Collect Date: 01-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	0.440	+/-1.34	2.38	+/-1.34	3.00	pCi/L			JE1	02/28/23	0844	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.12	+/-1.41	2.38	+/-1.42		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.677	+/-0.439	0.609	+/-0.456	1.00	pCi/L			LXP1	02/27/23	0747	2378760	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"	2378772	75.6	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration

Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1-EB-02

Project: GPCC00100

Sample ID: 609415003

Client ID: GPCC001

Matrix: WQ

Collect Date: 01-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	-0.377	+/-1.31	2.45	+/-1.31	3.00	pCi/L			JE1	02/28/23	0842	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.436	+/-1.34	2.45	+/-1.34		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.436	+/-0.301	0.413	+/-0.308	1.00	pCi/L			LXP1	02/27/23	0747	2378760	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"	2378772	79.2	(15%-125%)

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1PZ-1

Project: GPCC00100

Sample ID: 609415004

Client ID: GPCC001

Matrix: WG

Collect Date: 01-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	1.71	+/-1.29	2.01	+/-1.36	3.00	pCi/L			JE1	02/28/23	0844	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.69	+/-1.34	2.01	+/-1.42		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.977	+/-0.368	0.258	+/-0.399	1.00	pCi/L			LXP1	02/27/23	0747	2378760	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"	2378772	61.9	(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 | |

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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1GWA-2

Project: GPCC00100

Sample ID: 609415005

Client ID: GPCC001

Matrix: WG

Collect Date: 01-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	0.899	+/-1.13	1.92	+/-1.15	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.46	+/-1.17	1.92	+/-1.20		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.563	+/-0.324	0.389	+/-0.334	1.00	pCi/L			LXP1	02/27/23	0747	2378760	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"	2378772	60.8	(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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1-FD-01

Project: GPCC00100

Sample ID: 609415006

Client ID: GPCC001

Matrix: WG

Collect Date: 01-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		2.24	+/-1.36	2.07	+/-1.48	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.60	+/-1.38	2.07	+/-1.50		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.364	+/-0.223	0.232	+/-0.235	1.00	pCi/L			LXP1	02/27/23	0747	2378760	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"	2378772	69	(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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1-FD-02

Project: GPCC00100

Sample ID: 609415007

Client ID: GPCC001

Matrix: WG

Collect Date: 01-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	1.02	+/-1.16	1.94	+/-1.19	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.37	+/-1.18	1.94	+/-1.21		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.346	+/-0.250	0.294	+/-0.258	1.00	pCi/L			LXP1	02/27/23	0836	2378760	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"	2378772	61	(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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1PZ-2

Project: GPCC00100

Sample ID: 609415008

Client ID: GPCC001

Matrix: WG

Collect Date: 01-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	1.94	+/-1.30	1.97	+/-1.39	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.17	+/-1.33	1.97	+/-1.42		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.230	+/-0.281	0.473	+/-0.285	1.00	pCi/L			LXP1	02/27/23	0836	2378760	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"	2378772	58.3	(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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1PZ-6

Project: GPCC00100

Sample ID: 609415009

Client ID: GPCC001

Matrix: WG

Collect Date: 01-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	1.79	+/-1.29	1.98	+/-1.36	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.12	+/-1.32	1.98	+/-1.40		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.322	+/-0.282	0.431	+/-0.291	1.00	pCi/L			LXP1	02/27/23	0836	2378760	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"	2378772	58.5	(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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1PZ-10

Project: GPCC00100

Sample ID: 609415010

Client ID: GPCC001

Matrix: WG

Collect Date: 01-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	0.386	+/-1.28	2.30	+/-1.29	3.00	pCi/L			JE1	02/28/23	0842	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.990	+/-1.33	2.30	+/-1.34		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.604	+/-0.361	0.445	+/-0.379	1.00	pCi/L			LXP1	02/27/23	0836	2378760	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"	2378772	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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-APIPZ-4
Sample ID: 609415011
Matrix: WG
Collect Date: 01-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		2.40	+/-1.38	1.98	+/-1.51	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
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Radium-226+Radium-228 Calculation "See Parent Products"

Radium-226+228 Sum		2.85	+/-1.41	1.98	+/-1.54		pCi/L			NXL1	03/01/23	0821	2378773	2
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Rad Radium-226

Lucas Cell, Ra226, Liquid "As Received"

Radium-226	U	0.452	+/-0.313	0.457	+/-0.323	1.00	pCi/L			LXP1	02/27/23	0836	2378760	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"	2378772	56.7	(15%-125%)

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
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Atlanta, Georgia 30308

Report Date: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1PZ-11

Project: GPCC00100

Sample ID: 609415012

Client ID: GPCC001

Matrix: WG

Collect Date: 01-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	0.599	+/-1.23	2.16	+/-1.24	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.21	+/-1.27	2.16	+/-1.29		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.609	+/-0.325	0.374	+/-0.345	1.00	pCi/L			LXP1	02/27/23	0836	2378760	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"	2378772	70.6	(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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Atlanta, Georgia 30308

Report Date: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1PZ-7

Project: GPCC00100

Sample ID: 609415013

Client ID: GPCC001

Matrix: WG

Collect Date: 01-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		3.37	+/-1.44	1.99	+/-1.67	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		3.75	+/-1.49	1.99	+/-1.71		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.380	+/-0.365	0.582	+/-0.370	1.00	pCi/L			LXP1	02/27/23	0836	2378760	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"	2378772	68	(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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1PZ-8

Project: GPCC00100

Sample ID: 609415014

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	0.582	+/-1.01	1.78	+/-1.02	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.723	+/-1.03	1.78	+/-1.04		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.141	+/-0.239	0.434	+/-0.240	1.00	pCi/L			LXP1	02/27/23	0836	2378760	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"	2378772	54.8	(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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1PZ-9

Project: GPCC00100

Sample ID: 609415015

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	1.09	+/-1.12	1.85	+/-1.16	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.48	+/-1.16	1.85	+/-1.19		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.391	+/-0.270	0.341	+/-0.277	1.00	pCi/L			LXP1	02/27/23	0925	2378760	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"	2378772	56.5	(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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1-FB-01

Project: GPCC00100

Sample ID: 609415016

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	-0.329	+/-1.22	2.31	+/-1.22	3.00	pCi/L			JE1	02/28/23	0845	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.0993	+/-1.24	2.31	+/-1.24		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.0993	+/-0.234	0.444	+/-0.234	1.00	pCi/L			LXP1	02/27/23	0925	2378760	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"	2378772	75.5	(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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1PZ-5

Project: GPCC00100

Sample ID: 609415017

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	1.92	+/-1.29	1.94	+/-1.38	3.00	pCi/L			JE1	02/28/23	0846	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.36	+/-1.32	1.94	+/-1.41		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.438	+/-0.302	0.414	+/-0.310	1.00	pCi/L			LXP1	02/27/23	0925	2378760	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"	2378772	61.5	(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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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: March 1, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1-EB-01

Project: GPCC00100

Sample ID: 609415018

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	1.40	+/-1.26	2.05	+/-1.31	3.00	pCi/L			JE1	02/28/23	0846	2378772	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.72	+/-1.31	2.05	+/-1.36		pCi/L			NXL1	03/01/23	0821	2378773	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.323	+/-0.354	0.581	+/-0.359	1.00	pCi/L			LXP1	02/27/23	0925	2378760	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"	2378772	68.3	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

- | | |
|---------------------------------------|-----------------------------------|
| DF: Dilution Factor | Mtd.: Method |
| DL: Detection Limit | PF: Prep Factor |
| Lc/LC: Critical Level | RL: Reporting Limit |
| MDA: Minimum Detectable Activity | TPU: Total Propagated Uncertainty |
| MDC: Minimum Detectable Concentration | |

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 609415**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

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

Analytical Batch: 2378773

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609415001	ARK-API-FB-02
609415002	ARK-APIGWA-1
609415003	ARK-API-EB-02
609415004	ARK-APIPZ-1
609415005	ARK-APIGWA-2
609415006	ARK-API-FD-01
609415007	ARK-API-FD-02
609415008	ARK-APIPZ-2
609415009	ARK-APIPZ-6
609415010	ARK-APIPZ-10
609415011	ARK-APIPZ-4
609415012	ARK-APIPZ-11
609415013	ARK-APIPZ-7
609415014	ARK-APIPZ-8
609415015	ARK-APIPZ-9
609415016	ARK-API-FB-01
609415017	ARK-APIPZ-5
609415018	ARK-API-EB-01

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: 2378772

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609415001	ARK-API-FB-02

609415002	ARK-APIGWA-1
609415003	ARK-API-EB-02
609415004	ARK-APIPZ-1
609415005	ARK-APIGWA-2
609415006	ARK-API-FD-01
609415007	ARK-API-FD-02
609415008	ARK-APIPZ-2
609415009	ARK-APIPZ-6
609415010	ARK-APIPZ-10
609415011	ARK-APIPZ-4
609415012	ARK-APIPZ-11
609415013	ARK-APIPZ-7
609415014	ARK-APIPZ-8
609415015	ARK-APIPZ-9
609415016	ARK-API-FB-01
609415017	ARK-APIPZ-5
609415018	ARK-API-EB-01
1205311811	Method Blank (MB)
1205311812	609213001(NonSDG) Sample Duplicate (DUP)
1205311813	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
1205311812 (Non SDG 609213001DUP)	Radium-228	RPD 123* (0.0%-100.0%) RER 2.48 (0-3)

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

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

Analytical Batch: 2378760

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
609415001	ARK-API-FB-02
609415002	ARK-APIGWA-1
609415003	ARK-API-EB-02

609415004	ARK-APIPZ-1
609415005	ARK-APIGWA-2
609415006	ARK-API-FD-01
609415007	ARK-API-FD-02
609415008	ARK-APIPZ-2
609415009	ARK-APIPZ-6
609415010	ARK-APIPZ-10
609415011	ARK-APIPZ-4
609415012	ARK-APIPZ-11
609415013	ARK-APIPZ-7
609415014	ARK-APIPZ-8
609415015	ARK-APIPZ-9
609415016	ARK-API-FB-01
609415017	ARK-APIPZ-5
609415018	ARK-API-EB-01
1205311785	Method Blank (MB)
1205311786	609213001(NonSDG) Sample Duplicate (DUP)
1205311787	609213001(NonSDG) Matrix Spike (MS)
1205311788	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, 1205311787 (Non SDG 609213001MS), 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.

