2023 SEMI-ANNUAL GROUNDWATER MONITORING REPORT

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

February 28, 2024

Prepared for:

Georgia Power

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CERTIFICATION STATEMENT

This *2023 Semi-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 has been 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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Executive Summary

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

Plant Arkwright 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. Per the 2018 permit submittal, Georgia Power has elected to remove CCR material from AP-1 Landfill and place it in a lined landfill. 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 system 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 piezometers to be abandoned. Groundwater monitoring at AP-1 Landfill has been initiated in order to meet GA EPD requirements. A minor modification was submitted to GA EPD on June 15, 2023 for the abandonment of AP1PZ-6 and removal of AP1PZ-6 from the groundwater monitoring system in support of initial construction. AP1PZ-6 was abandoned on June 21, 2023.

During the 2023 semi-annual reporting period, Stantec conducted one semi-annual groundwater sampling event in October 2023. 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 AP-1 Landfill. 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
District	Washington Slope District
DO	Dissolved Oxygen
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
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
Stantec	Stantec Consulting Services, Inc.
US EPA	United States Environmental Protection Agency

1.0 Introduction

This *2023 Semi-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. Per the 2018 CCR permit submittal, Georgia Power has elected to remove CCR material from AP-1 Landfill and place it in a lined landfill. 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 semi-annual report documents the activities completed between July 2023 and December 2023. One groundwater monitoring event was conducted during this monitoring period in October 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 Plant Arkwright site is located along the southern edge of the Washington Slope District (the District) within the Piedmont Physiographic Province (Clark and Zisa, 1976). The District is characterized by a gently undulating

surface, which generally slopes to the south and southeast toward the Coastal Plain Physiographic Province located approximately 3.8 miles to the southeast of the Site.

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

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

1.2.1 SITE GEOLOGY

The general geology beneath Plant Arkwright consists of clays, silty and sandy clays, silty sands, sandy silts, and minor gravel at depth, underlain by a silty sand saprolite and bedrock. Historical borings advanced at the Site indicate overburden thickness ranging from 22 to 62 feet, overlying a thin layer (5 to 10 feet) of partially weathered rock (PWR) above a more competent bedrock. The underlying bedrock consists of quartzofeldspathic gneiss, hornblende gneiss, and schist (Jacobs, 2021).

1.2.2 SITE HYDROGEOLOGY

The uppermost aquifer at the Site consists of two hydrostratigraphic units: the water table (overburden) hydrostratigraphic unit and the underlying shallow fractured bedrock hydrostratigraphic unit. The water table (overburden) unit is composed of unconsolidated silty sands and sandy silts with clays and variable thicknesses of PWR mantling the bedrock surface, whereas the bedrock unit is a zone comprised of 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. The interim piezometerswere installed to evaluate the uppermost occurrence of groundwater at the Site and from the groundwater monitoring system for AP-1 Landfill (Figure 2).

Slug testing data from the Site reflects a range of hydraulic conductivities from 10^{-6} to 10^{-3} centimeters per second in the water table (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 east, southeast, and northeast, in the direction of the Ocmulgee River and Beaverdam Creek (Figure 3).

1.3 Groundwater Monitoring System

Georgia Power installed a temporary groundwater monitoring system 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 piezometer 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 system 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 July 2023 and December 2023. Samples were collected from each of the piezometers 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.

Piezometer AP1PZ-6 was abandoned in June of 2023 due to construction activities involving ash removal on the southern tip of the landfill and groundwater sampling for the Fall of 2023 was completed for piezometer AP1PZ-6 on June 13, 2023 prior to the abandonment. The remaining AP-1 Landfill piezometers were sampled in October 2023.

2.1 Piezometer Installation and Maintenance

Piezometers 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)). Well inspection forms are included in Appendix A. In October 2023, the piezometers were inspected. There was no need for corrective actions for the wells at AP-1 Landfill during this reporting period. .

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 October 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. Surface water samples were also submitted for analysis of total alkalinity, bicarbonate alkalinity, magnesium, potassium, and sodium.

Sample bottles were placed in ice-packed coolers and submitted to Pace Analytical Services, LLC (Pace) of Peachtree Corners, Georgia following chain-of-custody protocol. The laboratory report associated with the October 2023 sampling event is 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 event completed in June (AP1PZ-6 only) and October 2023 for AP-1 Landfill includes 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 (Figure 3). 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 $\left(\frac{feet}{day}\right)$

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

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

$n_e =$ 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, 1989; Freeze and Cherry 1979). The general groundwater flow velocity values based on October 9, 2023 are presented in Table 4. The results for groundwater flow velocities ranged from 0.005 feet/day in the southern portion of the Site to 0.122 feet/day in the northeastern portion of the Site (1.9 and 44.6 feet/year, respectively) on October 9, 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 June (AP1PZ-6 only) and October 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). Piezometers 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 ± 0.1 Standard Units
- Specific conductance ± 5 %
- ± 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. Table 5 summarizes the groundwater analytical results for June (AP1PZ-6 only) and October 2023, and the corresponding formal analytical reports are in Appendix B.

The October 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. Table 6 summarizes the surface water analytical results for October 2023, and the corresponding formal analytical report 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 5 and 6 provide concentrations from the June (AP1PZ-6 only) and October 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 October 2023 groundwater monitoring event and for the October 2023 surface water sampling event, are summarized in Table 5 and Table 6, 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 Semi-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 piezometer AP1PZ-6 on June 13, 2023, for the AP-1 Landfill. The remaining AP-1 Landfill piezometers were sampled in October 2023.. The next semi-annual sampling event is scheduled for January 2024. The January 2024 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.
5. * = Abandoned. AP1PZ-6 was abandoned on June 20 and 21, 2023.

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

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

Notes:

X - Indicates well sampled during event

* AP1PZ-6 was sampled on June 13, 2023 and abandoned on June 20 and 21, 2023.

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]
Measurement Date		10/9/2023	
AP1GWA-1	345.44	26.96	318.48
AP1GWA-2	341.42	19.67	321.75
AP1PZ-1	338.97	45.73	293.24
AP1PZ-2	339.58	43.04	296.54
AP1PZ-3	338.57	43.65	294.92
AP1PZ-4	338.36	48.02	290.34
AP1PZ-5	339.81	49.55	290.26
AP1PZ-7	340.91	50.93	289.98
AP1PZ-8	338.31	47.34	290.97
AP1PZ-9	337.62	42.14	295.48
AP1PZ-10	338.38	39.96	298.42
AP1PZ-11	338.98	41.23	297.75

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)
October 9, 2023	AP1PZ-10 to AP1PZ-5	298.42	290.26	8.16	842	0.010	0.11	0.2	0.005	1.9
	AP1PZ-11 to AP1PZ-1	297.75	293.24	4.51	222	0.020	1.20	0.2	0.122	44.6

Notes:

1. The geometric mean of the in-situ hydraulic conductivity (K) slug test values for AP1PZ-10 and AP1PZ-5 used for AP1PZ-10 to AP1PZ-5 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 5
ANALYTICAL DATA SUMMARY - GROUNDWATER, OCTOBER 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
		10/9/2023	10/9/2023	10/9/2023	10/9/2023	10/10/2023	10/10/2023	10/10/2023	6/13/2023	10/10/2023	10/10/2023	10/11/2023	10/10/2023	10/10/2023
APPENDIX III	Boron	0.108	0.0734	0.355	0.470	1.71	4.02	7.16	6.95	2.76	2.88	0.707	0.357	0.143
	Calcium	19.3	6.91	33.2	205	434	418	589	460	383	311	72.3	90.4	27.6
	Chloride	1.77	1.81	3.13	2.98	4.77	5.59	7.01	7.77	6.29	2.72	8.68	10.9	1.20
	Fluoride	0.426	0.225	0.279	0.262	< 0.165	0.565	0.409 J	< 0.500	0.270 J	0.292	0.964	0.647	0.202
	Sulfate	58.3	2.17	105	801	1290	1370	1970	2480	1370	680	308	231	54.3
	TDS	139	52.0	211	1170	1830	2030	3080	3340	1960	1370	527	499	198
	pH	5.29	5.99	6.41	5.98	5.61	6.28	6.05	5.33	6.27	6.6	5.17	6.3	6.67
APPENDIX IV	Antimony	< 0.00100	< 0.00100	< 0.00100	< 0.00100	< 0.00100	< 0.00100	< 0.00100	< 0.00300	< 0.00100	< 0.00100	< 0.00100	< 0.00100	< 0.00100
	Arsenic	0.00219 J	0.00255 J	0.00222 J	< 0.00200	< 0.00200	0.00302 J	0.00493 J	0.00324 J	0.00399 J	0.00326 J	0.00224 J	0.00382 J	0.00303 J
	Barium	0.0609	0.0580	0.0422	0.0300	0.0254	0.0395	0.0362	0.0228	0.0421	0.0449	0.0252	0.0347	0.0234
	Beryllium	0.00187	< 0.000200	< 0.000200	< 0.000200	< 0.000200	< 0.000200	< 0.000200	0.00172	< 0.000200	< 0.000200	0.000523	< 0.000200	< 0.000200
	Cadmium	0.000410 J	< 0.000300	< 0.000300	0.000689 J	0.00195	< 0.000300	< 0.000300	< 0.00100	< 0.000300	0.00125	0.00112	< 0.000300	< 0.000300
	Chromium	0.00462 J	0.00340 J	< 0.00300	< 0.00300	< 0.00300	< 0.00300	< 0.00300	< 0.0100	< 0.00300	< 0.00300	< 0.00300	< 0.00300	< 0.00300
	Cobalt	0.00672	0.0112	0.000610 J	0.169	0.0639	0.000518 J	0.0631	0.415	0.00123	0.00118	0.100	0.00140	< 0.000300
	Lead	< 0.000500	< 0.000500	< 0.000500	< 0.000500	< 0.000500	< 0.000500	< 0.000500	< 0.00200	< 0.000500	< 0.000500	< 0.000500	< 0.000500	< 0.000500
	Lithium	0.00944 J	< 0.00300	0.00408 J	0.0214	0.0659	0.00657 J	0.343	0.00923 J	0.00302 J	0.00315 J	0.145	0.0189	< 0.00300
	Mercury	< 0.0000670	< 0.0000670	< 0.0000670	< 0.0000670	< 0.0000670	< 0.0000670	< 0.0000670	< 0.000200	< 0.0000670	< 0.0000670	< 0.0000670	< 0.0000670	< 0.0000670
	Molybdenum	< 0.000200	< 0.000200	0.000437 J	< 0.000200	0.000299 J	0.00398	0.0437	< 0.00100	0.00367	0.729	0.000323 J	0.00214	0.000342 J
	Radium	4.31	6.78	4.93	7.40	12.5	5.33	4.50	3.69	1.64 U	3.27	5.37	11.6	1.77 U
	Selenium	0.00299 J	< 0.00150	< 0.00150	< 0.00150	< 0.00150	< 0.00150	< 0.00150	0.00251 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	< 0.00200	< 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.
7. AP1PZ-6 sampled on June 13, 2023 prior to abandonment on June 21, 2023.

TABLE 6
ANALYTICAL DATA SUMMARY - SURFACE WATER, OCTOBER 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
		10/3/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023
APPENDIX III	Boron	<0.027	<0.027	<0.027	<0.027	<0.027	0.045
	Calcium	7.4	7.2	7.4	7.2	12.9	15.0
	Chloride	9.0	9.0	8.9	9.0	9.3	9.2
	Fluoride	<0.050	<0.050	<0.050	<0.050	0.16	0.14
	Sulfate	6.4	6.3	6.4	6.5	11.6	14.7
	TDS	72.0	66.0	72.0	67.0	99.0	110
	pH	7.32	7.45	7.71	7.74	7.77	7.72
APPENDIX IV	Antimony	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
	Arsenic	<0.0037	<0.0037	<0.0037	<0.0037	<0.0037	<0.0037
	Barium	0.021	0.020	0.021	0.019	0.037	0.036
	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	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012
	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	0.106	0.160	0.549	0.187	0.302	0.297
	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	32.7	32.4	33.1	33.1	60.9	61.8
	Bicarbonate Alkalinity	32.7	32.4	33.1	33.1	60.9	61.8
	Magnesium	2.0	2.0	2.0	2.0	5.5	6.4
	Potassium	3.6	3.5	3.3	3.4	2.7	2.8
	Sodium	9.4	9.1	9.5	9.2	11.2	11.3

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. TDS indicates total dissolved solids.
5. U indicates the constituent was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.