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QC Summary

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

Report Date: March 1, 2023
Page 1 of 2

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 609415

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow									
Batch	2378772								
QC1205311812	609213001 DUP								
Radium-228		3.77	U	0.898	pCi/L	123*	(0% - 100%)	JE1	02/28/2308:44
	Uncert:	+/-1.52		+/-1.37					
	TPU:	+/-1.79		+/-1.39					
QC1205311813	LCS								
Radium-228	62.8			62.1	pCi/L	98.9	(75%-125%)	JE1	02/28/2308:44
	Uncert:			+/-4.48					
	TPU:			+/-16.4					
QC1205311811	MB								
Radium-228			U	-0.511	pCi/L			JE1	02/28/2308:44
	Uncert:			+/-1.04					
	TPU:			+/-1.04					
Rad Ra-226									
Batch	2378760								
QC1205311786	609213001 DUP								
Radium-226		0.386		0.583	pCi/L	40.7	(0% - 100%)	LXP1	02/27/2309:25
	Uncert:	+/-0.283		+/-0.336					
	TPU:	+/-0.289		+/-0.352					
QC1205311788	LCS								
Radium-226	26.5			25.4	pCi/L	95.6	(75%-125%)	LXP1	02/27/2309:25
	Uncert:			+/-1.76					
	TPU:			+/-5.48					
QC1205311785	MB								
Radium-226			U	0.231	pCi/L			LXP1	02/27/2309:25
	Uncert:			+/-0.251					
	TPU:			+/-0.256					
QC1205311787	609213001 MS								
Radium-226	130	0.386		105	pCi/L	81	(75%-125%)	LXP1	02/27/2309:25
	Uncert:	+/-0.283		+/-8.58					
	TPU:	+/-0.289		+/-25.5					

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

GEL LABORATORIES LLC

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QC Summary

Workorder: 609415

Page 2 of 2

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

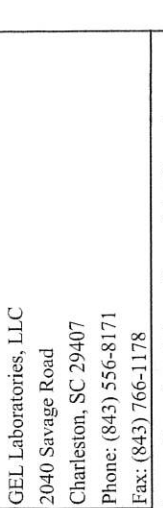
N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

** 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.



Chain of Custody and Analytical Request
 GEL Project Manager: Erin Trent
 Phone # (937-344-6533)
 Fax:

609415
GEL Work Order Number:
Sample Analysis Requested (5) (Fill in the number of containers for each test)
 Total number of containers: 5

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hh:mm)	QC Code (1)	Field Filtered (2)	Sample Matrix (4)	Should this sample be considered:		TDS (SM Method R2.1) (300.0)	Alkalinity (300.0)	Antions (Cl, FL, Sulfate) (300 Rev. 2.1 1993)	Metals App. IV (6020B)	Metals App. III (6020B)	Metals App. II (6020B)	Metals App. I (6020B)	Metals AL, K, Mg, Na, Fe, Mn (6020B)	Mercury (7470B)	Preservative Type (6)	Comments (task_code: ARK-CCR-ASSMT-2023S1)
						Radioactive (if isotopic info) yes, please supply	(7) Known or possible Hazards											
ARK-API-FB-02	02-01-23	0930	FB	N	WQ			X	X	X	X	X	X	X	X	X	NA	
ARK-APIGWA-1	02-01-23	1010	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 5.55	
ARK-API-EB-02	02-01-23	1045	EB	N	WQ			X	X	X	X	X	X	X	X	X	NA	
ARK-APIPZ-1	02-01-23	1150	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 6.45	
ARK-APIGWA-2	02-01-23	1155	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 6.08	
ARK-API-FD-01	02-01-23	NA	FD	N	WQ			X	X	X	X	X	X	X	X	X	NA	
ARK-API-FD-02	02-01-23	NA	FD	N	WQ			X	X	X	X	X	X	X	X	X	NA	
ARK-APIPZ-2	02-01-23	1345	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 6.28	
ARK-APIPZ-6	02-01-23	1355	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 5.45	
ARK-APIPZ-10	02-01-23	1428	N	N	WG			X	X	X	X	X	X	X	X	X	pH: 6.38	

Chain of Custody Signatures

Refiniquished By (Signed)	Print Name	Date	Received by (signed)	Print Name	Date
<i>[Signature]</i>	John Myer (Stantec)	2/3/23	<i>[Signature]</i>		2/3/23
			<i>[Signature]</i>		2/3/23

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 [] 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=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, LW = Listed Waste (F, K, P and U-listed wastes), CO = Corrosive, RE = Reactive
 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: GPCC-ARK	SDG/AR/COC/Work Order: 609415
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): <u>0</u> CPM /mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>4</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>12223</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?			<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			ID's and containers affected:
10 Date & time on COC match date & time on bottles?			<input checked="" type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) ARK-ARAW-3 @ 1230, 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):

List of current GEL Certifications as of 01 March 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 22, 2023

Jessica Ware
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

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.

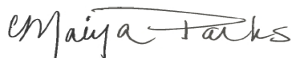
The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Peachtree Corners, GA

Rev. 1 - This replaces the February 20, 2023 final report, see Project Narrative.

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-CCR
Warren Johnson, ARCADIS - Atlanta
Laura Midkiff, Georgia Power
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651543

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651543

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92651543001	ARK-BC-0.3	Water	02/08/23 16:35	02/09/23 15:53
92651543002	ARK-BC-0.1	Water	02/08/23 16:25	02/09/23 15:53
92651543003	ARK-OR-0.8	Water	02/09/23 10:58	02/09/23 15:53
92651543004	ARK-OR-0.1	Water	02/09/23 12:10	02/09/23 15:53
92651543005	ARK-OR-0.3	Water	02/09/23 11:30	02/09/23 15:53
92651543006	ARK-OR+0.25	Water	02/09/23 12:45	02/09/23 15:53

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92651543001	ARK-BC-0.3	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651543002	ARK-BC-0.1	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651543003	ARK-OR-0.8	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651543004	ARK-OR-0.1	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651543005	ARK-OR-0.3	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92651543006	ARK-OR+0.25	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 9056A	CDC	3	PASI-A

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651543

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
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PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651543

Date: February 22, 2023

Georgia Power EQulS Database Manager requested Pace Project Manager correct each matrix code from WG to WS and the task_code from ARK-CCR-ASSMT-2023S2 to ARK-CSURF-ASSMT-2023S1.

These updates ensure the sample nomenclature is followed on final PDF and EDD for successful upload of laboratory data into the Georgia Power EQulS database.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

Sample: ARK-BC-0.3	Lab ID: 92651543001	Collected: 02/08/23 16:35	Received: 02/09/23 15:53	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.9	mg/L	0.20	1	02/14/23 12:35	02/15/23 20:44	7440-09-7	
Sodium	6.7	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:44	7440-23-5	
Calcium	6.8	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:44	7440-70-2	
Magnesium	3.3	mg/L	0.050	1	02/14/23 12:35	02/15/23 20:44	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	02/17/23 11:15	02/18/23 22:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:34	7440-38-2	
Barium	0.032	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:34	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 22:34	7440-41-7	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 22:34	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 22:34	7440-43-9	
Chromium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:34	7440-48-4	
Lead	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 22:34	7439-92-1	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 22:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 22:34	7439-98-7	
Selenium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:34	7782-49-2	
Thallium	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 22:34	7440-28-0	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	02/14/23 08:15	02/14/23 12:18	7439-97-6	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	61.0	mg/L	25.0	1		02/13/23 16:46		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	32.5	mg/L	5.0	1		02/15/23 12:54		
Alkalinity, Total as CaCO ₃	32.5	mg/L	5.0	1		02/15/23 12:54		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	6.3	mg/L	1.0	1		02/12/23 04:46	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 04:46	16984-48-8	
Sulfate	7.0	mg/L	1.0	1		02/12/23 04:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651543

Sample: ARK-BC-0.1	Lab ID: 92651543002	Collected: 02/08/23 16:25	Received: 02/09/23 15:53	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.0	mg/L	0.20	1	02/14/23 12:35	02/15/23 20:49	7440-09-7	
Sodium	6.8	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:49	7440-23-5	
Calcium	7.0	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:49	7440-70-2	
Magnesium	3.4	mg/L	0.050	1	02/14/23 12:35	02/15/23 20:49	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	02/17/23 11:15	02/18/23 22:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:40	7440-38-2	
Barium	0.033	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:40	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 22:40	7440-41-7	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 22:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 22:40	7440-43-9	
Chromium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:40	7440-48-4	
Lead	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 22:40	7439-92-1	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 22:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 22:40	7439-98-7	
Selenium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:40	7782-49-2	
Thallium	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 22:40	7440-28-0	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	02/14/23 08:15	02/14/23 12:20	7439-97-6	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	82.0	mg/L	25.0	1		02/13/23 16:47		
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 13:00		
Alkalinity, Total as CaCO ₃	32.7	mg/L	5.0	1		02/15/23 13:00		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	6.4	mg/L	1.0	1		02/12/23 05:01	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 05:01	16984-48-8	
Sulfate	7.0	mg/L	1.0	1		02/12/23 05:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651543

Sample: ARK-OR-0.8	Lab ID: 92651543003	Collected: 02/09/23 10:58	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	2.5	mg/L	0.20	1	02/14/23 12:35	02/15/23 20:54	7440-09-7	
Sodium	5.3	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:54	7440-23-5	
Calcium	5.2	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:54	7440-70-2	
Magnesium	1.6	mg/L	0.050	1	02/14/23 12:35	02/15/23 20:54	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	02/17/23 11:15	02/18/23 22:46	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:46	7440-38-2	
Barium	0.026	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:46	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 22:46	7440-41-7	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 22:46	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 22:46	7440-43-9	
Chromium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:46	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:46	7440-48-4	
Lead	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 22:46	7439-92-1	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 22:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 22:46	7439-98-7	
Selenium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:46	7782-49-2	
Thallium	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 22:46	7440-28-0	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	02/14/23 08:15	02/14/23 12:23	7439-97-6	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	64.0	mg/L	25.0	1		02/15/23 11:53		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	20.5	mg/L	5.0	1		02/15/23 13:06		
Alkalinity, Total as CaCO ₃	20.5	mg/L	5.0	1		02/15/23 13:06		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	5.5	mg/L	1.0	1		02/12/23 05:15	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 05:15	16984-48-8	
Sulfate	4.6	mg/L	1.0	1		02/12/23 05:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

Sample: ARK-OR-0.1	Lab ID: 92651543004	Collected: 02/09/23 12:10	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	2.4	mg/L	0.20	1	02/14/23 12:35	02/15/23 20:58	7440-09-7	
Sodium	5.4	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:58	7440-23-5	
Calcium	5.1	mg/L	1.0	1	02/14/23 12:35	02/15/23 20:58	7440-70-2	
Magnesium	1.6	mg/L	0.050	1	02/14/23 12:35	02/15/23 20:58	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	02/17/23 11:15	02/18/23 22:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:52	7440-38-2	
Barium	0.025	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:52	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 22:52	7440-41-7	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 22:52	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 22:52	7440-43-9	
Chromium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:52	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:52	7440-48-4	
Lead	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 22:52	7439-92-1	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 22:52	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 22:52	7439-98-7	
Selenium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 22:52	7782-49-2	
Thallium	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 22:52	7440-28-0	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	02/14/23 08:15	02/14/23 12:26	7439-97-6	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	112	mg/L	25.0	1		02/15/23 11:56		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	20.4	mg/L	5.0	1		02/15/23 13:12		
Alkalinity, Total as CaCO ₃	20.4	mg/L	5.0	1		02/15/23 13:12		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	5.5	mg/L	1.0	1		02/12/23 05:29	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 05:29	16984-48-8	
Sulfate	4.6	mg/L	1.0	1		02/12/23 05:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

Sample: ARK-OR-0.3	Lab ID: 92651543005	Collected: 02/09/23 11:30	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	2.3	mg/L	0.20	1	02/14/23 12:35	02/15/23 21:03	7440-09-7	
Sodium	5.3	mg/L	1.0	1	02/14/23 12:35	02/15/23 21:03	7440-23-5	
Calcium	5.1	mg/L	1.0	1	02/14/23 12:35	02/15/23 21:03	7440-70-2	
Magnesium	1.6	mg/L	0.050	1	02/14/23 12:35	02/15/23 21:03	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	02/17/23 11:15	02/18/23 23:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 23:10	7440-38-2	
Barium	0.026	mg/L	0.0050	1	02/17/23 11:15	02/18/23 23:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 23:10	7440-41-7	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 23:10	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 23:10	7440-43-9	
Chromium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 23:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 23:10	7440-48-4	
Lead	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 23:10	7439-92-1	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 23:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 23:10	7439-98-7	
Selenium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 23:10	7782-49-2	
Thallium	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 23:10	7440-28-0	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	02/14/23 08:15	02/14/23 12:28	7439-97-6	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	54.0	mg/L	25.0	1		02/15/23 11:57		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	20.9	mg/L	5.0	1		02/15/23 13:18		
Alkalinity, Total as CaCO ₃	20.9	mg/L	5.0	1		02/15/23 13:18		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	5.5	mg/L	1.0	1		02/12/23 05:44	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 05:44	16984-48-8	
Sulfate	4.6	mg/L	1.0	1		02/12/23 05:44	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

Sample: ARK-OR+0.25	Lab ID: 92651543006	Collected: 02/09/23 12:45	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	2.3	mg/L	0.20	1	02/14/23 12:35	02/15/23 21:08	7440-09-7	
Sodium	5.2	mg/L	1.0	1	02/14/23 12:35	02/15/23 21:08	7440-23-5	
Calcium	5.1	mg/L	1.0	1	02/14/23 12:35	02/15/23 21:08	7440-70-2	
Magnesium	1.6	mg/L	0.050	1	02/14/23 12:35	02/15/23 21:08	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	1	02/17/23 11:15	02/18/23 23:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 23:16	7440-38-2	
Barium	0.025	mg/L	0.0050	1	02/17/23 11:15	02/18/23 23:16	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 23:16	7440-41-7	
Boron	ND	mg/L	0.040	1	02/17/23 11:15	02/18/23 23:16	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	02/17/23 11:15	02/18/23 23:16	7440-43-9	
Chromium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 23:16	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 23:16	7440-48-4	
Lead	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 23:16	7439-92-1	
Lithium	ND	mg/L	0.030	1	02/17/23 11:15	02/18/23 23:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	02/17/23 11:15	02/18/23 23:16	7439-98-7	
Selenium	ND	mg/L	0.0050	1	02/17/23 11:15	02/18/23 23:16	7782-49-2	
Thallium	ND	mg/L	0.0010	1	02/17/23 11:15	02/18/23 23:16	7440-28-0	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	02/14/23 08:15	02/14/23 12:31	7439-97-6	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	39.0	mg/L	25.0	1		02/15/23 11:57		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	20.4	mg/L	5.0	1		02/15/23 13:24		
Alkalinity, Total as CaCO ₃	20.4	mg/L	5.0	1		02/15/23 13:24		
9056 IC anions 28 Days								
Analytical Method: EPA 9056A								
Pace Analytical Services - Asheville								
Chloride	5.5	mg/L	1.0	1		02/12/23 05:58	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/12/23 05:58	16984-48-8	
Sulfate	4.6	mg/L	1.0	1		02/12/23 05:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

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: 92651543001, 92651543002, 92651543003, 92651543004, 92651543005, 92651543006

METHOD BLANK: 3926444 Matrix: Water
Associated Lab Samples: 92651543001, 92651543002, 92651543003, 92651543004, 92651543005, 92651543006

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		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Calcium	mg/L	3360 ug/L	1	4.3	1	4.3	91	96	75-125	1	20	
Magnesium	mg/L	4150 ug/L	1	5.0	1	5.1	89	94	75-125	1	20	
Potassium	mg/L	3980 ug/L	1	4.8	1	4.9	83	91	75-125	2	20	
Sodium	mg/L	11500 ug/L	1	12.3	1	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-Revised Report
Pace Project No.: 92651543

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: 92651543001, 92651543002, 92651543003, 92651543004, 92651543005, 92651543006

METHOD BLANK: 3930860 Matrix: Water
Associated Lab Samples: 92651543001, 92651543002, 92651543003, 92651543004, 92651543005, 92651543006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	02/18/23 20:47	
Arsenic	mg/L	ND	0.0050	02/18/23 20:47	
Barium	mg/L	ND	0.0050	02/18/23 20:47	
Beryllium	mg/L	ND	0.00050	02/18/23 20:47	
Boron	mg/L	ND	0.040	02/18/23 20:47	
Cadmium	mg/L	ND	0.00050	02/18/23 20:47	
Chromium	mg/L	ND	0.0050	02/18/23 20:47	
Cobalt	mg/L	ND	0.0050	02/18/23 20:47	
Lead	mg/L	ND	0.0010	02/18/23 20:47	
Lithium	mg/L	ND	0.030	02/18/23 20:47	
Molybdenum	mg/L	ND	0.010	02/18/23 20:47	
Selenium	mg/L	ND	0.0050	02/18/23 20:47	
Thallium	mg/L	ND	0.0010	02/18/23 20:47	

LABORATORY CONTROL SAMPLE: 3930861

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.092	92	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.094	94	80-120	
Boron	mg/L	1	0.97	97	80-120	
Cadmium	mg/L	0.1	0.094	94	80-120	
Chromium	mg/L	0.1	0.093	93	80-120	
Cobalt	mg/L	0.1	0.092	92	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.093	93	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3930862 3930863

Parameter	Units	92651537002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	101	103	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.092	0.095	92	95	75-125	3	20	

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651543

Parameter	Units	3930862		3930863		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92651537002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Barium	mg/L	0.023	0.1	0.1	0.12	0.13	98	104	75-125	5	20	
Beryllium	mg/L	ND	0.1	0.1	0.089	0.091	89	91	75-125	3	20	
Boron	mg/L	0.082	1	1	0.95	1.0	87	92	75-125	4	20	
Cadmium	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.092	0.094	92	94	75-125	2	20	
Cobalt	mg/L	0.0072	0.1	0.1	0.099	0.10	92	95	75-125	3	20	
Lead	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	1	20	
Lithium	mg/L	ND	0.1	0.1	0.094	0.097	93	96	75-125	3	20	
Molybdenum	mg/L	ND	0.1	0.1	0.094	0.096	93	96	75-125	3	20	
Selenium	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

QC Batch: 755636 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92651543001, 92651543002, 92651543003, 92651543004, 92651543005, 92651543006

METHOD BLANK: 3925965 Matrix: Water
Associated Lab Samples: 92651543001, 92651543002, 92651543003, 92651543004, 92651543005, 92651543006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	02/14/23 11:36	

LABORATORY CONTROL SAMPLE: 3925966

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3925967 3925968

Parameter	Units	3925967		3925968		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0023	0.0024	93	95	75-125	2	20	

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

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: 92651543001, 92651543002

METHOD BLANK: 3925080 Matrix: Water
Associated Lab Samples: 92651543001, 92651543002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	02/13/23 16:22	

LABORATORY CONTROL SAMPLE: 3925081

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	397	99	80-120	

SAMPLE DUPLICATE: 3925082

Parameter	Units	92651537006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	116	85.0	31	10	D6

SAMPLE DUPLICATE: 3925083

Parameter	Units	92651580003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	822	839	2	10	

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

QC Batch: 755982 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92651543003, 92651543004, 92651543005, 92651543006

METHOD BLANK: 3927602 Matrix: Water
Associated Lab Samples: 92651543003, 92651543004, 92651543005, 92651543006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	02/15/23 11:50	

LABORATORY CONTROL SAMPLE: 3927603

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	377	94	80-120	

SAMPLE DUPLICATE: 3927604

Parameter	Units	92651771004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	31.0	29.0	7	10	