FIGURES

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, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS

Legend

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

0 1,000 2,000 Feet

(At original document size of 11x17)
1:12,000

N

Stantec

Georgia Power

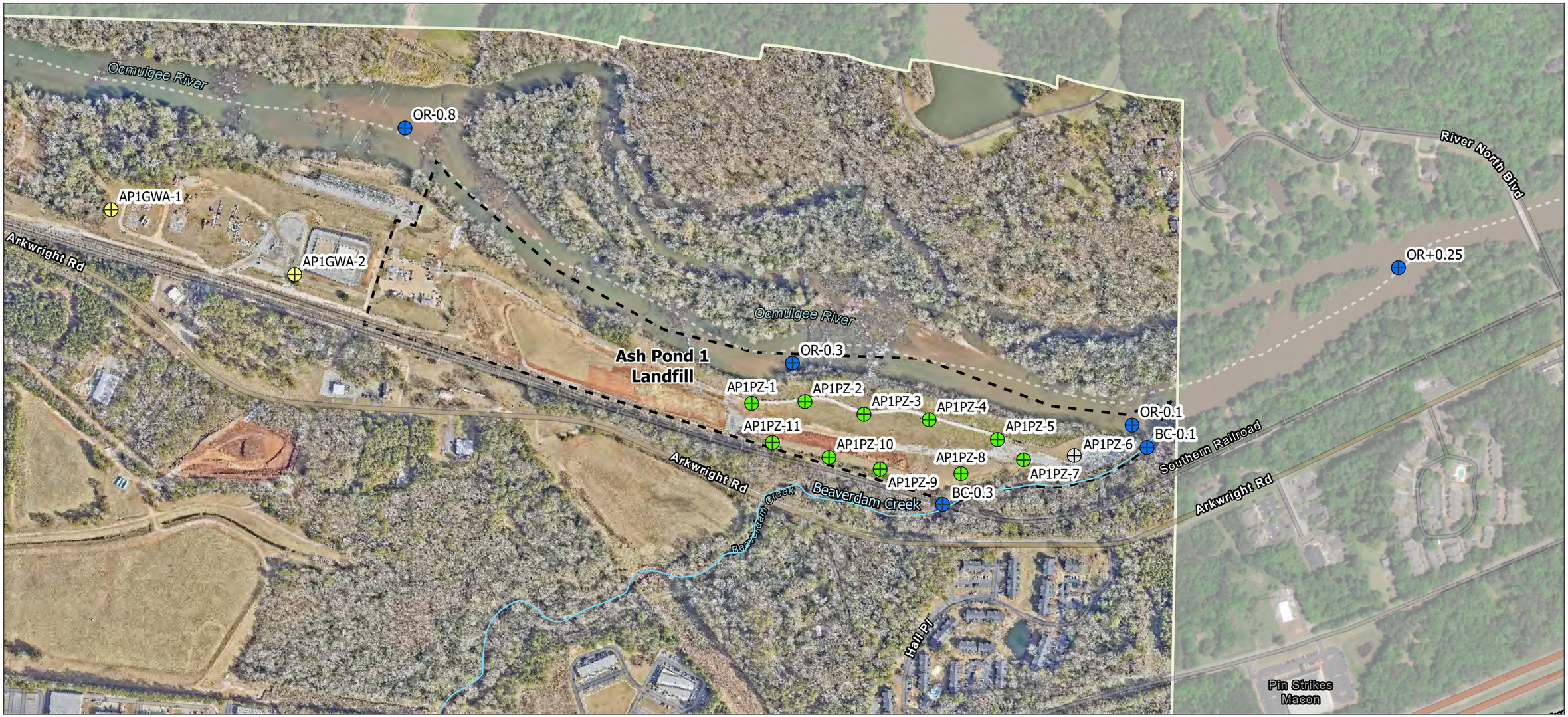
Project Location
Macon, Georgia

Prepared by DMB on 1/8/2024
TR by CS on 1/8/2024
IR by MD on 1/8/2024

Client/Project 175569434
Georgia Power
2023 Semi-Annual Groundwater Monitoring Report
Plant Arkwright Ash Pond 1 Landfill

Figure No.
1

Title
Site Location Map



Legend

- Piezometer
- Well
- Abandoned Piezometer
- Surface Water Sampling Location
- Beaverdam Creek
- Ash Pond 1 Landfill Permit Boundary
- Limit of Client Imagery (dated 1/22/2024)

0 500 1,000 Feet

(At original document size of 11x17)
1:6,000

N

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: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS. Plant imagery provided by client and is dated 1/22/2024.

Stantec

Georgia Power

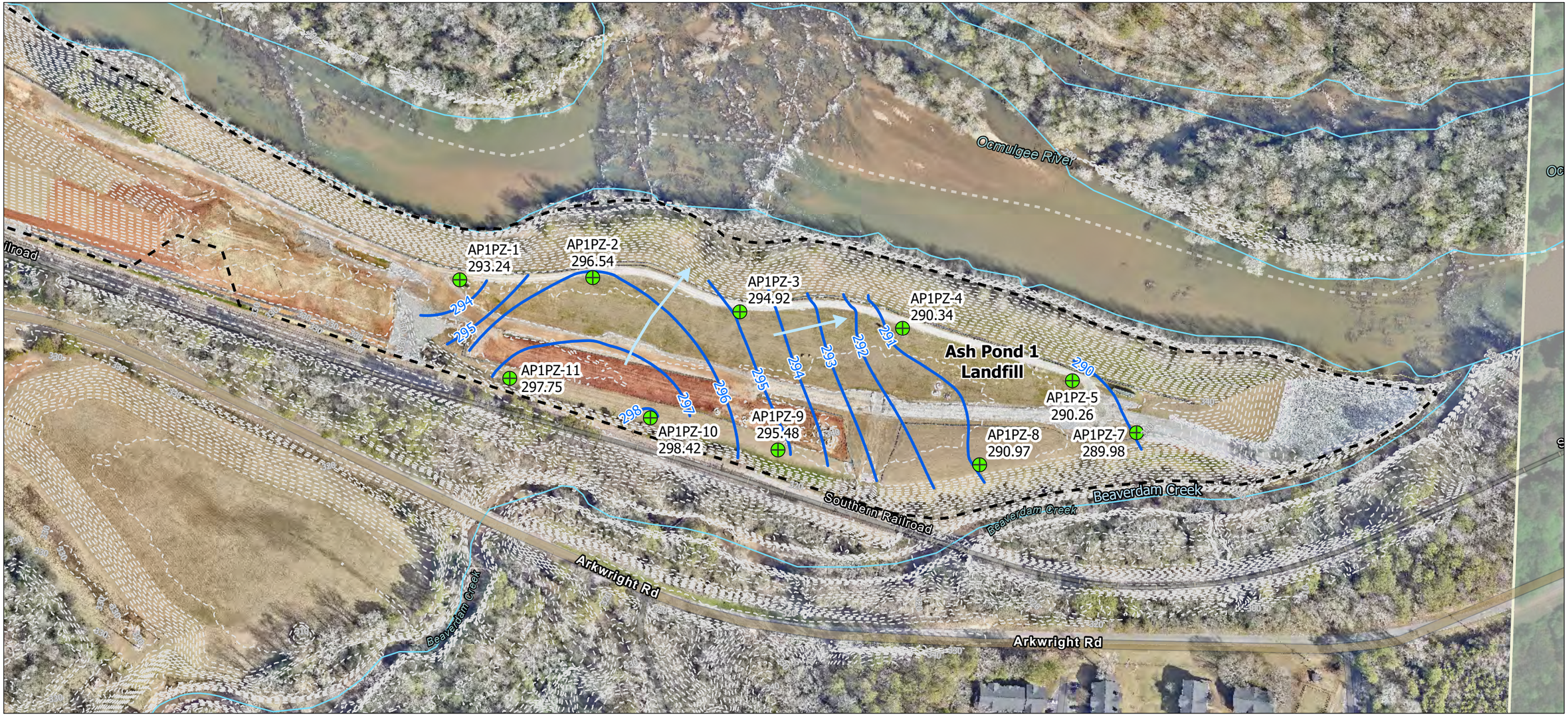
Project Location
Macon, Georgia

Prepared by DMB on 2/26/2024
TR by CS on 2/26/2024
IR by JK on 2/26/2024

Client/Project 175569434
Georgia Power
2023 Semi-Annual Groundwater Monitoring Report
Plant Arkwright Ash Pond 1 Landfill

Figure No.
2

Title
Piezometer and Surface Water Sample Locations Map



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: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS. Plant imagery provided by client and is dated 1/22/2024.

Legend

- Piezometer Location
- Beaverdam Creek/Ocmulgee River (Approximate)
- Interpreted Groundwater Flow Direction
- Potentiometric Surface Contour Oct 2023 (feet (ft) NAVD88)
- Topographic Contour 2024 (2 ft interval)
- Approximate Limits of Ash Pond 1 Landfill
- Limit of Client Imagery (dated 1/22/2024)

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

KATIE T. ROSS
GEORGIA REGISTERED PROFESSIONAL GEOLOGIST
No. 1776

0 200 400 Feet
(At original document size of 11x17)
1:2,400

N

Stantec

Georgia Power

Project Location
Macon, Georgia

Prepared by DMB on 2/26/2024
TR by CS on 2/26/2024
IR by JK on 2/26/2024

Client/Project 175569434
Georgia Power
2023 Semi-Annual Groundwater Monitoring Report
Plant Arkwright Ash Pond 1 Landfill

Figure No.
3

Title
Potentiometric Surface Contour Map AP-1 Landfill - October 9, 2023

APPENDIX A
Well Inspections

MONITORING WELL INSPECTION CHECKLIST

Stantec

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:	10/9/2023
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: John Myer 10/9/2023

DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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: 10/9/2023
Monitoring Well No.: AP1GWA-2
Priority Maintenance Item Identified: Missing dedicated tubing.

	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			Well is located at the confluence of two high-traffic roads; truck can
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		Dedicated length of tubing is missing from gauging portal.
c	Does the well require redevelopment (low-flow, turbid)?		X		Well breathes at 400 mL/min.

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

Well is protected on two sides by concrete barriers. Defunct wasp nest inside outer casing and defunct ant hill on edge of well pad. Well pad and surrounding area are in need of mild landscaping maintenance.

Prepared By / Date: Dylan Quintal 10/12/2023

DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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:	10/9/2023
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: John Myer 10/9/2023

DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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: 10/12/2023
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			Well is located on circuit road used exclusivey by pickup trucks
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		Well breathes at 300 mL/min.

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

Well is protected on two sides by concrete barriers. Ant hill located on or near well pad; presented no significant hazard.

Prepared By / Date: Dylan Quintal 10/12/2023

DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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: 10/9/2023
Monitoring Well No.: AP1PZ-3
Priority Maintenance Item Identified: Grass cutting; Ant mound

	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		Ant mound found; Grass needs to be cut
e	Is the pad surface clean (not covered with sediment or debris)?	X			
4	**Internal casing**				
a	Does the cap prevent entry of foreign material into the well?	X			
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	**Sampling (Groundwater Wells Only)**				
a	Does well recharge adequately when purged?	X			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

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

N/A

Prepared By / Date: John Myer 10/9/2023

DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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: 10/12/2023
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			Well is located on circuit road used exclusivey by pickup trucks
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		Well breathes at 100 mL/min.

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

Well is protected on two sides by concrete barriers. Small watercraft located on west side of well pad.

Prepared By / Date: Dylan Quintal 10/12/2023

DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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: 10/9/2023
Monitoring Well No.: AP1PZ-5
Priority Maintenance Item Identified: Grass Cutting

	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		Grass needs to be cut
e	Is the pad surface clean (not covered with sediment or debris)?	X			
4	**Internal casing**				
a	Does the cap prevent entry of foreign material into the well?	X			
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	**Sampling (Groundwater Wells Only)**				
a	Does well recharge adequately when purged?	X			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

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

N/A

Prepared By / Date: John Myer 10/9/2023

DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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:	10/9/2023
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: John Myer 10/9/2023

DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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: 10/12/2023
Monitoring Well No.: AP1PZ-8
Priority Maintenance Item Identified: Access via wattles and landscaping.

	Description	Yes	No	NA	Comments
1	**Location/Identification**				
a	Is the well visible and accessible?		X		Well cannot be easily accessed
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		Well breathes at 100 mL/min.

Comments: Include inspection details, including items requiring repair or maintenance.
Well located behind wattles in less well-maintained area; requires landscaping maintenance.

Prepared By / Date: Dylan Quintal 10/12/2023
DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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: 10/9/2023
Monitoring Well No.: AP1PZ-9
Priority Maintenance Item Identified: Grass Cutting

	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		Grass needs to be cut
e	Is the pad surface clean (not covered with sediment or debris)?	X			
4	**Internal casing**				
a	Does the cap prevent entry of foreign material into the well?	X			
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	X			
c	Is the well properly vented for equilibrium of air pressure?	X			
d	Is the survey point clearly marked on the inner casing?	X			
e	Is the depth of the well consistent with the original well log?	X			
f	Is the casing stable? (or does the PVC move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	X			
5	**Sampling (Groundwater Wells Only)**				
a	Does well recharge adequately when purged?	X			
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	X			
c	Does the well require redevelopment (low-flow, turbid)?		X		

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

N/A

Prepared By / Date: John Myer 10/9/2023

DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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: 10/12/2023
Monitoring Well No.: AP1PZ-10
Priority Maintenance Item Identified: Tilted bollard.

	Description	Yes	No	NA	Comments
1	**Location/Identification**				
a	Is the well visible and accessible?		X		Well cannot be easily seen or
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			Ant hill located on edge of well
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		Well breathes at 100 mL/min.

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

Southeast bollard does not stand completely vertically. Active ant hill located on edge of well pad. Area surrounding well pad in need of landscaping maintenance.

Prepared By / Date: Dylan Quintal 10/12/2023

DL/SME Review By / Date:

MONITORING WELL INSPECTION CHECKLIST

Stantec

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: 10/12/2023
Monitoring Well No.: AP1PZ-11
Priority Maintenance Item Identified: Access via wattles and landscaping.

	Description	Yes	No	NA	Comments
1	**Location/Identification**				
a	Is the well visible and accessible?		X		Well cannot be easily seen or
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		Ant hill located on edge of well
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		Well breathes at 200 mL/min.

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

Well located behind wattles in less well-maintained area; requires landscaping maintenance.

Prepared By / Date: Dylan Quintal 10/12/2023

DL/SME Review By / Date:

APPENDIX B
Field Sampling Data and Analytical Data Reports

B.1 Field Sampling Data

Low-Flow Test Report:

Test Date / Time: 10/9/2023 1:11:56 PM
Project: Arkwright
Operator Name: J. Myer

Location Name: AP1GWA-1 **Latitude: 32.930019061764** **Longitude: -83.7010088190436** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 26.8 ft** **Total Depth: 37.5 ft** **Initial Depth to Water: 26.96 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 31.8 ft** **Estimated Total Volume Pumped: 7500 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 300 ml/min Final Draw Down: 0.19 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850751**

Test Notes:
Heron Instruments Dipper-T ID: WL006
MP50 SN: 26
ID: 103
Pressure: 25 psi

Weather Conditions:
Sunny 71 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/9/2023 1:11 PM	00:00	5.32 pH	22.31 °C	203.05 µS/cm	4.21 mg/L	2.44 NTU	188.7 mV	27.15 ft	300.00 ml/min
10/9/2023 1:16 PM	05:00	5.25 pH	20.71 °C	203.67 µS/cm	3.15 mg/L	2.52 NTU	161.0 mV	27.15 ft	300.00 ml/min
10/9/2023 1:21 PM	10:00	5.29 pH	20.66 °C	203.66 µS/cm	3.06 mg/L	2.04 NTU	180.8 mV	27.15 ft	300.00 ml/min
10/9/2023 1:26 PM	15:00	5.30 pH	20.62 °C	202.08 µS/cm	3.03 mg/L	2.10 NTU	145.2 mV	27.15 ft	300.00 ml/min
10/9/2023 1:31 PM	20:00	5.30 pH	20.62 °C	202.21 µS/cm	3.01 mg/L	2.30 NTU	138.7 mV	27.15 ft	300.00 ml/min
10/9/2023 1:36 PM	25:00	5.29 pH	20.66 °C	201.95 µS/cm	3.00 mg/L	3.10 NTU	135.2 mV	27.15 ft	300.00 ml/min

Samples

Sample ID:	Description:

ARK-AP1GWA-1	1345 6 bottles Metals Radium TDS Anions
ARK-AP1-FB-01	1405 6 bottles Metals Radium TDS Anions DI water provided by AIR

Low-Flow Test Report:

Test Date / Time: 10/9/2023 1:40:42 PM
Project: Arkwright
Operator Name: Dylan Quintal

Location Name: Arkwright, AP-1, AP1GWA-2 **Latitude: 32.9273346601797** **Longitude: -83.7005548551679** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 20.5 ft** **Total Depth: 31.1 ft** **Initial Depth to Water: 19.67 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 25.3 ft** **Estimated Total Volume Pumped: 16000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 400 ml/min Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850762**

Test Notes:
Heron Dipper-T SN: 11FF2205014ML
MP50 SN: 22
ID: 103
Pressure: 35 psi

Weather Conditions:
Sunny, 73F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/9/2023 1:40 PM	00:00	6.01 pH	21.68 °C	87.35 µS/cm	3.50 mg/L	27.50 NTU	49.9 mV	19.67 ft	400.00 ml/min
10/9/2023 1:45 PM	05:00	6.00 pH	21.80 °C	91.00 µS/cm	3.22 mg/L	18.20 NTU	16.1 mV	19.67 ft	400.00 ml/min
10/9/2023 1:50 PM	10:00	6.00 pH	21.83 °C	93.36 µS/cm	3.01 mg/L	15.10 NTU	-2.5 mV	19.67 ft	400.00 ml/min
10/9/2023 1:55 PM	15:00	6.00 pH	21.87 °C	94.40 µS/cm	2.90 mg/L	11.30 NTU	-5.1 mV	19.67 ft	400.00 ml/min
10/9/2023 2:00 PM	20:00	5.95 pH	21.91 °C	94.79 µS/cm	2.86 mg/L	8.17 NTU	-16.2 mV	19.67 ft	400.00 ml/min
10/9/2023 2:05 PM	25:00	5.95 pH	21.84 °C	95.81 µS/cm	2.72 mg/L	7.42 NTU	-20.3 mV	19.67 ft	400.00 ml/min
10/9/2023 2:10 PM	30:00	5.98 pH	21.87 °C	96.42 µS/cm	2.59 mg/L	5.51 NTU	-26.6 mV	19.67 ft	400.00 ml/min
10/9/2023 2:15 PM	35:00	5.99 pH	21.93 °C	97.22 µS/cm	2.44 mg/L	3.99 NTU	-33.2 mV	19.67 ft	400.00 ml/min
10/9/2023 2:20 PM	40:00	5.99 pH	21.89 °C	97.80 µS/cm	2.36 mg/L	3.64 NTU	-37.9 mV	19.67 ft	400.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1GWA-2	Sample time: 1430 6 bottles: Metals, Anions, TDS, Radium
ARK-AP1-EB-01	6 bottles: Metals, Anions, TDS, Radium

Low-Flow Test Report:

Test Date / Time: 10/9/2023 3:31:25 PM
Project: Arkwright
Operator Name: J. Myer

Location Name: AP1PZ-1 **Latitude: 32.9210574183589** **Longitude: -83.6987658217549** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 77 ft** **Total Depth: 87.6 ft** **Initial Depth to Water: 45.73 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 82.6 ft** **Estimated Total Volume Pumped: 4000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 2.33 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850751**

Test Notes:
Heron Instruments Dipper-T SN WL 006
MP50 SN: 26
ID: 105
Pressure: 45

Weather Conditions:
Sunny 76 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/9/2023 3:31 PM	00:00	6.75 pH	24.42 °C	329.45 µS/cm	1.76 mg/L	3.32 NTU	19.4 mV	46.49 ft	100.00 ml/min
10/9/2023 3:36 PM	05:00	6.50 pH	22.11 °C	337.93 µS/cm	1.12 mg/L	3.51 NTU	58.1 mV	46.98 ft	100.00 ml/min
10/9/2023 3:41 PM	10:00	6.44 pH	21.87 °C	337.04 µS/cm	1.14 mg/L	3.36 NTU	65.9 mV	47.34 ft	100.00 ml/min
10/9/2023 3:46 PM	15:00	6.43 pH	21.73 °C	336.97 µS/cm	0.99 mg/L	3.70 NTU	70.4 mV	47.71 ft	100.00 ml/min
10/9/2023 3:51 PM	20:00	6.42 pH	21.64 °C	339.90 µS/cm	0.83 mg/L	2.55 NTU	81.7 mV	47.73 ft	100.00 ml/min
10/9/2023 3:56 PM	25:00	6.42 pH	21.47 °C	339.04 µS/cm	0.73 mg/L	1.97 NTU	70.1 mV	47.83 ft	100.00 ml/min
10/9/2023 4:01 PM	30:00	6.41 pH	21.50 °C	338.33 µS/cm	0.68 mg/L	1.45 NTU	69.6 mV	47.94 ft	100.00 ml/min
10/9/2023 4:06 PM	35:00	6.41 pH	21.46 °C	337.40 µS/cm	0.64 mg/L	1.46 NTU	68.9 mV	48.01 ft	100.00 ml/min
10/9/2023 4:11 PM	40:00	6.41 pH	21.41 °C	337.44 µS/cm	0.64 mg/L	1.80 NTU	68.1 mV	48.06 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-1	1620 6 bottles collected Metals Radium Anions TDS

Low-Flow Test Report:

Test Date / Time: 10/9/2023 4:20:06 PM
Project: Arkwright
Operator Name: Dylan Quintal

Location Name: Arkwright, AP-1, AP1PZ-2 **Latitude: 32.920425025932** **Longitude: -83.6982994526625** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 52.1 ft** **Total Depth: 62.7 ft** **Initial Depth to Water: 43.04 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 56.6 ft** **Estimated Total Volume Pumped: 9000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850762**

Test Notes:
Heron dipper-T SN: 11FF2205014ML
MP50 SN: 22
ID: 103
Pressure: 45 psi

Weather Conditions:
Sunny, 77F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/9/2023 4:20 PM	00:00	6.12 pH	20.84 °C	1,154.8 µS/cm	0.48 mg/L	11.50 NTU	54.4 mV	43.04 ft	300.00 ml/min
10/9/2023 4:25 PM	05:00	6.08 pH	20.78 °C	1,216.5 µS/cm	0.44 mg/L	9.03 NTU	56.6 mV	43.04 ft	300.00 ml/min
10/9/2023 4:30 PM	10:00	6.05 pH	20.65 °C	1,268.1 µS/cm	0.36 mg/L	7.15 NTU	64.5 mV	43.04 ft	300.00 ml/min
10/9/2023 4:35 PM	15:00	6.02 pH	20.76 °C	1,317.6 µS/cm	0.24 mg/L	4.31 NTU	71.7 mV	43.04 ft	300.00 ml/min
10/9/2023 4:40 PM	20:00	6.01 pH	21.00 °C	1,326.9 µS/cm	0.18 mg/L	4.04 NTU	75.5 mV	43.04 ft	300.00 ml/min
10/9/2023 4:45 PM	25:00	5.99 pH	20.95 °C	1,343.6 µS/cm	0.18 mg/L	3.87 NTU	79.8 mV	43.04 ft	300.00 ml/min
10/9/2023 4:50 PM	30:00	5.98 pH	20.92 °C	1,369.4 µS/cm	0.17 mg/L	3.29 NTU	82.1 mV	43.04 ft	300.00 ml/min

Samples

Sample ID:	Description:

ARK-AP1PZ-2	Sample time: 1700; 6 bottles: Metals, Anions, TDS, Radium
ARK-AP1-FD-01	6 bottles: Metals, Anions, TDS, Radium

Low-Flow Test Report:

Test Date / Time: 10/10/2023 8:49:00 AM
Project: Arkwright
Operator Name: J. Myer

Location Name: AP1PZ-3 **Latitude: 32.9196479679014** **Longitude: -83.6980466544628** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 56.9 ft** **Total Depth: 67.4 ft** **Initial Depth to Water: 43.7 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 61.4 ft** **Estimated Total Volume Pumped: 5250 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0.3 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850751**

Test Notes:
Heron Instrument Dipper-T SN: WL-006
MP-50 SN: 26
ID: 103
Pressure: 35 PSI

Weather Conditions:
Cloudy 53 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/10/2023 8:49 AM	00:00	5.56 pH	18.11 °C	2,156.4 µS/cm	4.47 mg/L	1.36 NTU	198.0 mV	44.00 ft	150.00 ml/min
10/10/2023 8:54 AM	05:00	5.60 pH	19.14 °C	2,143.6 µS/cm	0.83 mg/L	0.80 NTU	175.2 mV	44.00 ft	150.00 ml/min
10/10/2023 8:59 AM	10:00	5.61 pH	19.11 °C	2,126.4 µS/cm	0.58 mg/L	0.59 NTU	192.3 mV	44.00 ft	150.00 ml/min
10/10/2023 9:04 AM	15:00	5.61 pH	19.15 °C	2,138.6 µS/cm	0.51 mg/L	0.74 NTU	164.2 mV	44.00 ft	150.00 ml/min
10/10/2023 9:09 AM	20:00	5.61 pH	19.23 °C	2,127.3 µS/cm	0.52 mg/L	0.51 NTU	178.5 mV	44.00 ft	150.00 ml/min
10/10/2023 9:14 AM	25:00	5.61 pH	19.23 °C	2,133.2 µS/cm	0.38 mg/L	0.94 NTU	152.0 mV	44.00 ft	150.00 ml/min
10/10/2023 9:19 AM	30:00	5.61 pH	19.24 °C	2,143.0 µS/cm	0.30 mg/L	0.69 NTU	147.2 mV	44.00 ft	150.00 ml/min
10/10/2023 9:24 AM	35:00	5.61 pH	19.33 °C	2,130.6 µS/cm	0.27 mg/L	0.34 NTU	142.6 mV	44.00 ft	150.00 ml/min