SAMPLE DUPLICATE: 3927605

Parameter	Units	92650184006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	619	623	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

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: 92651543001, 92651543002, 92651543003, 92651543004, 92651543005, 92651543006

METHOD BLANK: 3926334 Matrix: Water
Associated Lab Samples: 92651543001, 92651543002, 92651543003, 92651543004, 92651543005, 92651543006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	02/15/23 11:15	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	02/15/23 11:15	

LABORATORY CONTROL SAMPLE: 3926335

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.4	99	80-120	

LABORATORY CONTROL SAMPLE: 3926336

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.3	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3926337 3926338

Parameter	Units	92651307004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	34.1	50	50	85.9	85.3	104	102	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3926339 3926340

Parameter	Units	92651475009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	11.5	50	50	27.0	26.9	31	31	80-120	1	25	M1

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QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651543

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: 92651543001, 92651543002, 92651543003, 92651543004, 92651543005, 92651543006

METHOD BLANK: 3924650 Matrix: Water
 Associated Lab Samples: 92651543001, 92651543002, 92651543003, 92651543004, 92651543005, 92651543006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	02/13/23 22:59	
Fluoride	mg/L	ND	0.10	02/13/23 22:59	
Sulfate	mg/L	ND	1.0	02/13/23 22:59	

LABORATORY CONTROL SAMPLE: 3924651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	53.5	107	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	54.0	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3924652 3924653

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92651537001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	3.5	50	50	55.2	56.6	104	106	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.7	102	105	90-110	3	10		
Sulfate	mg/L	2.1	50	50	54.0	55.3	104	106	90-110	2	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3924654 3924655

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92651539005 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	6.3	50	50	59.9	58.4	107	104	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.6	106	103	90-110	3	10		
Sulfate	mg/L	6.6	50	50	60.6	59.5	108	106	90-110	2	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651543

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-Revised Report

Pace Project No.: 92651543

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92651543001	ARK-BC-0.3	EPA 3010A	755753	EPA 6010D	755809
92651543002	ARK-BC-0.1	EPA 3010A	755753	EPA 6010D	755809
92651543003	ARK-OR-0.8	EPA 3010A	755753	EPA 6010D	755809
92651543004	ARK-OR-0.1	EPA 3010A	755753	EPA 6010D	755809
92651543005	ARK-OR-0.3	EPA 3010A	755753	EPA 6010D	755809
92651543006	ARK-OR+0.25	EPA 3010A	755753	EPA 6010D	755809
92651543001	ARK-BC-0.3	EPA 3005A	756602	EPA 6020B	756701
92651543002	ARK-BC-0.1	EPA 3005A	756602	EPA 6020B	756701
92651543003	ARK-OR-0.8	EPA 3005A	756602	EPA 6020B	756701
92651543004	ARK-OR-0.1	EPA 3005A	756602	EPA 6020B	756701
92651543005	ARK-OR-0.3	EPA 3005A	756602	EPA 6020B	756701
92651543006	ARK-OR+0.25	EPA 3005A	756602	EPA 6020B	756701
92651543001	ARK-BC-0.3	EPA 7470A	755636	EPA 7470A	755687
92651543002	ARK-BC-0.1	EPA 7470A	755636	EPA 7470A	755687
92651543003	ARK-OR-0.8	EPA 7470A	755636	EPA 7470A	755687
92651543004	ARK-OR-0.1	EPA 7470A	755636	EPA 7470A	755687
92651543005	ARK-OR-0.3	EPA 7470A	755636	EPA 7470A	755687
92651543006	ARK-OR+0.25	EPA 7470A	755636	EPA 7470A	755687
92651543001	ARK-BC-0.3	SM 2540C-2015	755473		
92651543002	ARK-BC-0.1	SM 2540C-2015	755473		
92651543003	ARK-OR-0.8	SM 2540C-2015	755982		
92651543004	ARK-OR-0.1	SM 2540C-2015	755982		
92651543005	ARK-OR-0.3	SM 2540C-2015	755982		
92651543006	ARK-OR+0.25	SM 2540C-2015	755982		
92651543001	ARK-BC-0.3	SM 2320B-2011	755731		
92651543002	ARK-BC-0.1	SM 2320B-2011	755731		
92651543003	ARK-OR-0.8	SM 2320B-2011	755731		
92651543004	ARK-OR-0.1	SM 2320B-2011	755731		
92651543005	ARK-OR-0.3	SM 2320B-2011	755731		
92651543006	ARK-OR+0.25	SM 2320B-2011	755731		
92651543001	ARK-BC-0.3	EPA 9056A	755331		
92651543002	ARK-BC-0.1	EPA 9056A	755331		
92651543003	ARK-OR-0.8	EPA 9056A	755331		
92651543004	ARK-OR-0.1	EPA 9056A	755331		
92651543005	ARK-OR-0.3	EPA 9056A	755331		
92651543006	ARK-OR+0.25	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#: **92651543**

PM: MP

Due Date: 02/17/23

CLIENT: GA-ArcadAt1

Courier: Fed Ex UPS USPS Client Commercial Pace Other: _____

Date/Initials Person Examining Contents: 2-9-23 A.V

Custody Seal Present? Yes No Seals Intact? Yes No

Biological Tissue Frozen?

Yes No N/A

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer:

IR Gun ID: 230

Type of Ice: Wet Blue None

Cooler Temp: 13.4

Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 13.4

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input 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: <u>W</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_ Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

W0#: 92651543

PH: MP

Due Date: 02/17/23

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT: GA-ArcadAtI

**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-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1				4																								
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3				4																								
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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.



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: ARCADIS - Atlanta Address: 2839 Paces Ferry Rd Atlanta, GA 30339

Section B Required Project Information: Report To: Kelly Sharp, Warren Johnson Copy To: Ben Hodges, Joli Abraham

Section C Invoice Information: Attention: Company Name: Address: Pace Quote: Pace Project Manager: malya.parks@pacelabs.com, Pace Profile #: 15836

Required Date Date: 5 Day TAT

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample Ids must be unique	MATRIX	CODE	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analytes Test	Residual Chlorine (Y/N)						
				START DATE	TIME	END DATE			TIME	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol			Other	Total/Bicarb Alkalinity	Cl, F, SO4	TDS	App. III Metals - B, Ca	App. IV Metals (Client List)
1	ARK-BC-0.3	Drinking Water	DW	2/9/13	1635			5	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
2	ARK-BC-0.1	Water	WT	2/8/13	1625			5	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
3	ARK-OR-0.8	Waste Water	WW	2/9/13	1658			5	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4	ARK-OR-0.1	Process	P	2/9/13	1210			5	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
5	ARK-OR-0.3	Surface	SL	2/9/13	1130			5	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
6	ARK-OR-0.25	Other	OT	2/9/13	1245			5	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
7	ARK-OR-1.0	Other	OT					5	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
8																								
9																								
10																								
11																								
12																								

MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	DATE	TIME	ADDITIONAL COMMENTS
WGG		2/9/13	1635								
WGG		2/8/13	1625								
WGG		2/9/13	1658								
WGG		2/9/13	1210								
WGG		2/9/13	1130								
WGG		2/9/13	1245								
WGG											

APR-CCR-ASSMT-302332

ARC - ARK

W0#: 92651552

BARCODE

TEMP in C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

Signature: [Handwritten Signature]

Date signed: 2-9-13



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#: 92651552

PM: MP

Due Date: 03/03/23

CLIENT: GA-ArcadAt1

Courier: Fed Ex UPS USPS Client

Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 2-9-23 A.Y

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID:

230

Type of Ice:

Wet Blue None

Cooler Temp:

13.4

Correction Factor: Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

13.4

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input 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: W	
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

Rads not present for BC-0.3 + BC-0.1

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#: 92651552

Project #

PM: MP

Due Date: 03/03/23

CLIENT: GR-AreadAt!

*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-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
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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.

March 02, 2023

Jessica Ware
Arcadis - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651552

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 - Greensburg

Rev. 1 - This replaces the February 28, 2023 final report, see Project Narrative.

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-CCR
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-Revised Report
Pace Project No.: 92651552

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651552

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92651552003	ARK-OR-0.8	Water	02/09/23 10:58	02/09/23 18:38
92651552004	ARK-OR-0.1	Water	02/09/23 12:10	02/09/23 18:38
92651552005	ARK-OR-0.3	Water	02/09/23 11:30	02/09/23 18:38
92651552006	ARK-OR+0.25	Water	02/09/23 12:45	02/09/23 18:38

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651552

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92651552003	ARK-OR-0.8	EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	JGH	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92651552004	ARK-OR-0.1	EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	JGH	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92651552005	ARK-OR-0.3	EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	JGH	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92651552006	ARK-OR+0.25	EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	JGH	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651552

Date: March 02, 2023

Georgia Power EQulS Database Manager requested Pace Project Manager correct each matrix code from WG to WS and the task_code from ARK-CCR-ASSMT-2023S2 to ARK-CSURF-ASSMT-2023S1.