Samples

Sample ID:	Description:

ARK-AP1PZ-3	0930 6 bottles collected Metals Radium Anions TDS

Low-Flow Test Report:

Test Date / Time: 10/10/2023 8:45:09 AM
Project: Arkwright
Operator Name: Dylan Quintal

Location Name: Arkwright, AP-1, AP1PZ-4 **Latitude: 32.9188151770192** **Longitude: -83.6975826323032** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 56.9 ft** **Total Depth: 67.4 ft** **Initial Depth to Water: 48.03 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 61.5 ft** **Estimated Total Volume Pumped: 2000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850762**

Test Notes:
Heron dipper-T SN: 11FF2205014ML; MP50 SN: 22; ID: 101; Pressure: 35 psi

Weather Conditions:
Cloudy, 54F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/10/2023 8:45 AM	00:00	6.30 pH	18.19 °C	2,379.5 µS/cm	0.46 mg/L	6.10 NTU	-52.7 mV	48.03 ft	100.00 ml/min
10/10/2023 8:50 AM	05:00	6.29 pH	18.37 °C	2,371.3 µS/cm	0.45 mg/L	5.98 NTU	-69.0 mV	48.03 ft	100.00 ml/min
10/10/2023 8:55 AM	10:00	6.29 pH	18.57 °C	2,362.8 µS/cm	0.45 mg/L	4.55 NTU	-52.0 mV	48.03 ft	100.00 ml/min
10/10/2023 9:00 AM	15:00	6.29 pH	18.46 °C	2,361.8 µS/cm	0.43 mg/L	4.15 NTU	-51.1 mV	48.03 ft	100.00 ml/min
10/10/2023 9:05 AM	20:00	6.28 pH	18.59 °C	2,357.5 µS/cm	0.43 mg/L	3.99 NTU	-66.8 mV	48.03 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-4	Sample time: 0910; 6 bottles: Metals, Anions, TDS, Radium
ARK-AP1-FB-02	Sample time: 0930; 6 bottles: Metals, Anions, TDS, Radium

Low-Flow Test Report:

Test Date / Time: 10/10/2023 10:31:42 AM
Project: Arkwright
Operator Name: J. Myer

Location Name: AP1PZ-5 **Latitude: 32.9179289032926** **Longitude: -83.6973509564996** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 56.8 ft** **Total Depth: 67.2 ft** **Initial Depth to Water: 49.55 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 61.3 ft** **Estimated Total Volume Pumped: 4500 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 1.12 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850751**

Test Notes:
Heron Instruments Dipper-T SN: WL-006
MP-50 SN: 26
ID: 103
Pressure: 35 psi

Weather Conditions:
Sunny 64 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/10/2023 10:31 AM	00:00	6.03 pH	22.07 °C	2,926.0 µS/cm	2.18 mg/L	20.50 NTU	-11.3 mV	50.30 ft	100.00 ml/min
10/10/2023 10:36 AM	05:00	6.05 pH	20.32 °C	3,023.3 µS/cm	1.37 mg/L	14.90 NTU	-37.6 mV	50.48 ft	100.00 ml/min
10/10/2023 10:41 AM	10:00	6.06 pH	20.30 °C	3,028.5 µS/cm	1.20 mg/L	8.60 NTU	-42.2 mV	50.55 ft	100.00 ml/min
10/10/2023 10:46 AM	15:00	6.06 pH	20.35 °C	3,019.0 µS/cm	1.05 mg/L	6.59 NTU	-74.1 mV	50.60 ft	100.00 ml/min
10/10/2023 10:51 AM	20:00	6.06 pH	20.33 °C	3,022.2 µS/cm	0.85 mg/L	5.51 NTU	-49.9 mV	50.63 ft	100.00 ml/min
10/10/2023 10:56 AM	25:00	6.05 pH	20.38 °C	3,023.4 µS/cm	0.72 mg/L	3.26 NTU	-48.9 mV	50.66 ft	100.00 ml/min
10/10/2023 11:01 AM	30:00	6.06 pH	20.54 °C	3,025.1 µS/cm	0.66 mg/L	2.07 NTU	-50.6 mV	50.67 ft	100.00 ml/min
10/10/2023 11:06 AM	35:00	6.05 pH	20.57 °C	3,015.2 µS/cm	0.63 mg/L	1.71 NTU	-77.6 mV	50.67 ft	100.00 ml/min
10/10/2023 11:11 AM	40:00	6.05 pH	20.66 °C	3,027.6 µS/cm	0.60 mg/L	1.03 NTU	-48.8 mV	50.67 ft	100.00 ml/min
10/10/2023 11:16 AM	45:00	6.05 pH	20.77 °C	3,026.0 µS/cm	0.59 mg/L	0.88 NTU	-46.8 mV	50.67 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-5	1120 6 Samples taken Metals Radium Anions TDS
ARK-AP1-EB-02	1210 6 Samples taken Metals Radium TDS Anions

Low-Flow Test Report:

Test Date / Time: 6/13/2023 2:42:52 PM
Project: Arkwright
Operator Name: B. Pennell

Location Name: Arkwright, AP-1, PZ-6 **Latitude: 32.9169078058876** **Longitude: -83.696961030364** **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: 57.13 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: LDPE** **Tubing Inner Diameter: 0.17 in** **Pump Intake From TOC: 67.6 ft** **Estimated Total Volume Pumped: 9750 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0.43 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 989630**

Test Notes:
Sample time: 1552

Weather Conditions:
Light rain, 30 C

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.33	
6/13/2023 2:42 PM	00:00	4.68 pH	20.23 °C	3,021.4 µS/cm	2.60 mg/L	4.86 NTU	164.5 mV	57.13 ft	150.00 ml/min
6/13/2023 2:47 PM	05:00	5.10 pH	19.95 °C	3,047.8 µS/cm	1.96 mg/L	6.22 NTU	89.1 mV	57.56 ft	150.00 ml/min
6/13/2023 2:52 PM	10:00	5.22 pH	19.86 °C	3,044.7 µS/cm	1.47 mg/L	3.59 NTU	76.2 mV	57.56 ft	150.00 ml/min
6/13/2023 2:57 PM	15:00	5.26 pH	19.86 °C	3,049.9 µS/cm	1.27 mg/L	2.36 NTU	53.4 mV	57.56 ft	150.00 ml/min
6/13/2023 3:02 PM	20:00	5.28 pH	19.86 °C	3,049.8 µS/cm	1.10 mg/L	2.04 NTU	45.6 mV	57.56 ft	150.00 ml/min
6/13/2023 3:07 PM	25:00	5.30 pH	19.86 °C	3,051.9 µS/cm	1.00 mg/L	1.41 NTU	40.7 mV	57.56 ft	150.00 ml/min
6/13/2023 3:12 PM	30:00	5.31 pH	19.89 °C	3,048.2 µS/cm	0.87 mg/L	0.97 NTU	37.2 mV	57.56 ft	150.00 ml/min
6/13/2023 3:17 PM	35:00	5.31 pH	19.91 °C	3,057.0 µS/cm	0.80 mg/L	0.82 NTU	34.7 mV	57.56 ft	150.00 ml/min
6/13/2023 3:22 PM	40:00	5.32 pH	19.91 °C	3,055.5 µS/cm	0.71 mg/L	0.62 NTU	32.6 mV	57.56 ft	150.00 ml/min
6/13/2023 3:27 PM	45:00	5.33 pH	19.90 °C	3,042.9 µS/cm	0.62 mg/L	0.68 NTU	31.1 mV	57.56 ft	150.00 ml/min
6/13/2023 3:32 PM	50:00	5.33 pH	19.86 °C	3,039.1 µS/cm	0.55 mg/L	0.47 NTU	29.7 mV	57.56 ft	150.00 ml/min
6/13/2023 3:37 PM	55:00	5.33 pH	19.81 °C	3,036.5 µS/cm	0.49 mg/L	0.39 NTU	28.8 mV	57.56 ft	150.00 ml/min

6/13/2023 3:42 PM	01:00:00	5.34 pH	19.81 °C	3,031.2 µS/cm	0.43 mg/L	0.39 NTU	27.6 mV	57.56 ft	150.00 ml/min
6/13/2023 3:47 PM	01:05:00	5.34 pH	19.83 °C	3,029.3 µS/cm	0.38 mg/L	0.34 NTU	26.6 mV	57.56 ft	150.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-6-20230613	6 Polys collected at 1552

Low-Flow Test Report:

Test Date / Time: 10/10/2023 1:11:16 PM
Project: Arkwright
Operator Name: J. Myer

Location Name: AP1PZ-7 **Latitude: 32.9174028763597** **Longitude: -83.6975306645036** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 67.3 ft** **Total Depth: 77.8 ft** **Initial Depth to Water: 51.1 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 71.8 ft** **Estimated Total Volume Pumped: 3000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 3 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850751**

Test Notes:
Heron Instruments Dipper-T SN: WL 006
MP50 SN: 26
ID: 103
Pressure: 40 PSI

Weather Conditions:
Sunny 76 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/10/2023 1:11 PM	00:00	6.34 pH	25.56 °C	2,237.8 µS/cm	1.52 mg/L	8.00 NTU	-51.5 mV	52.05 ft	100.00 ml/min
10/10/2023 1:16 PM	05:00	6.24 pH	22.56 °C	2,332.4 µS/cm	0.81 mg/L	7.55 NTU	-41.5 mV	52.50 ft	100.00 ml/min
10/10/2023 1:21 PM	10:00	6.25 pH	21.96 °C	2,343.3 µS/cm	0.67 mg/L	6.62 NTU	-33.3 mV	52.95 ft	100.00 ml/min
10/10/2023 1:26 PM	15:00	6.28 pH	22.18 °C	2,323.1 µS/cm	0.81 mg/L	5.26 NTU	-24.2 mV	53.35 ft	100.00 ml/min
10/10/2023 1:31 PM	20:00	6.28 pH	22.08 °C	2,327.5 µS/cm	0.93 mg/L	2.72 NTU	-22.2 mV	53.65 ft	100.00 ml/min
10/10/2023 1:36 PM	25:00	6.28 pH	22.18 °C	2,312.8 µS/cm	0.98 mg/L	2.21 NTU	-41.6 mV	53.85 ft	100.00 ml/min
10/10/2023 1:41 PM	30:00	6.27 pH	22.32 °C	2,300.6 µS/cm	0.98 mg/L	1.98 NTU	-23.8 mV	54.10 ft	100.00 ml/min

Samples

Sample ID:	Description:

ARK-AP1PZ-7	1350 6 samples taken Metals Radium TDS Anions

Low-Flow Test Report:

Test Date / Time: 10/10/2023 10:40:18 AM
Project: Arkwright
Operator Name: Dylan Quintal

Location Name: Arkwright, AP-1, AP1PZ-8 **Latitude: 32.9180746929753** **Longitude: -83.6980637535453** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 55.6 ft** **Total Depth: 66.1 ft** **Initial Depth to Water: 47.87 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 59 ft** **Estimated Total Volume Pumped: 7500 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 2.27 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850762**

Test Notes:
Heron dipper-T SN: 11FF2205014ML; MP50 SN: 22; ID: 99; Pressure: 40 psi

Weather Conditions:
Partly cloudy, 66F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/10/2023 10:40 AM	00:00	6.63 pH	20.37 °C	1,569.6 µS/cm	2.14 mg/L	2.02 NTU	-22.3 mV	50.14 ft	100.00 ml/min
10/10/2023 10:45 AM	05:00	6.60 pH	20.88 °C	1,631.7 µS/cm	1.45 mg/L	1.08 NTU	-31.5 mV	50.14 ft	100.00 ml/min
10/10/2023 10:50 AM	10:00	6.60 pH	20.80 °C	1,653.1 µS/cm	1.12 mg/L	0.64 NTU	-37.0 mV	50.14 ft	100.00 ml/min
10/10/2023 10:55 AM	15:00	6.60 pH	20.99 °C	1,659.2 µS/cm	0.99 mg/L	0.54 NTU	-39.0 mV	50.14 ft	100.00 ml/min
10/10/2023 11:00 AM	20:00	6.60 pH	21.53 °C	1,655.6 µS/cm	0.89 mg/L	0.50 NTU	-40.6 mV	50.14 ft	100.00 ml/min
10/10/2023 11:05 AM	25:00	6.60 pH	21.91 °C	1,651.5 µS/cm	0.82 mg/L	0.54 NTU	-41.4 mV	50.14 ft	100.00 ml/min
10/10/2023 11:10 AM	30:00	6.59 pH	21.84 °C	1,652.4 µS/cm	0.76 mg/L	0.48 NTU	-42.3 mV	50.14 ft	100.00 ml/min
10/10/2023 11:15 AM	35:00	6.59 pH	22.27 °C	1,653.1 µS/cm	0.72 mg/L	0.45 NTU	-42.7 mV	50.14 ft	100.00 ml/min
10/10/2023 11:20 AM	40:00	6.59 pH	22.60 °C	1,650.5 µS/cm	0.67 mg/L	0.46 NTU	-42.2 mV	50.14 ft	100.00 ml/min
10/10/2023 11:25 AM	45:00	6.59 pH	22.60 °C	1,652.6 µS/cm	0.63 mg/L	0.67 NTU	-42.1 mV	50.14 ft	100.00 ml/min
10/10/2023 11:30 AM	50:00	6.59 pH	22.68 °C	1,652.7 µS/cm	0.59 mg/L	0.34 NTU	-42.3 mV	50.14 ft	100.00 ml/min
10/10/2023 11:35 AM	55:00	6.59 pH	22.33 °C	1,651.2 µS/cm	0.57 mg/L	0.28 NTU	-42.1 mV	50.14 ft	100.00 ml/min

10/10/2023 11:40 AM	01:00:00	6.60 pH	22.38 °C	1,648.9 µS/cm	0.52 mg/L	0.27 NTU	-42.6 mV	50.14 ft	100.00 ml/min
10/10/2023 11:45 AM	01:05:00	6.60 pH	22.07 °C	1,650.4 µS/cm	0.50 mg/L	0.26 NTU	-55.9 mV	50.14 ft	100.00 ml/min
10/10/2023 11:50 AM	01:10:00	6.60 pH	22.16 °C	1,651.0 µS/cm	0.49 mg/L	0.25 NTU	-55.8 mV	50.14 ft	100.00 ml/min
10/10/2023 11:55 AM	01:15:00	7.06 pH	24.69 °C	0.93 µS/cm	8.11 mg/L		13.1 mV	50.14 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-8	Sample time: 1155; 6 bottles: Metals, Anions, TDS, Radium

Final reading at 11:55 AM was taken after flow through cell was detached and while sampling was occurring. Values are not applicable to stabilization criteria. Final stable parameters are recorded at 11:50 AM.

Low-Flow Test Report:

Test Date / Time: 10/10/2023 3:11:32 PM
Project: Arkwright
Operator Name: J. Myer

Location Name: AP1PZ-9 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 46.3 ft** **Total Depth: 57.4 ft** **Initial Depth to Water: 42.15 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 50.1 ft** **Estimated Total Volume Pumped: 3500 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 4.85 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850751**

Test Notes:
Heron Instruments Dipper-T SN: WL 006
MP50 SN: 26
ID: 103
Pressure: 35 PSI

Well purged dry. Well will allow to recharge and sample the following day

Weather Conditions:
Cloudy 81 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/10/2023 3:11 PM	00:00	5.22 pH	28.36 °C	589.11 µS/cm	2.15 mg/L	11.70 NTU	191.7 mV	43.33 ft	100.00 ml/min
10/10/2023 3:16 PM	05:00	4.61 pH	22.70 °C	636.28 µS/cm	1.88 mg/L	13.10 NTU	224.2 mV	43.89 ft	100.00 ml/min
10/10/2023 3:21 PM	10:00	4.39 pH	22.36 °C	646.67 µS/cm	2.16 mg/L	9.85 NTU	248.2 mV	44.45 ft	100.00 ml/min
10/10/2023 3:26 PM	15:00	4.32 pH	22.19 °C	649.23 µS/cm	2.37 mg/L	6.60 NTU	259.8 mV	44.90 ft	100.00 ml/min
10/10/2023 3:31 PM	20:00	4.30 pH	22.00 °C	650.97 µS/cm	2.36 mg/L	5.39 NTU	263.2 mV	45.40 ft	100.00 ml/min
10/10/2023 3:36 PM	25:00	4.32 pH	22.23 °C	646.95 µS/cm	2.27 mg/L	3.87 NTU	262.3 mV	45.90 ft	100.00 ml/min
10/10/2023 3:41 PM	30:00	4.36 pH	22.31 °C	645.89 µS/cm	2.25 mg/L	3.20 NTU	258.1 mV	46.30 ft	100.00 ml/min
10/10/2023 3:46 PM	35:00	4.40 pH	22.08 °C	645.34 µS/cm	2.44 mg/L	2.66 NTU	252.9 mV	47.00 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-9	Well not sampled due to insufficient water

Low-Flow Test Report:

Test Date / Time: 10/11/2023 8:15:06 AM
Project: Arkwright
Operator Name: Dylan Quintal

Location Name: Arkwright, AP-1, AP1PZ-9 **Latitude: 32.9191016872371** **Longitude: -83.6986887082457** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 46.3 ft** **Total Depth: 57.4 ft** **Initial Depth to Water: 42.26 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 50.1 ft** **Estimated Total Volume Pumped: 0 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850762**

Test Notes:
Heron dipper-T SN: 11FF2205014ML; MP50 SN: 22; ID: 103; Pressure: 35 psi

Weather Conditions:
Cloudy, 60F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/11/2023 8:15 AM	00:00	5.17 pH	18.68 °C	692.89 µS/cm	1.93 mg/L	3.97 NTU	170.3 mV	42.26 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-9	Sample time: 0820; 6 bottles: Metals, Anions, TDS, Radium

Low-Flow Test Report:

Test Date / Time: 10/10/2023 1:30:27 PM
Project: Arkwright
Operator Name: Dylan Quintal

Location Name: Arkwright, AP-1, AP1PZ-10 **Latitude: 32.9197326819116** **Longitude: -83.6989545822144** **Well Diameter: 2 cm** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 46 ft** **Total Depth: 56.5 ft** **Initial Depth to Water: 39.98 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 50.5 ft** **Estimated Total Volume Pumped: 4500 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 2.52 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850762**

Test Notes:
Heron dipper-T SN: 11FF2205014ML; MP50 SN: 22; ID: 99; Pressure: 30 psi

Weather Conditions:
Sunny, 77F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/10/2023 1:30 PM	00:00	6.24 pH	23.54 °C	671.01 µS/cm	1.72 mg/L	2.88 NTU	11.9 mV	42.50 ft	100.00 ml/min
10/10/2023 1:35 PM	05:00	6.38 pH	23.54 °C	739.85 µS/cm	1.46 mg/L	2.00 NTU	-48.0 mV	42.50 ft	100.00 ml/min
10/10/2023 1:40 PM	10:00	6.43 pH	23.59 °C	764.43 µS/cm	1.23 mg/L	1.71 NTU	-48.9 mV	42.50 ft	100.00 ml/min
10/10/2023 1:45 PM	15:00	6.42 pH	23.75 °C	763.75 µS/cm	1.08 mg/L	1.95 NTU	-47.9 mV	42.50 ft	100.00 ml/min
10/10/2023 1:50 PM	20:00	6.40 pH	23.83 °C	752.07 µS/cm	1.02 mg/L	2.37 NTU	-44.3 mV	42.50 ft	100.00 ml/min
10/10/2023 1:55 PM	25:00	6.40 pH	23.68 °C	751.40 µS/cm	0.93 mg/L	1.94 NTU	-42.6 mV	42.50 ft	100.00 ml/min
10/10/2023 2:00 PM	30:00	6.38 pH	23.24 °C	740.03 µS/cm	0.84 mg/L	2.62 NTU	-40.2 mV	42.50 ft	100.00 ml/min
10/10/2023 2:05 PM	35:00	6.35 pH	23.22 °C	719.32 µS/cm	0.79 mg/L	2.55 NTU	-35.7 mV	42.50 ft	100.00 ml/min
10/10/2023 2:10 PM	40:00	6.34 pH	22.62 °C	720.61 µS/cm	0.75 mg/L	3.03 NTU	-32.4 mV	42.50 ft	100.00 ml/min
10/10/2023 2:15 PM	45:00	6.30 pH	22.70 °C	700.48 µS/cm	0.77 mg/L	1.89 NTU	-27.0 mV	42.50 ft	100.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-10	Sample time: 1420; 6 bottles: Metals, Anions, TDS, Radium

Low-Flow Test Report:

Test Date / Time: 10/10/2023 3:50:03 PM
Project: Arkwright
Operator Name: Dylan Quintal

Location Name: Arkwright, AP-1, AP1PZ-11 **Latitude: 32.9205162123018** **Longitude: -83.6991527304053** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 62.8 ft** **Total Depth: 73.3 ft** **Initial Depth to Water: 41.22 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: HDPE** **Pump Intake From TOC: 67.9 ft** **Estimated Total Volume Pumped: 4000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850762**

Test Notes:
Heron dipper-T SN: 11FF2205014ML; MP50 SN: 22; ID: 104; Pressure: 40 psi

Weather Conditions:
Cloudy, 81F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
10/10/2023 3:50 PM	00:00	6.67 pH	21.09 °C	297.14 µS/cm	3.55 mg/L	2.38 NTU	77.3 mV	41.22 ft	200.00 ml/min
10/10/2023 3:55 PM	05:00	6.67 pH	20.92 °C	298.01 µS/cm	3.00 mg/L	2.33 NTU	69.7 mV	41.22 ft	200.00 ml/min
10/10/2023 4:00 PM	10:00	6.67 pH	20.82 °C	297.33 µS/cm	2.77 mg/L	2.15 NTU	68.7 mV	41.22 ft	200.00 ml/min
10/10/2023 4:05 PM	15:00	6.67 pH	20.77 °C	295.74 µS/cm	2.67 mg/L	1.69 NTU	67.6 mV	41.22 ft	200.00 ml/min
10/10/2023 4:10 PM	20:00	6.67 pH	20.74 °C	294.40 µS/cm	2.64 mg/L	1.41 NTU	80.5 mV	41.22 ft	200.00 ml/min

Samples

Sample ID:	Description:
ARK-AP1PZ-11	Sample time: 1615; 6 bottles: Metals, Anions, TDS, Radium
ARK-AP1-FD-02	Sample time: NA; 6 bottles: Metals, Anions, TDS, Radium

B.2 Calibration Data

Field Instrumentation Calibration Form

Site Name: Arkwright

Date: 10/9/23

Calibrated By: John Myer

Field Conditions: Clear 65 F

Instrument	Manufactuer/ Model	Serial Number
Water Quality Meter	AquaTroll	850751
Turbidity Meter	Hach 2100Q	23060D00290

Calibration Standard Information				
Parameter	**Standard**	**Lot #**	**Date of Expiration**	**Brand**
Specific Conductance (µS/cm)	4,490	24000044	May-24	AIR
pH (SU)	4.00	24000044	May-24	AIR
pH (SU)	7.00	22290139	Apr-24	AIR
pH (SU)	10.00	22110130	Apr-24	AIR
D.O. (%)	N/A	N/A	N/A	N/A
ORP (mV)	228.0	24002258	Jun-24	AIR

Calibration					
Time Start	**10:34**	**Time Finish**	**10:55**		
Parameter	**Standard**	**Calibration Value**	**Calibration Solution Temperature (°C)**	**Acceptance Criteria**	**Reference**
Specific Conductance (µS/cm)	4,490	4484	20.35	± 10% of standard	EPA 2023
pH (SU)	4.00	4.02	20.59	± 0.1	GWMP
pH (SU)	7.00	7.05	20.51	± 0.1	GWMP
pH (SU)	10.00	10.05	20.75	± 0.1	GWMP
D.O. (%)	N/A	100.09	20.11	± 10%	NA
ORP (mV)	228.0	235	20.49	± 10	EPA 2023

	Standard	**Calibration Value**	**Acceptance Criteria**	**Reference**
Turbidity (NTU)	20	19.7	± 10% of standard	EPA 2023
	100	98.9		
	800	798		
	10	10.3		

Calibration Check					
Time Start	**15:00**	**Time Finish**	**15:15**		
Parameter	**Standard**	**Calibration Value**	**Calibration Solution Temperature (°C)**	**Acceptance Criteria**	**Reference**
Specific Conductance (µS/cm)	4,490	4342.7	25.6	± 10% of standard	EPA 2023
pH (SU)	4.00	4.07	25.6	± 0.1	GWMP
pH (SU)	7.00	7.08	24.1	± 0.1	GWMP
pH (SU)	10.00	10.04	24.4	± 0.1	GWMP