These updates ensure the sample nomenclature is followed on final PDF and EDD for successful upload of laboratory data into the Georgia Power EQulS database.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651552

Sample: ARK-OR-0.8 **Lab ID: 92651552003** Collected: 02/09/23 10:58 Received: 02/09/23 18:38 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.000 ± 0.401 (0.899) C:NA T:100%	pCi/L	02/24/23 15:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.457 ± 0.308 (0.579) C:87% T:87%	pCi/L	02/23/23 14:53	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.457 ± 0.709 (1.48)	pCi/L	02/28/23 14:36	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651552

Sample: ARK-OR-0.1 **Lab ID: 92651552004** Collected: 02/09/23 12:10 Received: 02/09/23 18:38 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	-0.313 ± 0.378 (1.03) C:NA T:98%	pCi/L	02/24/23 15:29	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.409 ± 0.339 (0.678) C:93% T:81%	pCi/L	02/23/23 14:53	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.409 ± 0.717 (1.71)	pCi/L	02/28/23 14:36	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651552

Sample: ARK-OR-0.3 **Lab ID: 92651552005** Collected: 02/09/23 11:30 Received: 02/09/23 18:38 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.423 ± 0.500 (1.27) C:NA T:88%	pCi/L	02/24/23 15:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.467 ± 0.421 (0.854) C:83% T:68%	pCi/L	02/23/23 14:53	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.467 ± 0.921 (2.12)	pCi/L	02/28/23 14:36	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651552

Sample: ARK-OR+0.25 **Lab ID: 92651552006** Collected: 02/09/23 12:45 Received: 02/09/23 18:38 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.000 ± 0.588 (1.20) C:NA T:93%	pCi/L	02/24/23 15:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.192 ± 0.301 (0.652) C:84% T:86%	pCi/L	02/23/23 14:53	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.192 ± 0.889 (1.85)	pCi/L	02/28/23 14:36	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651552

QC Batch: 567675

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92651552003, 92651552004, 92651552005, 92651552006

METHOD BLANK: 2757330

Matrix: Water

Associated Lab Samples: 92651552003, 92651552004, 92651552005, 92651552006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.587 ± 0.283 (0.473) C:94% T:97%	pCi/L	02/23/23 14:53	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond-Revised Report

Pace Project No.: 92651552

QC Batch: 567674

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92651552003, 92651552004, 92651552005, 92651552006

METHOD BLANK: 2757328

Matrix: Water

Associated Lab Samples: 92651552003, 92651552004, 92651552005, 92651552006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0592 ± 0.270 (0.436) C:NA T:97%	pCi/L	02/24/23 15:29	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651552

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92651552

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92651552003	ARK-OR-0.8	EPA 903.1	567674		
92651552004	ARK-OR-0.1	EPA 903.1	567674		
92651552005	ARK-OR-0.3	EPA 903.1	567674		
92651552006	ARK-OR+0.25	EPA 903.1	567674		
92651552003	ARK-OR-0.8	EPA 904.0	567675		
92651552004	ARK-OR-0.1	EPA 904.0	567675		
92651552005	ARK-OR-0.3	EPA 904.0	567675		
92651552006	ARK-OR+0.25	EPA 904.0	567675		
92651552003	ARK-OR-0.8	Total Radium Calculation	570475		
92651552004	ARK-OR-0.1	Total Radium Calculation	570475		
92651552005	ARK-OR-0.3	Total Radium Calculation	570475		
92651552006	ARK-OR+0.25	Total Radium Calculation	570475		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

Sample Condition Upon Receipt

Client Name: *ARCADIS*

Laboratory receiving samples: Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Courier: Commercial Fed Ex UPS USPS Other: Client

Custody Seal Present? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 230

Cooler Temp: Add/Subtract (C) 0.0

Cooler Temp Corrected (C): N/A, water sample 13.4

Did samples originate in a quarantine zone within the United States: CA, NY, or SC Yes No (check maps)? Yes No

Did samples originate from a foreign source (internationally including Hawaii and Puerto Rico)? Yes No

Comments/Discrepancy:

1.	Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2.	Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
3.	Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
4.	Rush Turn Around Time Requested?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
5.	Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
6.	Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
7.	-Face Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
8.	Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
9.	Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
10.	Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
11.	-Includes Date/Time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
11.	Trip Blank Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
11.	Trip Blank Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
11.	Headspace in VOA Vials (>5-6mm)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Field Data Required? Yes No

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

COMMENTS/SAMPLE DISCREPANCY
Rads not present for Bc-0.3 + Bc-0.1

Lot ID of split containers: _____

MO#: 92651552
Due Date: 03/03/23
PM: MP
CLIENT: GR-Arcadis

Date/Initials Person Examining Contents: *2-1-23 A.V.*

Biological Tissue Frozen? Yes No N/A

Type of Ice: Wet Blue None

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

March 08, 2023

Jessica Ware
Arcadis - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92652193

Dear Jessica Ware:

Enclosed are the analytical results for sample(s) received by the laboratory on February 14, 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 - Greensburg

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-CCR
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.: 92652193

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92652193

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92652193001	ARK-BC-0.3	Water	02/14/23 11:10	02/14/23 15:38
92652193002	ARK-BC-0.1	Water	02/14/23 11:00	02/14/23 15:38

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92652193

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92652193001	ARK-BC-0.3	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92652193002	ARK-BC-0.1	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92652193

Sample: ARK-BC-0.3 **Lab ID: 92652193001** Collected: 02/14/23 11:10 Received: 02/14/23 15:38 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	0.226 ± 0.532 (0.986) C:NA T:80%	pCi/L	03/06/23 16:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.119 ± 0.494 (1.13) C:49% T:85%	pCi/L	03/03/23 11:37	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.345 ± 1.03 (2.12)	pCi/L	03/08/23 14:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92652193

Sample: ARK-BC-0.1 **Lab ID: 92652193002** Collected: 02/14/23 11:00 Received: 02/14/23 15:38 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	0.297 ± 0.583 (1.05) C:NA T:82%	pCi/L	03/06/23 16:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.403 ± 0.418 (0.865) C:70% T:81%	pCi/L	03/03/23 11:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.700 ± 1.00 (1.92)	pCi/L	03/08/23 14:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92652193

QC Batch: 568435

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92652193001, 92652193002

METHOD BLANK: 2760528

Matrix: Water

Associated Lab Samples: 92652193001, 92652193002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.110 ± 0.405 (0.778) C:NA T:87%	pCi/L	03/06/23 16:44	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92652193

QC Batch: 568436

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92652193001, 92652193002

METHOD BLANK: 2760529

Matrix: Water

Associated Lab Samples: 92652193001, 92652193002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.616 ± 0.440 (0.844) C:62% T:83%	pCi/L	03/03/23 11:36	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92652193

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Arkwright-CCR Ash Pond

Pace Project No.: 92652193

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92652193001	ARK-BC-0.3	EPA 903.1	568435		
92652193002	ARK-BC-0.1	EPA 903.1	568435		
92652193001	ARK-BC-0.3	EPA 904.0	568436		
92652193002	ARK-BC-0.1	EPA 904.0	568436		
92652193001	ARK-BC-0.3	Total Radium Calculation	572420		
92652193002	ARK-BC-0.1	Total Radium Calculation	572420		

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 Atlanta

Project #:

WO#: 92652193

PM: MP

Due Date: 03/08/23

CLIENT: GA-ArcadAt1

Courier: Fed Ex UPS USPS Client Commercial Pace Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 2/14/23

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer:

IR Gun ID:

083

Type of Ice: Wet Blue None

Cooler Temp:

2.4

Correction Factor:

Add/Subtract (°C)

+0.2

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

2.6

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input checked="" type="checkbox"/> Yes <input 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 type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input 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 type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Field Data Required? Yes No

COMMENTS/SAMPLE DISCREPANCY

Only BIN for Rads present for analysis

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



Effective Date: 11/14/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

WO#: 92652193

PM: MP

Due Date: 03/08/23

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT: GA-ArcadRI

**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)	BP1N-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

June 30, 2023

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

Re: Arkwright CCR Groundwater Compliance AP1
Work Order: 625988

Dear Joju Abraham:

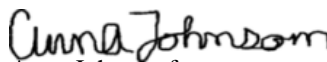
GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 14, 2023. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. Georgia Power EQUIS Database Manager requested for the correction of the sample IDs by removing the dates. These updates ensure the sample nomenclature is consistent on final PDF & EDD.

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: 625988 GEL Work Order: 625988

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
- B Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
- J Value is estimated
- N/A RPD or %Recovery limits do not apply.
- 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: June 30, 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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-3	Project: GPCC00100
Sample ID: 625988001	Client ID: GPCC001
Matrix: WG	
Collect Date: 13-JUN-23 13:08	
Receive Date: 14-JUN-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		5.57			SU			EOS1	06/13/23	1308	2443855	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Sulfate		1330	13.3	40.0	mg/L		100	JLD1	06/15/23	0812	2444191	2
Chloride		4.91	0.335	1.00	mg/L		5	JLD1	06/14/23	2303	2444191	3
Fluoride	U	ND	0.165	0.500	mg/L		5					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	06/16/23	1040	2444300	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		1.50	0.104	0.300	mg/L	1.00	20	PRB	06/17/23	1838	2443950	5
Calcium		363	1.60	4.00	mg/L	1.00	20					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	06/17/23	1736	2443950	6
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0215	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium		0.00361	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0515	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0625	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000306	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		2000	4.76	20.0	mg/L			CH6	06/15/23	1400	2444265	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JD2	06/15/23	0720	2443949
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	06/15/23	1250	2444297

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: June 30, 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 ComplianceAPI

Client Sample ID: ARK-AP1PZ-3
Sample ID: 625988001

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 7470A											
5	SW846 3005A/6020B											
6	SW846 3005A/6020B											
7	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: June 30, 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 ComplianceAP1

Client Sample ID: ARK-AP1-EB-01 Project: GPCC00100
Sample ID: 625988002 Client ID: GPCC001
Matrix: WQ
Collect Date: 13-JUN-23 14:05
Receive Date: 14-JUN-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	0.0934	0.0670	0.200	mg/L		1	JLD1	06/15/23	0843	2444191	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	0.000670	0.000200	mg/L	1.00	1	JP2	06/16/23	1045	2444300	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	06/17/23	1754	2443950	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	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	PRB	06/17/23	1918	2443950	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	06/15/23	1400	2444265	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JD2	06/15/23	0720	2443949
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	06/15/23	1250	2444297

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: June 30, 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 ComplianceAP1

Client Sample ID: ARK-AP1-FB-01 Project: GPCC00100
Sample ID: 625988003 Client ID: GPCC001
Matrix: WQ
Collect Date: 13-JUN-23 14:20
Receive Date: 14-JUN-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	0.0938	0.0670	0.200	mg/L		1	JLD1	06/15/23	0915	2444191	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	0.000670	0.000200	mg/L	1.00	1	JP2	06/16/23	1047	2444300	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	06/17/23	1757	2443950	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	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	PRB	06/17/23	1853	2443950	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	06/15/23	1400	2444265	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JD2	06/15/23	0720	2443949
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	06/15/23	1250	2444297

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Certificate of Analysis

Report Date: June 30, 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 ComplianceAP1

Client Sample ID: ARK-AP1-FB-01
Sample ID: 625988003

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: June 30, 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 ComplianceAP1