	Standard	**Calibration Value**	**Acceptance Criteria**	**Reference**
Turbidity (NTU)	20	20.3	± 10% of standard	EPA 2023
	100	103		
	800	795		
	10	10.2		

Notes:

Field Instrumentation Calibration Form

Site Name: Plant Arkwright_____ Date: 2023-10-06_____

Calibrated By: Dylan Quintal_____ Field Conditions: Clear 60F

Instrument	Manufactuer/ Model	Serial Number
Water Quality Meter	InSitu Aqua TROLL 400	850762
Turbidity Meter	Hach 2100Q	22090D000086

Calibration Standard Information				
Parameter	**Standard**	**Lot #**	**Date of Expiration**	**Brand**
Specific Conductance (µS/cm)	4,490	24000044	May-24	AIR
pH (SU)	4.00	24000044	May-24	AIR
pH (SU)	7.00	22290139	Apr-24	AIR
pH (SU)	10.00	22110130	Apr-24	AIR
D.O. (%)	N/A	NA	NA	NA
ORP (mV)	228.0	24002258	Jun-24	AIR

Calibration					
Time Start	**10:30**	**Time Finish**	**11:05**		
Parameter	**Standard**	**Calibration Value**	**Calibration Solution Temperature (°C)**	**Acceptance Criteria**	**Reference**
Specific Conductance (µS/cm)	4,490	4484.9	20.49	± 10% of standard	EPA 2023
pH (SU)	4.00	4.03	19.35	± 0.1	GWMP
pH (SU)	7.00	7.05	19.67	± 0.1	GWMP
pH (SU)	10.00	10.05	20.33	± 0.1	GWMP
D.O. (%)	N/A	100.13	21.76	± 10%	NA
ORP (mV)	228.0	228	20.4	± 10	EPA 2023

	Standard	**Calibration Value**	**Acceptance Criteria**	**Reference**
Turbidity (NTU)	20	19.4	± 10% of standard	EPA 2023
	100	101		
	800	802		
	10	10.1		

Calibration Check					
Time Start	**15:15**	**Time Finish**	**15:35**		
Parameter	**Standard**	**Calibration Value**	**Calibration Solution Temperature (°C)**	**Acceptance Criteria**	**Reference**
Specific Conductance (µS/cm)	4,490	4516.7	22.64	± 10% of standard	EPA 2023
pH (SU)	4.00	4.07	22.72	± 0.1	GWMP
pH (SU)	7.00	7.04	21.89	± 0.1	GWMP
pH (SU)	10.00	9.95	22.06	± 0.1	GWMP

	Standard	**Calibration Value**	**Acceptance Criteria**	**Reference**
Turbidity (NTU)	20	20.6	± 10% of standard	EPA 2023
	100	99.3		
	800	802		
	10	9.92		

Notes:

Field Instrumentation Calibration Form

Site Name: Plant Arkwrigh

Date: 10/10/23

Calibrated By: John Myer

Field Conditions: Clear 51 F

Instrument	Manufactuer/ Model	Serial Number
Water Quality Meter	AquaTroll	850751
Turbidity Meter	Hach 2100Q	23060D00290

Calibration Standard Information				
Parameter	**Standard**	**Lot #**	**Date of Expiration**	**Brand**
Specific Conductance (µS/cm)	4,490	24000044	May-24	AIR
pH (SU)	4.00	24000044	May-24	AIR
pH (SU)	7.00	22290139	Apr-24	AIR
pH (SU)	10.00	22110130	Apr-24	AIR
D.O. (%)	N/A	N/A	N/A	N/A
ORP (mV)	228.0	24002258	Jun-24	AIR

Calibration					
Time Start	**5:30**	**Time Finish**	**6:00**		
Parameter	**Standard**	**Calibration Value**	**Calibration Solution Temperature (°C)**	**Acceptance Criteria**	**Reference**
Specific Conductance (µS/cm)	4,490	4403	19.89	± 10% of standard	EPA 2023
pH (SU)	4.00	4.03	20.22	± 0.1	GWMP
pH (SU)	7.00	7.06	20.25	± 0.1	GWMP
pH (SU)	10.00	10.06	20.28	± 0.1	GWMP
D.O. (%)	N/A	100.05	20.08	± 10%	NA
ORP (mV)	228.0	235.5	20.08	± 10	EPA 2023

	Standard	Calibration Value	Acceptance Criteria	Reference
Turbidity (NTU)	20	20.2	± 10% of standard	EPA 2023
	100	104		
	800	816		
	10	10.1		

Calibration Check					
Time Start	**12:35**	**Time Finish**	**12:50**		
Parameter	**Standard**	**Calibration Value**	**Calibration Solution Temperature (°C)**	**Acceptance Criteria**	**Reference**
Specific Conductance (µS/cm)	4,490	4301	25.41	± 10% of standard	EPA 2023
pH (SU)	4.00	4.06	25.41	± 0.1	GWMP
pH (SU)	7.00	7.08	23.89	± 0.1	GWMP
pH (SU)	10.00	10.05	22.59	± 0.1	GWMP

	Standard	Calibration Value	Acceptance Criteria	Reference
Turbidity (NTU)	20	20.2	± 10% of standard	EPA 2023
	100	102		
	800	803		
	10	10.1		

Notes:

Field Instrumentation Calibration Form

Site Name: Plant Arkwright_____ Date: 2023-10-10_____

Calibrated By: Dylan Quintal_____ Field Conditions: Partly cloudy

Instrument	Manufactuer/ Model	Serial Number
Water Quality Meter	InSitu AquaTroll 400	850762
Turbidity Meter	Hach 2100Q	22090D000086

Calibration Standard Information				
Parameter	**Standard**	**Lot #**	**Date of Expiration**	**Brand**
Specific Conductance (µS/cm)	4,490	24000044	May-24	AIR
pH (SU)	4.00	24000044	May-24	AIR
pH (SU)	7.00	22290139	Apr-24	AIR
pH (SU)	10.00	22110130	Apr-24	AIR
D.O. (%)	N/A	NA	NA	NA
ORP (mV)	228.0	24002258	Jun-24	AIR

Calibration					
Time Start	**7:25**	**Time Finish**	**7:50**		
Parameter	**Standard**	**Calibration Value**	**Calibration Solution Temperature (°C)**	**Acceptance Criteria**	**Reference**
Specific Conductance (µS/cm)	4,490	4470.4	11.85	± 10% of standard	EPA 2023
pH (SU)	4.00	4.03	12.00	± 0.1	GWMP
pH (SU)	7.00	7.09	12.24	± 0.1	GWMP
pH (SU)	10.00	10.14	12.38	± 0.1	GWMP
D.O. (%)	N/A	100.1	14.47	± 10%	NA
ORP (mV)	228.0	246.7	11.82	± 10	EPA 2023

	Standard	**Calibration Value**	**Acceptance Criteria**	**Reference**
Turbidity (NTU)	20	20.3	± 10% of standard	EPA 2023
	100	101		
	800	771		
	10	9.71		

Calibration Check					
Time Start	**14:40**	**Time Finish**	**14:50**		
Parameter	**Standard**	**Calibration Value**	**Calibration Solution Temperature (°C)**	**Acceptance Criteria**	**Reference**
Specific Conductance (µS/cm)	4,490	4285.4	25.72	± 10% of standard	EPA 2023
pH (SU)	4.00	4.09	25.72	± 0.1	GWMP
pH (SU)	7.00	7.09	24.75	± 0.1	GWMP
pH (SU)	10.00	10.02	23.73	± 0.1	GWMP

	Standard	**Calibration Value**	**Acceptance Criteria**	**Reference**
Turbidity (NTU)	20	20.7	± 10% of standard	EPA 2023
	100	103		
	800	797		
	10	10.2		

Notes:

Field Instrumentation Calibration Form

Site Name: Plant Arkwright_____ Date: 2023-10-11

Calibrated By: Dylan Quintal_____ Field Conditions:Cloudy, 59F

Instrument	Manufactuer/ Model	Serial Number
Water Quality Meter	InSitu AquaTroll 400	850762
Turbidity Meter	Hach 2100Q	22090D000086

Calibration Standard Information				
Parameter	**Standard**	**Lot #**	**Date of Expiration**	**Brand**
Specific Conductance (µS/cm)	4,490	24000044	May-24	AIR
pH (SU)	4.00	24000044	May-24	AIR
pH (SU)	7.00	22290139	Apr-24	AIR
pH (SU)	10.00	22110130	Apr-24	AIR
D.O. (%)	N/A	NA	NA	NA
ORP (mV)	228.0	24002258	Jun-24	AIR

Calibration					
Time Start	**7:00**	**Time Finish**	**7:30**		
Parameter	**Standard**	**Calibration Value**	**Calibration Solution Temperature (°C)**	**Acceptance Criteria**	**Reference**
Specific Conductance (µS/cm)	4,490	4477.8	18.09	± 10% of standard	EPA 2023
pH (SU)	4.00	4.04	18.03	± 0.1	GWMP
pH (SU)	7.00	7.07	18.05	± 0.1	GWMP
pH (SU)	10.00	10.05	18.21	± 0.1	GWMP
D.O. (%)	N/A	100.07	17.65	± 10%	NA
ORP (mV)	228.0	227.9	17.93	± 10	EPA 2023

	Standard	Calibration Value	Acceptance Criteria	Reference
Turbidity (NTU)	20	20.4	± 10% of standard	EPA 2023
	100	97.5		
	800	803		
	10	9.76		

Calibration Check					
Time Start	**8:50**	**Time Finish**	**9:00**		
Parameter	**Standard**	**Calibration Value**	**Calibration Solution Temperature (°C)**	**Acceptance Criteria**	**Reference**
Specific Conductance (µS/cm)	4,490	4412.9	17.61	± 10% of standard	EPA 2023
pH (SU)	4.00	4.04	17.63	± 0.1	GWMP
pH (SU)	7.00	7.04	17.97	± 0.1	GWMP
pH (SU)	10.00	10.03	18.00	± 0.1	GWMP

	Standard	Calibration Value	Acceptance Criteria	Reference
Turbidity (NTU)	20	19.2	± 10% of standard	EPA 2023
	100	88.6		
	800	807		
	10	9.81		

Notes:

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: 6/13/2023

Page 1 **of** 1

Morning (AM) Calibration			**Calibrated By:**	B. Pennell	
Weather:			Partly cloudy, 27 °C		
Time (24hr) Start:	12:00	*Acceptance Criteria*	**Time (24hr) Finish:**	12:31	
Temperature (°C):			**Barometric Pressure (mbar):**		
NIST Thermometer:	27.6	*+/- 4°C*	*Local Weather Station:*	1012.9	
Aqua TROLL 400:	27.15		*Aqua TROLL 400:*	1002.2	
Turbidity (NTUs):	*20 NTU Standard*	*100 NTU Standard*	*800 NTU Standard*	*10 NTU Verification*	*Acceptance Criteria*
	20.0	101	793	10.1	*+/- 3 %*
	Calibration Value	**Post Calibration**	*Acceptance Criteria*	**Cal Sol Temp (ºC)**	**Notes:**
Specific Conductance 4,490 (µS/cm)	4490	4494.7	*+/- 1 %*	27.13	NA
pH 7 (SU)	7.00	7.01	*+/- .1 (SU)*	26.50	NA
pH 4 (SU)	4.00	4.00	*+/- .1 (SU)*	26.82	NA
pH 10 (SU)	10.00	9.95	*+/- .1 (SU)*	26.57	NA
D.O. (%)	*N/A*	103.49	*95-105 %*	29.05	NA
ORP (mV)	226.8	226.5	*+/- 10 mV*	26.46	NA

Afternoon (PM) Calibration Verification			**Verification By:**	Bryan Pennell	
Weather:			Cloudy, 26 °C		
Time (24hr) Start:	21:40	*Acceptance Criteria*	**Time (24hr) Finish:**	22:05	
Temperature (°C):			**Barometric Pressure (mbar):**		
NIST Thermometer:	27.1	*+/- 4°C*	*Local Weather Station:*	1010.7	
Aqua TROLL 400:	26.63		*Aqua TROLL 400:*	1001.5	
Turbidity (NTUs):	*20 NTU Standard*	*100 NTU Standard*	*800 NTU Standard*	*10 NTU Verification*	*Acceptance Criteria*
	19.5	100	786	9.82	*+/- 3 %*
	Calibration Value	**Verification**	*Acceptance Criteria*	**Cal Sol Temp (ºC)**	**Notes:**
Specific Conductance 4490 (µS/cm)	4490	4488.6	*+/- 1 %*	26.63	NA
pH 7 (SU)	7.00	6.99	*+/- .1 (SU)*	26.12	NA
pH 4 (SU)	4.00	4.01	*+/- .1 (SU)*	26.68	NA
pH 10 (SU)	10.00	10.03	*+/- .1 (SU)*	26.03	NA
D.O. (%)	*N/A*	100.96	*95-105 %*	28.31	NA
ORP (mV)	225.9	225.6	*+/- 10 mV*	25.86	NA

Calibration Standards Information

Standard (@ 25°C)	**Certified Value**	**Brand**	**Lot Number**	**Expiration Date**
AM pH 4 (SU)	4.00	AIR	22250153	11/1/2023
AM pH 7 (SU)	7.00	AIR	2216893	11/1/2023
AM pH 10 (SU)	10.00	AIR	21320202	12/1/2023
PM pH 4 (SU)	4.00	AIR	22250153	11/1/2023
PM pH 7 (SU)	7.00	AIR	2216893	11/1/2023
PM pH 10 (SU)	10.00	AIR	21320202	12/1/2023
Specific Conductance 4,490 (µS/cm)	4490	AIR	22250153	11/1/2023
ORP (mV)	228.0	AIR	21390144	11/1/2023
Turbidity - 20 NTU	20.0	Hach	A2231	12/1/2023
Turbidity - 100 NTU	100	Hach	A2239	12/1/2023
Turbidity - 800 NTU	800	Hach	A2231	12/1/2023
Turbidity - 10 NTU	10.0	Hach	A2264	1/1/2024

	Manufacturer	**Instruments Model**	**Serial Number**	**Calibrated Within Acceptance Criteria:**
Water Quality Meter	InSitu	AquaTroll 400	01-7125	
Turbidity Meter	Hach	2100Q	22080D000173	
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620123	Expiration Date: 6/28/2024
Explanations:	NA			

Prepared By: Bryan Pennell *Date:* 6/13/2023 *Signature:* Bryan Pennell

Review By: Jennifer Kolbe *Date:* 2/26/2024 *Signature:* Jennifer L. Kolbe

B.3 Groundwater & Surface Water Laboratory Analytical Reports

GEL Laboratories LLC

a member of The GEL Group INC

October 23, 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: 640869

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 11, 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. The laboratory received the following sample(s):

Laboratory ID	Client ID	Matrix	Date Collected	Date Recieved
640869001	ARK-AP1GWA-1	Ground Water	09/10/23 13:45	11/10/23 15:28
640869002	ARK-AP1-FB-01	Ground Water	09/10/23 14:05	11/10/23 15:28
640869003	ARK-AP1GWA-2	Ground Water	09/10/23 14:30	11/10/23 15:28
640869004	ARK-AP1-EB-01	Ground Water	09/10/23 15:00	11/10/23 15:28
640869005	ARK-AP1PZ-1	Ground Water	09/10/23 16:20	11/10/23 15:28
640869006	ARK-AP1PZ-2	Ground Water	09/10/23 17:00	11/10/23 15:28
640869007	ARK-AP1-FD-01	Ground Water	09/10/23 00:00	11/10/23 15:28
640869008	ARK-AP1PZ-4	Ground Water	10/10/23 09:10	11/10/23 15:28
640869009	ARK-AP1-FB-02	Ground Water	10/10/23 09:30	11/10/23 15:28
640869010	ARK-AP1PZ-3	Ground Water	10/10/23 09:30	11/10/23 15:28
640869011	ARK-AP1PZ-8	Ground Water	10/10/23 11:55	11/10/23 15:28
640869012	ARK-AP1PZ-5	Ground Water	10/10/23 11:20	11/10/23 15:28
640869013	ARK-AP1-EB-02	Ground Water	10/10/23 12:10	11/10/23 15:28
640869014	ARK-AP1PZ-7	Ground Water	10/10/23 13:50	11/10/23 15:28
640869015	ARK-AP1PZ-10	Ground Water	10/10/23 14:20	11/10/23 15:28
640869016	ARK-AP1PZ-11	Ground Water	10/10/23 16:15	11/10/23 15:28

640869017	ARK-AP1-FD-02	Ground Water	10/10/23 00:00	11/10/23 15:28
640869018	ARK-AP1PZ-9	Ground Water	11/10/23 08:20	11/10/23 15:28

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.

Prep Methods and Prep Dates

Method	Run Date ID
SW846 3005A	12-OCT-2023
SW846 7470A Prep	12-OCT-2023

Analysis Methods and Analysis Dates

Method	Run Date ID
EPA 300.0	13-OCT-2023
EPA 300.0	14-OCT-2023
SM 2540C	12-OCT-2023
SM 2540C	13-OCT-2023
SW846 3005A/6020B	14-OCT-2023
SW846 3005A/6020B	15-OCT-2023
SW846 3005A/6020B	16-OCT-2023
SW846 7470A	13-OCT-2023

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,

Amanda Turner 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: 640869 GEL Work Order: 640869

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 Metals--The Matrix spike sample recovery is not within specified control limits

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 Amanda Tew

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

Certificate of Analysis

Report Date: October 23, 2023

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

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

Client Sample ID:	ARK-AP1GWA-1	Project:	GPCC00100
Sample ID:	640869001	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	09-OCT-23 13:45		
Receive Date:	11-OCT-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		1.77	0.335	1.00	mg/L		5	LXA2	10/13/23	0209	2507800	1
Sulfate		58.3	0.665	2.00	mg/L		5					
Fluoride		0.426	0.0330	0.100	mg/L		1	LXA2	10/13/23	2017	2507800	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1200	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1441	2507328	4
Barium		0.0609	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.00187	0.000200	0.000500	mg/L	1.00	1					
Cadmium	J	0.000410	0.000300	0.00100	mg/L	1.00	1					
Calcium		19.3	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00462	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00672	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00944	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	J	0.00299	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Arsenic	J	0.00219	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1550	2507328	5
Boron		0.108	0.00520	0.0150	mg/L	1.00	1	PRB	10/16/23	1028	2507328	6
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		139	2.38	10.0	mg/L			CH6	10/12/23	1323	2507350	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1GWA-1	Project:	GPCC00100
Sample ID:	640869001	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1-FB-01	Project:	GPCC00100
Sample ID:	640869002	Client ID:	GPCC001
Matrix:	WQ		
Collect Date:	09-OCT-23 14:05		
Receive Date:	11-OCT-23		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.213	0.0670	0.200	mg/L		1	LXA2	10/13/23	0342	2507800	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1201	2507487	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1506	2507328	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					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	PRB	10/16/23	1041	2507328	4
Arsenic	J	0.00231	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1604	2507328	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	10/12/23	1323	2507350	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1-FB-01	Project:	GPCC00100
Sample ID:	640869002	Client ID:	GPCC001

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

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	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: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1GWA-2	Project:	GPCC00100
Sample ID:	640869003	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	09-OCT-23 14:30		
Receive Date:	11-OCT-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		1.81	0.0670	0.200	mg/L		1	LXA2	10/13/23	0413	2507800	1
Fluoride		0.225	0.0330	0.100	mg/L		1					
Sulfate		2.17	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1203	2507487	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.0734	0.00520	0.0150	mg/L	1.00	1	PRB	10/16/23	1043	2507328	3
Arsenic	J	0.00255	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1606	2507328	4
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1510	2507328	5
Barium		0.0580	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		6.91	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00340	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0112	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		52.0	2.38	10.0	mg/L			CH6	10/12/23	1323	2507350	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1GWA-2	Project:	GPCC00100
Sample ID:	640869003	Client ID:	GPCC001

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

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1-EB-01	Project:	GPCC00100
Sample ID:	640869004	Client ID:	GPCC001
Matrix:	WQ		
Collect Date:	09-OCT-23 15:00		
Receive Date:	11-OCT-23		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.364	0.0670	0.200	mg/L		1	LXA2	10/13/23	0546	2507800	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1204	2507487	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	J	0.00243	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1608	2507328	3
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	PRB	10/16/23	1045	2507328	4
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1513	2507328	5
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	10/12/23	1423	2507357	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1-EB-01	Project:	GPCC00100
Sample ID:	640869004	Client ID:	GPCC001

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

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	

Notes:

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: October 23, 2023

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

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

Client Sample ID:	ARK-AP1PZ-1	Project:	GPCC00100
Sample ID:	640869005	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	09-OCT-23 16:20		
Receive Date:	11-OCT-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"												
Fluoride		0.279	0.0330	0.100	mg/L		1	LXA2	10/13/23	2149	2507800	1
Chloride		3.13	0.670	2.00	mg/L		10	LXA2	10/13/23	0718	2507800	2
Sulfate		105	1.33	4.00	mg/L		10					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1206	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	J	0.00222	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1610	2507328	4
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1517	2507328	5
Barium		0.0422	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		33.2	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000610	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00408	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000437	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		0.355	0.0260	0.0750	mg/L	1.00	5	PRB	10/15/23	2114	2507328	6
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		211	2.38	10.0	mg/L			CH6	10/12/23	1423	2507357	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-1	Project:	GPCC00100
Sample ID:	640869005	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	SW846 3005A/6020B	
7	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: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-2	Project:	GPCC00100
Sample ID:	640869006	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	09-OCT-23 17:00		
Receive Date:	11-OCT-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		801	6.65	20.0	mg/L		50	LXA2	10/13/23	0749	2507800	1
Chloride		2.98	0.134	0.400	mg/L		2	LXA2	10/13/23	2220	2507800	2
Fluoride		0.262	0.0660	0.200	mg/L		2					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1208	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1520	2507328	4
Barium		0.0300	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	J	0.000689	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.169	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0214	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		0.470	0.0260	0.0750	mg/L	1.00	5	PRB	10/15/23	2116	2507328	5
Calcium		205	0.400	1.00	mg/L	1.00	5					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1612	2507328	6
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1170	4.76	20.0	mg/L			CH6	10/12/23	1423	2507357	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-2	Project:	GPCC00100
Sample ID:	640869006	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1-FD-01	Project:	GPCC00100
Sample ID:	640869007	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	09-OCT-23 00:00		
Receive Date:	11-OCT-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		804	13.3	40.0	mg/L		100	LXA2	10/13/23	0820	2507800	1
Chloride		3.06	0.134	0.400	mg/L		2	LXA2	10/13/23	2251	2507800	2
Fluoride		0.283	0.0660	0.200	mg/L		2					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1213	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1524	2507328	4
Barium		0.0313	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	J	0.000635	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.192	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0238	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					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1614	2507328	5
Boron		0.492	0.0260	0.0750	mg/L	1.00	5	PRB	10/15/23	2118	2507328	6
Calcium		218	0.400	1.00	mg/L	1.00	5					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1210	4.76	20.0	mg/L			CH6	10/12/23	1423	2507357	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1-FD-01	Project:	GPCC00100
Sample ID:	640869007	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1PZ-4	Project:	GPCC00100
Sample ID:	640869008	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	10-OCT-23 09:10		
Receive Date:	11-OCT-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		5.59	0.335	1.00	mg/L		5	LXA2	10/13/23	2321	2507800	1
Fluoride		0.565	0.165	0.500	mg/L		5					
Sulfate		1370	26.6	80.0	mg/L		200	LXA2	10/13/23	0851	2507800	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1214	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	J	0.00302	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1616	2507328	4
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1528	2507328	5
Barium		0.0395	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	0.000518	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00657	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00398	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		4.02	0.130	0.375	mg/L	1.00	25	PRB	10/15/23	2120	2507328	6
Calcium		418	2.00	5.00	mg/L	1.00	25					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2030	23.8	100	mg/L			CH6	10/12/23	1423	2507357	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-4	Project:	GPCC00100
Sample ID:	640869008	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1-FB-02	Project:	GPCC00100
Sample ID:	640869009	Client ID:	GPCC001
Matrix:	WQ		
Collect Date:	10-OCT-23 09:30		
Receive Date:	11-OCT-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	LXA2	10/13/23	0922	2507800	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1216	2507487	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1531	2507328	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					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	PRB	10/16/23	1046	2507328	4
Arsenic	J	0.00204	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1622	2507328	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	10/12/23	1423	2507357	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1-FB-02	Project:	GPCC00100
Sample ID:	640869009	Client ID:	GPCC001