Client Sample ID: ARK-AP1-FD-01 Project: GPCC00100
Sample ID: 625988004 Client ID: GPCC001
Matrix: WG
Collect Date: 13-JUN-23 12:00
Receive Date: 14-JUN-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		4.94	0.335	1.00	mg/L		5	JLD1	06/15/23	0143	2444191	1
Fluoride	U	ND	0.165	0.500	mg/L		5					
Sulfate		1350	13.3	40.0	mg/L		100	JLD1	06/15/23	0947	2444191	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.000670	0.000200	mg/L	1.00	1	JP2	06/16/23	1048	2444300	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		1.87	0.104	0.300	mg/L	1.00	20	PRB	06/17/23	1900	2443950	4
Calcium		374	1.60	4.00	mg/L	1.00	20					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	06/17/23	1801	2443950	5
Arsenic	J	0.00200	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0212	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium		0.00367	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0522	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0663	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000266	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		2050	4.76	20.0	mg/L			CH6	06/15/23	1400	2444265	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	06/15/23	1250	2444297
SW846 3005A	ICP-MS 3005A PREP	JD2	06/15/23	0720	2443949

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Certificate of Analysis

Report Date: June 30, 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 ComplianceAPI

Client Sample ID: ARK-API-FD-01
Sample ID: 625988004

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: June 30, 2023

Page 1 of 8

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

Contact: Joju Abraham

Workorder: 625988

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2444191										
QC1205433470	625884001	DUP									
Chloride		2.67		2.70	mg/L	1.22		(0%-20%)	JLD1	06/15/23	03:18
Fluoride	J	0.0909	J	0.0803	mg/L	12.4	^	(+/-0.100)			
Sulfate		88.1		89.8	mg/L	1.91		(0%-20%)		06/15/23	07:01
QC1205433469	LCS										
Chloride	5.00			4.85	mg/L			97.1 (90%-110%)		06/15/23	02:46
Fluoride	2.50			2.49	mg/L			99.5 (90%-110%)			
Sulfate	10.0			9.93	mg/L			99.3 (90%-110%)			
QC1205433468	MB										
Chloride			U	ND	mg/L					06/15/23	02:15
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205433471	625884001	PS									
Chloride	5.00	2.67		7.39	mg/L			94.4 (90%-110%)		06/15/23	03:50
Fluoride	2.50	J 0.0909		2.38	mg/L			91.8 (90%-110%)			
Sulfate	10.0	8.81		18.9	mg/L			101 (90%-110%)		06/15/23	07:33

GEL LABORATORIES LLC

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

QC Summary

Workorder: 625988

Page 2 of 8

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2443950										
QC1205433062	LCS										
Antimony	0.0500			0.0494	mg/L		98.8	(80%-120%)	PRB	06/17/23	17:32
Arsenic	0.0500			0.0492	mg/L		98.4	(80%-120%)			
Barium	0.0500			0.0509	mg/L		102	(80%-120%)			
Beryllium	0.0500			0.0556	mg/L		111	(80%-120%)			
Boron	0.100			0.113	mg/L		113	(80%-120%)		06/17/23	19:15
Cadmium	0.0500			0.0509	mg/L		102	(80%-120%)		06/17/23	17:32
Calcium	2.00			2.03	mg/L		101	(80%-120%)		06/17/23	19:15
Chromium	0.0500			0.0476	mg/L		95.2	(80%-120%)		06/17/23	17:32
Cobalt	0.0500			0.0482	mg/L		96.3	(80%-120%)			
Lead	0.0500			0.0502	mg/L		100	(80%-120%)			
Lithium	0.0500			0.0515	mg/L		103	(80%-120%)			
Molybdenum	0.0500			0.0509	mg/L		102	(80%-120%)			
Selenium	0.0500			0.0487	mg/L		97.5	(80%-120%)			
Thallium	0.0500			0.0481	mg/L		96.1	(80%-120%)			
QC1205433061	MB										
Antimony			U	ND	mg/L					06/17/23	17:28

GEL LABORATORIES LLC

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

QC Summary

Workorder: 625988

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2443950										
Arsenic			U	ND	mg/L				PRB	06/17/23	17:28
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L						
Boron			U	ND	mg/L					06/17/23	19:11
Cadmium			U	ND	mg/L					06/17/23	17:28
Calcium			U	ND	mg/L					06/17/23	19:11
Chromium			U	ND	mg/L					06/17/23	17:28
Cobalt			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Molybdenum			U	ND	mg/L						
Selenium			U	ND	mg/L						
Thallium			U	ND	mg/L						
QC1205433063 625988001 MS											
Antimony	0.0500	U	ND	0.0506	mg/L		101	(75%-125%)		06/17/23	17:39
Arsenic	0.0500	U	ND	0.0548	mg/L		106	(75%-125%)			

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QC Summary

Workorder: 625988

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2443950										
Barium	0.0500	0.0215		0.0714	mg/L		99.8	(75%-125%)	PRB	06/17/23	17:39
Beryllium	0.0500	U	ND	0.0590	mg/L		118	(75%-125%)			
Boron	0.100	1.50		1.67	mg/L		N/A	(75%-125%)		06/17/23	18:42
Cadmium	0.0500	0.00361		0.0548	mg/L		102	(75%-125%)		06/17/23	17:39
Calcium	2.00	363		389	mg/L		N/A	(75%-125%)		06/17/23	18:42
Chromium	0.0500	U	ND	0.0491	mg/L		97.7	(75%-125%)		06/17/23	17:39
Cobalt	0.0500	0.0515		0.100	mg/L		97.9	(75%-125%)			
Lead	0.0500	U	ND	0.0485	mg/L		97.1	(75%-125%)			
Lithium	0.0500	0.0625		0.124	mg/L		123	(75%-125%)			
Molybdenum	0.0500	J	0.000306	0.0540	mg/L		107	(75%-125%)			
Selenium	0.0500	U	ND	0.0557	mg/L		110	(75%-125%)			
Thallium	0.0500	U	ND	0.0473	mg/L		94.4	(75%-125%)			
QC1205433064	625988001	MSD									
Antimony	0.0500	U	ND	0.0508	mg/L	0.351	101	(0%-20%)		06/17/23	17:43
Arsenic	0.0500	U	ND	0.0540	mg/L	1.41	105	(0%-20%)			
Barium	0.0500	0.0215		0.0701	mg/L	1.88	97.2	(0%-20%)			

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QC Summary

Workorder: 625988

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2443950										
Beryllium	0.0500	U	ND	0.0589	mg/L	0.115	118	(0%-20%)	PRB	06/17/23	17:43
Boron	0.100		1.50	1.65	mg/L	1.3	N/A	(0%-20%)		06/17/23	18:46
Cadmium	0.0500		0.00361	0.0548	mg/L	0.0128	102	(0%-20%)		06/17/23	17:43
Calcium	2.00		363	381	mg/L	2.15	N/A	(0%-20%)		06/17/23	18:46
Chromium	0.0500	U	ND	0.0492	mg/L	0.183	97.9	(0%-20%)		06/17/23	17:43
Cobalt	0.0500		0.0515	0.102	mg/L	1.96	102	(0%-20%)			
Lead	0.0500	U	ND	0.0488	mg/L	0.622	97.7	(0%-20%)			
Lithium	0.0500		0.0625	0.124	mg/L	0.189	123	(0%-20%)			
Molybdenum	0.0500	J	0.000306	0.0537	mg/L	0.44	107	(0%-20%)			
Selenium	0.0500	U	ND	0.0561	mg/L	0.693	111	(0%-20%)			
Thallium	0.0500	U	ND	0.0482	mg/L	1.91	96.3	(0%-20%)			
QC1205433065 625988001 SDILT											
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		06/17/23	17:50
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Barium			21.5	J	4.00	ug/L	7.07	(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)			

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QC Summary

Workorder: 625988

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2443950										
Boron		75.1		17.0	ug/L	13.4		(0%-20%)	PRB	06/17/23	18:49
Cadmium		3.61	J	0.707	ug/L	2.02		(0%-20%)		06/17/23	17:50
Calcium		18100		3540	ug/L	2.42		(0%-20%)		06/17/23	18:49
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)		06/17/23	17:50
Cobalt		51.5		10.7	ug/L	4.04		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium		62.5		11.8	ug/L	5.19		(0%-20%)			
Molybdenum	J	0.306	U	ND	ug/L	N/A		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Metals Analysis-Mercury											
Batch	2444300										
QC1205433645	625831006	DUP									
Mercury	U	ND	U	ND	mg/L	N/A			JP2	06/16/23	10:06
QC1205433644	LCS										
Mercury		0.00200		0.00210	mg/L		105	(80%-120%)		06/16/23	09:48
QC1205433643	MB										
Mercury			U	ND	mg/L					06/16/23	09:46

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QC Summary

Workorder: 625988

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch	2444300										
QC1205433646	625831006	MS									
Mercury	0.00200	U	ND	0.00183	mg/L		89.3	(75%-125%)	JP2	06/16/23	10:08
QC1205433647	625831006	SDILT									
Mercury		U	ND	U	ND	ug/L	N/A	(0%-10%)		06/16/23	10:09
Solids Analysis											
Batch	2444265										
QC1205433571	625877002	DUP									
Total Dissolved Solids		U	ND	U	ND	mg/L	N/A		CH6	06/15/23	14:00
QC1205433567	LCS										
Total Dissolved Solids	300				302	mg/L	101	(95%-105%)		06/15/23	14:00
QC1205433566	MB										
Total Dissolved Solids			U		ND	mg/L				06/15/23	14:00

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

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QC Summary

Workorder: 625988

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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 #: 625988**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

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

Analytical Batch: 2443950

Preparation Method: SW846 3005A

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

Preparation Batch: 2443949

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
625988001	ARK-AP1PZ-3
625988002	ARK-AP1-EB-01
625988003	ARK-AP1-FB-01
625988004	ARK-AP1-FD-01
1205433061	Method Blank (MB) ICP-MS
1205433062	Laboratory Control Sample (LCS)
1205433065	625988001(ARK-AP1PZ-3L) Serial Dilution (SD)
1205433063	625988001(ARK-AP1PZ-3S) Matrix Spike (MS)
1205433064	625988001(ARK-AP1PZ-3SD) 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 625988001 (ARK-AP1PZ-3) and 625988004 (ARK-AP1-FD-01) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	625988	
	001	004
Boron	20X	20X
Calcium	20X	20X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

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

Analytical Batch: 2444300

Preparation Method: SW846 7470A Prep

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

Preparation Batch: 2444297

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
625988001	ARK-AP1PZ-3
625988002	ARK-AP1-EB-01
625988003	ARK-AP1-FB-01
625988004	ARK-AP1-FD-01
1205433643	Method Blank (MB)CVAA
1205433644	Laboratory Control Sample (LCS)
1205433647	625831006(NonSDGL) Serial Dilution (SD)
1205433645	625831006(NonSDGD) Sample Duplicate (DUP)
1205433646	625831006(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# 31

Analytical Batch: 2444191

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
625988001	ARK-AP1PZ-3
625988002	ARK-AP1-EB-01
625988003	ARK-AP1-FB-01
625988004	ARK-AP1-FD-01

1205433468	Method Blank (MB)
1205433469	Laboratory Control Sample (LCS)
1205433470	625884001(NonSDG) Sample Duplicate (DUP)
1205433471	625884001(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 1205433470 (Non SDG 625884001DUP), 1205433471 (Non SDG 625884001PS), 625988001 (ARK-AP1PZ-3) and 625988004 (ARK-AP1-FD-01) were diluted because target analyte concentrations exceeded the calibration range. Samples 625988001 (ARK-AP1PZ-3), 625988002 (ARK-AP1-EB-01), 625988003 (ARK-AP1-FB-01) and 625988004 (ARK-AP1-FD-01) were diluted to minimize matrix effects on instrument performance. Samples 625988001 (ARK-AP1PZ-3), 625988002 (ARK-AP1-EB-01), 625988003 (ARK-AP1-FB-01) and 625988004 (ARK-AP1-FD-01) 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	625988	
	001	004
Chloride	5X	5X
Fluoride	5X	5X
Sulfate	100X	100X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

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

Analytical Batch: 2444265

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
625988001	ARK-AP1PZ-3
625988002	ARK-AP1-EB-01
625988003	ARK-AP1-FB-01
625988004	ARK-AP1-FD-01
1205433566	Method Blank (MB)
1205433567	Laboratory Control Sample (LCS)
1205433571	625877002(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information**Additional Comments**

Sample filtration took > 10 minutes; therefore as prescribed in the method, a reduced aliquot was used. 625988001 (ARK-AP1PZ-3) and 625988004 (ARK-AP1-FD-01). A reduced aliquot was used due to limited volume. The client did not provide an entire 1 liter aliquot. 1205433571 (Non SDG 625877002DUP).

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: <u>GPCC</u>		SDG/AR/COC/Work Order: <u>625988 / 625989</u>	
Received By: <u>SNS</u>		Date Received: <u>6/14/23</u>	
Carrier and Tracking Number		Circle Applicable: <input checked="" type="radio"/> FedEx Express <input type="radio"/> FedEx Ground <input type="radio"/> UPS <input type="radio"/> Field Services <input type="radio"/> Courier <input type="radio"/> Other	
		<u>399598403522-1C 3511-1C</u>	
Suspected Hazard Information		Yes	No
		*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	<input 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 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 type="checkbox"/>
		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> <u>CPM</u> mR/Hr Classified as: Rad 1 Rad 2 Rad 3	
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
		COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
		If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____	
Sample Receipt Criteria		Yes	NA
		Yes	No
1	Shipping containers received intact and sealed?	<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"/>
		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"/>
		Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: _____	
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Temperature Device Serial #: <u>IR1-23</u> Secondary Temperature Device Serial # (if Applicable): _____	
5	Sample containers intact and sealed?	<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"/>
		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"/>
		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"/>
		ID's and tests affected: _____	
9	Sample ID's on COC match ID's on bottles?	<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"/>
		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"/>
		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"/>
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Circle Applicable: Not relinquished Other (describe)	
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials MG Date 6/15/23 Page 1 of 1

List of current GEL Certifications as of 30 June 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



July 12, 2023

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

Re: Arkwright CCR Groundwater Compliance AP1
Work Order: 625989

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 14, 2023. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. Georgia Power EQUIS Database Manager requested GEL Project Manager correct the sample IDs by removing the dates. These updates ensure the sample nomenclature is consistent on final PDF & EDD and successful upload to database,

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: 625989 GEL Work Order: 625989

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: July 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-APIPZ-3
 Sample ID: 625989001
 Matrix: WG
 Collect Date: 13-JUN-23
 Receive Date: 14-JUN-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	0.0108	+/-0.698	1.37	+/-0.698	3.00	pCi/L			JE1	06/23/23	1509	2445900	1
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Radium-226+Radium-228 Calculation "See Parent Products"

Radium-226+228 Sum		1.53	+/-0.981	1.37	+/-1.04		pCi/L		1	LXB3	07/06/23	1001	2448609	2
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Rad Radium-226

Lucas Cell, Ra226, Liquid "As Received"

Radium-226		1.52	+/-0.690	0.533	+/-0.771	1.00	pCi/L			LXP1	06/27/23	0810	2445887	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"	2445900	76.5	(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: July 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1-EB-01

Project: GPCC00100

Sample ID: 625989002

Client ID: GPCC001

Matrix: WQ

Collect Date: 13-JUN-23

Receive Date: 14-JUN-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	0.605	+/-1.44	2.53	+/-1.45	3.00	pCi/L			JE1	06/23/23	1509	2445900	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.766	+/-1.48	2.53	+/-1.49		pCi/L		1	LXB3	07/06/23	1001	2448609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.160	+/-0.352	0.698	+/-0.354	1.00	pCi/L			LXP1	06/27/23	0810	2445887	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"	2445900	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

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: July 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1-FB-01

Project: GPCC00100

Sample ID: 625989003

Client ID: GPCC001

Matrix: WQ

Collect Date: 13-JUN-23

Receive Date: 14-JUN-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	1.66	+/-1.26	2.00	+/-1.33	3.00	pCi/L			JE1	06/23/23	1509	2445900	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		5.04	+/-1.65	2.00	+/-1.78		pCi/L		1	LXB3	07/06/23	1001	2448609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		3.39	+/-1.07	0.663	+/-1.19	1.00	pCi/L			LXP1	06/27/23	0848	2445887	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"	2445900	76.4	(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

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: July 12, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAPI

Client Sample ID: ARK-AP1-FD-01

Project: GPCC00100

Sample ID: 625989004

Client ID: GPCC001

Matrix: WG

Collect Date: 13-JUN-23

Receive Date: 14-JUN-23

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		1.90	+/-1.02	1.46	+/-1.13	3.00	pCi/L			JE1	06/23/23	1509	2445900	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.44	+/-1.10	1.46	+/-1.20		pCi/L		1	LXB3	07/06/23	1001	2448609	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.540	+/-0.408	0.475	+/-0.419	1.00	pCi/L			LXP1	06/27/23	0848	2445887	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"	2445900	80.4	(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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QC Summary

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

Report Date: July 12, 2023
Page 1 of 2

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 625989

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch	2445900									
QC1205436474	625716001 DUP									
Radium-228	U	0.410	U	1.25	pCi/L	0		N/A	JE1	06/23/23 15:09
	Uncert:	+/-0.944		+/-1.03						
	TPU:	+/-0.950		+/-1.08						
QC1205436475	LCS									
Radium-228	80.4			88.8	pCi/L		111	(75%-125%)	JE1	06/23/23 15:09
	Uncert:			+/-4.76						
	TPU:			+/-23.1						
QC1205436473	MB									
Radium-228			U	0.213	pCi/L				JE1	06/23/23 15:09
	Uncert:			+/-0.991						
	TPU:			+/-0.992						
Rad Ra-226										
Batch	2445887									
QC1205436429	625648001 DUP									
Radium-226	U	0.580		1.33	pCi/L	78.8		(0% - 100%)	LXP1	06/27/23 09:24
	Uncert:	+/-0.575		+/-0.739						
	TPU:	+/-0.582		+/-0.781						
QC1205436431	LCS									
Radium-226	26.4			26.5	pCi/L		100	(75%-125%)	LXP1	06/27/23 09:24
	Uncert:			+/-2.78						
	TPU:			+/-5.69						
QC1205436428	MB									
Radium-226			U	0.326	pCi/L				LXP1	06/27/23 09:24
	Uncert:			+/-0.394						
	TPU:			+/-0.400						
QC1205436430	625648001 MS									
Radium-226	127	U	0.580	117	pCi/L		92.1	(75%-125%)	LXP1	06/27/23 09:24
	Uncert:		+/-0.575	+/-12.9						
	TPU:		+/-0.582	+/-27.6						

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- 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

GEL LABORATORIES LLC

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

QC Summary

Workorder: 625989

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.

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 625989**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

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

Analytical Batch: 2448609

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
625989001	ARK-APIPZ-3
625989002	ARK-API-EB-01
625989003	ARK-API-FB-01
625989004	ARK-API-FD-01

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: 2445900

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
625989001	ARK-APIPZ-3
625989002	ARK-API-EB-01
625989003	ARK-API-FB-01
625989004	ARK-API-FD-01
1205436473	Method Blank (MB)
1205436474	625716001(NonSDG) Sample Duplicate (DUP)
1205436475	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.

Preparation Information

Homogenous Matrix

Sample 1205436474 (Non SDG 625716001DUP) was non-homogenous matrix. particles and debris 1205436474 (Non SDG 625716001DUP).

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

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

Analytical Batch: 2445887

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
625989001	ARK-AP1PZ-3
625989002	ARK-AP1-EB-01
625989003	ARK-AP1-FB-01
625989004	ARK-AP1-FD-01
1205436428	Method Blank (MB)
1205436429	625648001(NonSDG) Sample Duplicate (DUP)
1205436430	625648001(NonSDG) Matrix Spike (MS)
1205436431	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, 1205436430 (Non SDG 625648001MS), aliquot was reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

SAMPLE RECEIPT & REVIEW FORM

Client: GPCC SDG/AR/COC/Work Order: 625988 / 625989
 Received By: SNS Date Received: 6/14/23

Carrier and Tracking Number: 399598403522-1c 3511-1c
 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? 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 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	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: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: _____
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<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#: _____ 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 checked="" 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 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)
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):

PM (or PMA) review: Initials mg Date 6/15/23 Page 1 of 1

List of current GEL Certifications as of 12 July 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

C.4 Data Quality Evaluation



DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed three data packages from GEL Laboratories (GEL) for the analysis of water samples collected from August 30 to September 7, 2022, at the Georgia Power Arkwright Plant site. Samples were collected according to the Field Sampling Plan – Plant Arkwright (Amec Foster Wheeler, 2016).

Intended Use of Data: To delineate concentrations of constituents of concern in site groundwater.

Analyses requested included:

- SW-846 6020B – Metals by inductively coupled plasma - mass spectrometry (ICP/MS)
- SW-846 7470A – Mercury by manual cold-vapor
- EPA 300 Rev 2.1 – Chloride, fluoride, and sulfate by ion chromatography
- SM 2540C - 2015 – Total dissolved solids (TDS)
- SM 2320B – Total Alkalinity, Bicarbonate, Carbonate

Data were reviewed and validated as described in the field sampling plan and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020). The results of the review/validation are discussed in this Data Usability Summary (DUS) and the associated Laboratory Data Review Checklists.

DATA REVIEW/VALIDATION RESULTS

Introduction

Forty (40) groundwater samples, ten (10) field blanks, and five (5) field duplicate samples were analyzed for one or more of the analyses listed above. Table 1 lists the field identifications cross-referenced to laboratory identifications. Table 2 is a summary of qualified data. Tables 3a through 3e summarize field duplicate results.

Analytical Results

The data packages contain a minimum of one quality control batch per analytical method analyzed. The quality control batch identifies the laboratory QC samples that correspond to the designated field samples. Not detected results are reported as less than the value of the method detection limit (MDL).

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers with the paperwork filled out properly. The laboratory sample condition upon receipt forms indicates all samples were received at temperatures ranging from 2°C to 4°C. All samples were analyzed within the technical holding time. No data were qualified.

Calibrations

Case narratives indicate Initial and continuing calibration verification data were within method acceptance criteria.

Blanks

Laboratory Method Blanks. No contamination was detected in any of the laboratory method blanks with the following exceptions:

SDG 591798 & 592011

- Magnesium was detected in the method blank in batch 2312499 at a concentration of 0.0107 mg/L. All associated sample results were reported as either not detected or detected at concentrations greater than 10 times the blank and therefore no qualification was necessary.

SDG 592013 & 592398

- Magnesium was detected in the method blank in batch 2312858 at a concentration of 0.0253 mg/L. All associated sample results were reported as either not detected or detected at concentrations greater than 10 times the blank and therefore no qualification was necessary.

Field Blanks. Field blanks were analyzed for the full suite of sample analyses and all analytes were not detected with the following exceptions:

SDG 591798 & 592011

- Molybdenum was detected in the equipment blank EB-02 (09/02/2022) at a concentration below the laboratory Reporting Limit (RL). No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Two samples (ARAMW-4 and DUP-02) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).
- Chloride was detected in the equipment blank EB-01 at a concentration above the laboratory RL and in the field blank FB-02 (both collected 08/31/2022) at a concentration below the RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Two samples (ARGWA-3 and ARGWC-15) had reported values less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).
- Boron was detected in the equipment blank EB-01 (08/31/2022) at concentrations below the RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Six samples (ARGWA-24, ARGWA-3, ARGWC-15, ARGWC9, ARGWA-14, and ARGWC-10) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).

SDG 592013 & 592398

- Chloride was detected in the equipment blank EB-01 (09/02/2022) at a concentration above the RL. Associated sample results were reported as detected greater than 10 times the blank concentration and therefore no qualification was necessary.

SDG 592388 & 592528

- Chloride was detected in the blanks EB-01 and EB-02 at a concentration below the RL and FB-01 and FB-02 (all collected 09/07/2022) at a concentration above the RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Four samples (AP1GWA-1, AP1GWA-2, AP1PZ-1, and AP1PZ-1) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).
- Molybdenum was detected in the equipment blank EB-01 (09/07/2022) at a concentration below the RL. No qualification was required for associated sample results reported as not detected or as greater than 10 times the blank concentration. Four samples (AP1PZ-1, AP1PZ-9, AP1PZ-3, and AP1PZ-6) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias (“J+”).

- Sulfate and barium were detected in the equipment blank EB-02 (09/07/2022) at a concentration below the RL and calcium was detected at a concentration above the RL. No qualification was required for associated sample results for barium and calcium reported as greater than 10 times the blank concentration. One sample (AP1GWA-2) had a reported value less than 10 times the blank concentration and has been qualified as estimated with a high bias (“J+”).

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met the laboratory acceptance criteria for all analyses.

Matrix Spike/Matrix Spike Duplicates

Site-specific MS/MSD precision and accuracy results were within the laboratory acceptance criteria with the following exceptions:

SDG 591798 & 592011

- Chloride had a high percent recovery in the post spike sample in ARGWC-9 while the MS/MSD was not reported. Chloride has been qualified as estimated (“J”) in this sample.
- Calcium had a high RPD in the serial dilution sample in ARGWA-5 while the MS/MSD had a sample concentration greater than four times the spike concentration. Calcium has been qualified as estimated (“J”) in this sample.
- Calcium, boron, magnesium, manganese, and sodium sample concentrations in sample ARGWC-18 were greater than four times the spike concentration and therefore not appropriate for evaluation.

SDG 592013 & 592398

- Barium and boron had MS/MSD percent recoveries of less than 30% in sample AP1GWA-1. Barium and boron have been qualified as rejected (“R”) in this sample.

SDG 592388 & 592528

- The same QC batch from SDG 592013 & 592398 including the sample AP1GWA-1 MS/MSD results was reported in this SDG. The same qualifications apply for this sample.

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria.

Field Precision

Five sets of field duplicate samples were collected for this sampling event (see Tables 3a – 3e for sample/duplicate identification and precision calculations). The calculated RPDs between sample and duplicate were within the QAPP acceptance criteria of 25% for all analytes detected above five times the RL. For results reported less than five times the RL, with a difference between sample and duplicate less than two times the RL are also considered acceptable (qualified “A*”). All field duplicate precision was considered acceptable.

Summary

The groundwater analytical data are usable for the purpose of determining current concentrations of COCs in this medium at the affected property. A summary of qualified data is presented in Table 2 below.

References:

Amec Foster Wheeler, 2016. Arkwright Field Sampling Plan. October.

United State Environmental Protection Agency (USEPA), 2020. National Functional Guidelines for Superfund Inorganic Methods Data Review. November.

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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:

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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 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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 March 2023

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

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed one data package from GEL Laboratories (GEL) for the analysis of water samples collected June 13, 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)

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

Two (2) groundwater samples, one (1) field blank, one (1) equipment blank, and one (1) field duplicate sample 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 a temperature of 1.0°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 not detected with the following exceptions:

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- Chloride was detected in the equipment blank ARK-AP1-EB-01 (06/13/2023) and field blank ARK-AP1-FB-01 (06/13/2023) at a concentration below the laboratory Reporting Limit (RL). No qualification was required for associated sample results reported as greater than 10 times the blank concentration.

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met the laboratory acceptance criteria for all analyses.

Matrix Spike/Matrix Spike Duplicates

Site-specific MS/MSD precision and accuracy results were within the laboratory acceptance criteria.

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria.

Field Precision

One set of field duplicate samples were collected for this sampling event (see Table 3a 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-AP1PZ-6-20230613	625986001	625986	06/13/2023
ARK-AP1PZ-3-20230616	625988001	625988	06/13/2023
ARK-AP1-EB-01-20230613	625988002	625988	06/13/2023
ARK-AP1-FB-01-20230613	625988003	625988	06/13/2023
ARK-AP1-FD-01-20230613	625988004	625988	06/13/2023

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Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
	None		

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.

Table 3a – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARK-AP1-FD-01 / ARK-AP1PZ-3	Sulfate	1330	1350	1.5%	A
	Chloride	4.91	4.94	<5*RL, <2*RL	A*
	Boron	1.50	1.87	22%	A
	Calcium	363	374	3.0%	A
	Barium	0.0215	0.0212	<5*RL, <2*RL	A*
	Cadmium	0.00361	0.00367	<5*RL, <2*RL	A*
	Cobalt	0.0515	0.0522	1.4%	A
	Lithium	0.0625	0.0633	1.3%	A
	Molybdenum	0.000306 J	0.000266 J	<5*RL, <2*RL	A*
	TDS	2000	2050	2.5%	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.

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed two data packages from GEL Laboratories (GEL) for the analysis of water samples collected from June 13, 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

Two (2) groundwater samples, one (1) field blank, one (1) equipment blank, and one (1) field duplicate sample 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 in good condition under wet ice however a temperature was not recorded on the lab sample receipt forms. 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:

- Radium-226 and Radium 226+228 were detected in the field blank ARK-AP1-FB-01 collected 06/13/2023. 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.

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-AP1PZ-3	625989001	625989	06/13/2023
ARK-AP1-EB-01	625989002	625989	06/13/2023
ARK-AP1-FB-01	625989003	625989	06/13/2023
ARK-AP1-FD-01	625989004	625989	06/13/2023
ARK-AP1PZ-6	625987001	625987	06/13/2023

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Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
ARK-AP1PZ-3	Radium 226+228	J	Field blank detection
ARK-AP1PZ-3	Radium 226	J	Field blank detection
ARK-AP1PZ-6	Radium 226+228	J	Field blank detection
ARK-AP1PZ-6	Radium 226	J	Field blank detection

Table 3a – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
ARK-AP1-FD-01 / ARK-AP1PZ-3	Radium-228	1.90	0.0108	NC	A*
	Radium 226_228	2.44	1.53	NC	A*
	Radium 226	0.54	1.52	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