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

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1PZ-3	Project:	GPCC00100
Sample ID:	640869010	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	10-OCT-23 09:30		
Receive Date:	11-OCT-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		1290	13.3	40.0	mg/L		100	LXA2	10/13/23	0952	2507800	1
Chloride		4.77	0.335	1.00	mg/L		5	LXA2	10/14/23	0054	2507800	2
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	10/13/23	1218	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1535	2507328	4
Barium		0.0254	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium		0.00195	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0639	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0659	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000299	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					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1625	2507328	5
Boron		1.71	0.104	0.300	mg/L	1.00	20	PRB	10/15/23	2126	2507328	6
Calcium		434	1.60	4.00	mg/L	1.00	20					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1830	23.8	100	mg/L			CH6	10/12/23	1423	2507357	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-3	Project:	GPCC00100
Sample ID:	640869010	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1PZ-8	Project:	GPCC00100
Sample ID:	640869011	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	10-OCT-23 11:55		
Receive Date:	11-OCT-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		680	13.3	40.0	mg/L		100	LXA2	10/13/23	1023	2507800	1
Chloride		2.72	0.134	0.400	mg/L		2	LXA2	10/14/23	0125	2507800	2
Fluoride		0.292	0.0660	0.200	mg/L		2					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1219	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		2.88	0.104	0.300	mg/L	1.00	20	PRB	10/15/23	2127	2507328	4
Calcium		311	1.60	4.00	mg/L	1.00	20					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1546	2507328	5
Barium		0.0449	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium		0.00125	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00118	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00315	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.729	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					
Arsenic	J	0.00326	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1627	2507328	6
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1370	4.76	20.0	mg/L			CH6	10/12/23	1423	2507357	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-8	Project:	GPCC00100
Sample ID:	640869011	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1PZ-5	Project:	GPCC00100
Sample ID:	640869012	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	10-OCT-23 11:20		
Receive Date:	11-OCT-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		1970	26.6	80.0	mg/L		200	LXA2	10/13/23	1054	2507800	1
Chloride		7.01	0.335	1.00	mg/L		5	LXA2	10/14/23	0156	2507800	2
Fluoride	J	0.409	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	10/13/23	1221	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	J	0.00493	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1629	2507328	4
Boron		7.16	0.520	1.50	mg/L	1.00	100	PRB	10/15/23	2129	2507328	5
Calcium		589	8.00	20.0	mg/L	1.00	100					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1549	2507328	6
Barium		0.0362	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		0.0631	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.343	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.0437	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		3080	23.8	100	mg/L			CH6	10/12/23	1423	2507357	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-5	Project:	GPCC00100
Sample ID:	640869012	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1-EB-02	Project:	GPCC00100
Sample ID:	640869013	Client ID:	GPCC001
Matrix:	WQ		
Collect Date:	10-OCT-23 12:10		
Receive Date:	11-OCT-23		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.206	0.0670	0.200	mg/L		1	LXA2	10/13/23	1125	2507800	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1223	2507487	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1553	2507328	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					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	J	0.115	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	0.000205	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	10/16/23	1048	2507328	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1631	2507328	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	10/12/23	1423	2507357	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1-EB-02	Project:	GPCC00100
Sample ID:	640869013	Client ID:	GPCC001

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

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1PZ-7	Project:	GPCC00100
Sample ID:	640869014	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	10-OCT-23 13:50		
Receive Date:	11-OCT-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		1370	13.3	40.0	mg/L		100	LXA2	10/13/23	1156	2507800	1
Chloride		6.29	0.335	1.00	mg/L		5	LXA2	10/14/23	0227	2507800	2
Fluoride	J	0.270	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	10/13/23	1224	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	J	0.00399	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1633	2507328	4
Boron		2.76	0.104	0.300	mg/L	1.00	20	PRB	10/15/23	2131	2507328	5
Calcium		383	1.60	4.00	mg/L	1.00	20					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1556	2507328	6
Barium		0.0421	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		0.00123	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00302	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00367	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		1960	23.8	100	mg/L			CH6	10/12/23	1423	2507357	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-7	Project:	GPCC00100
Sample ID:	640869014	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1PZ-10	Project:	GPCC00100
Sample ID:	640869015	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	10-OCT-23 14:20		
Receive Date:	11-OCT-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"												
Fluoride		0.647	0.0330	0.100	mg/L		1	LXA2	10/14/23	0257	2507800	1
Chloride		10.9	1.34	4.00	mg/L		20	LXA2	10/13/23	1329	2507800	2
Sulfate		231	2.66	8.00	mg/L		20					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1226	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.357	0.0260	0.0750	mg/L	1.00	5	PRB	10/15/23	2133	2507328	4
Calcium		90.4	0.400	1.00	mg/L	1.00	5					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1600	2507328	5
Barium		0.0347	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		0.00140	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0189	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00214	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					
Arsenic	J	0.00382	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1635	2507328	6
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		499	2.38	10.0	mg/L			CH6	10/13/23	1601	2508295	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-10	Project:	GPCC00100
Sample ID:	640869015	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1PZ-11	Project:	GPCC00100
Sample ID:	640869016	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	10-OCT-23 16:15		
Receive Date:	11-OCT-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		1.20	0.0670	0.200	mg/L		1	LXA2	10/14/23	0328	2507800	1
Fluoride		0.202	0.0330	0.100	mg/L		1					
Sulfate		54.3	0.665	2.00	mg/L		5	LXA2	10/13/23	1359	2507800	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1227	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.143	0.00520	0.0150	mg/L	1.00	1	PRB	10/16/23	1050	2507328	4
Arsenic	J	0.00303	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1708	2507328	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1604	2507328	6
Barium		0.0234	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		27.6	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	J	0.000342	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	10/13/23	1601	2508295	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-11	Project:	GPCC00100
Sample ID:	640869016	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1-FD-02	Project:	GPCC00100
Sample ID:	640869017	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	10-OCT-23 00:00		
Receive Date:	11-OCT-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		80.1	26.6	80.0	mg/L		200	LXA2	10/13/23	1430	2507800	1
Chloride		1.21	0.0670	0.200	mg/L		1	LXA2	10/14/23	0359	2507800	2
Fluoride		0.297	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	10/13/23	1233	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	J	0.00319	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1710	2507328	4
Boron		0.146	0.00520	0.0150	mg/L	1.00	1	PRB	10/16/23	1052	2507328	5
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1607	2507328	6
Barium		0.0242	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		28.0	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	0.000326	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		197	2.38	10.0	mg/L			CH6	10/13/23	1601	2508295	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1-FD-02	Project:	GPCC00100
Sample ID:	640869017	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	SW846 3005A/6020B	
7	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: October 23, 2023

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

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

Client Sample ID:	ARK-AP1PZ-9	Project:	GPCC00100
Sample ID:	640869018	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	11-OCT-23 08:20		
Receive Date:	11-OCT-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"												
Fluoride		0.964	0.0330	0.100	mg/L		1	LXA2	10/14/23	0430	2507800	1
Chloride		8.68	2.68	8.00	mg/L		40	LXA2	10/13/23	1501	2507800	2
Sulfate		308	5.32	16.0	mg/L		40					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/13/23	1234	2507487	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		0.707	0.0260	0.0750	mg/L	1.00	5	PRB	10/15/23	2135	2507328	4
Calcium		72.3	0.400	1.00	mg/L	1.00	5					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	10/14/23	1611	2507328	5
Barium		0.0252	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.000523	0.000200	0.000500	mg/L	1.00	1					
Cadmium		0.00112	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.100	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.145	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000323	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					
Arsenic	J	0.00224	0.00200	0.00500	mg/L	1.00	1	PRB	10/15/23	1641	2507328	6
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		527	2.38	10.0	mg/L			CH6	10/13/23	1601	2508295	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	10/12/23	1120	2507486
SW846 3005A	ICP-MS 3005A PREP	SD	10/12/23	1525	2507327

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Certificate of Analysis

Report Date: October 23, 2023

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Arkwright CCR Groundwater ComplianceAP1

Client Sample ID:	ARK-AP1PZ-9	Project:	GPCC00100
Sample ID:	640869018	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	SW846 3005A/6020B	
7	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

QC Summary

Report Date: October 23, 2023

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

Contact: **Joju Abraham**

Workorder: **640869**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography										
Batch 2507800										
QC1205545078 640869001 DUP										
Chloride		1.77		1.83	mg/L	2.97 ^		(+/-1.00)	LXA2	10/13/23 02:40
Fluoride		0.426		0.479	mg/L	11.6 ^		(+/-0.100)		10/13/23 20:47
Sulfate		58.3		59.2	mg/L	1.5		(0%-20%)		10/13/23 02:40
QC1205545079 640869003 DUP										
Chloride		1.81		1.80	mg/L	0.636		(0%-20%)		10/13/23 04:44
Fluoride		0.225		0.229	mg/L	1.94 ^		(+/-0.100)		
Sulfate		2.17		2.15	mg/L	0.767		(0%-20%)		
QC1205545077 LCS										
Chloride	5.00			4.58	mg/L		91.6	(90%-110%)		10/13/23 01:39
Fluoride	2.50			2.39	mg/L		95.6	(90%-110%)		
Sulfate	10.0			9.46	mg/L		94.6	(90%-110%)		
QC1205545076 MB										
Chloride			U	ND	mg/L					10/13/23 01:08
Fluoride			U	ND	mg/L					
Sulfate			U	ND	mg/L					
QC1205545080 640869001 PS										
Chloride	5.00	0.355		5.05	mg/L		93.8	(90%-110%)		10/13/23 03:11

QC Summary

Workorder: **640869**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography										
Batch 2507800										
Fluoride	2.50	0.426		2.82	mg/L		95.5	(90%-110%)	LXA2	10/13/23 21:18
Sulfate	10.0	11.7		22.3	mg/L		106	(90%-110%)		10/13/23 03:11
QC1205545081 640869003 PS										
Chloride	5.00	1.81		6.87	mg/L		101	(90%-110%)		10/13/23 05:15
Fluoride	2.50	0.225		2.68	mg/L		98.1	(90%-110%)		
Sulfate	10.0	2.17		12.1	mg/L		99.2	(90%-110%)		
Metals Analysis - ICPMS										
Batch 2507328										
QC1205544129 LCS										
Antimony	0.0500			0.0484	mg/L		96.8	(80%-120%)	PRB	10/14/23 14:37
Arsenic	0.0500			0.0510	mg/L		102	(80%-120%)		10/15/23 15:48
Barium	0.0500			0.0560	mg/L		112	(80%-120%)		10/14/23 14:37
Beryllium	0.0500			0.0518	mg/L		104	(80%-120%)		
Boron	0.100			0.104	mg/L		104	(80%-120%)		10/16/23 10:26
Cadmium	0.0500			0.0507	mg/L		101	(80%-120%)		10/14/23 14:37
Calcium	2.00			2.08	mg/L		104	(80%-120%)		
Chromium	0.0500			0.0480	mg/L		96.1	(80%-120%)		
Cobalt	0.0500			0.0479	mg/L		95.8	(80%-120%)		

QC Summary

Workorder: **640869**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2507328										
Lead	0.0500			0.0485	mg/L		97	(80%-120%)	PRB	10/14/23 14:37
Lithium	0.0500			0.0496	mg/L		99.2	(80%-120%)		
Molybdenum	0.0500			0.0521	mg/L		104	(80%-120%)		
Selenium	0.0500			0.0520	mg/L		104	(80%-120%)		
Thallium	0.0500			0.0474	mg/L		94.9	(80%-120%)		
QC1205544128 MB										
Antimony			U	ND	mg/L					10/14/23 14:34
Arsenic			U	ND	mg/L					10/15/23 15:46
Barium			U	ND	mg/L					10/14/23 14:34
Beryllium			U	ND	mg/L					
Boron			U	ND	mg/L					10/16/23 10:24
Cadmium			U	ND	mg/L					10/14/23 14:34
Calcium			U	ND	mg/L					
Chromium			U	ND	mg/L					
Cobalt			U	ND	mg/L					
Lead			U	ND	mg/L					

QC Summary

Workorder: **640869**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 2507328											
Lithium				U	ND	mg/L				PRB	10/14/23 14:34
Molybdenum				U	ND	mg/L					
Selenium				U	ND	mg/L					
Thallium				U	ND	mg/L					
QC1205544130 640869001 MS											
Antimony	0.0500	U	ND		0.0497	mg/L		99.4	(75%-125%)		10/14/23 14:44
Arsenic	0.0500	J	0.00219		0.0530	mg/L		102	(75%-125%)		10/15/23 15:52
Barium	0.0500		0.0609		0.115	mg/L		108	(75%-125%)		10/14/23 14:44
Beryllium	0.0500		0.00187		0.0544	mg/L		105	(75%-125%)		
Boron	0.100		0.108		0.216	mg/L		107	(75%-125%)		10/16/23 10:29
Cadmium	0.0500	J	0.000410		0.0516	mg/L		102	(75%-125%)		10/14/23 14:44
Calcium	2.00		19.3		21.0	mg/L		N/A	(75%-125%)		
Chromium	0.0500	J	0.00462		0.0539	mg/L		98.5	(75%-125%)		
Cobalt	0.0500		0.00672		0.0558	mg/L		98.2	(75%-125%)		
Lead	0.0500	U	ND		0.0494	mg/L		98.7	(75%-125%)		
Lithium	0.0500	J	0.00944		0.0604	mg/L		102	(75%-125%)		

QC Summary

Workorder: **640869**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 2507328											
Molybdenum	0.0500	U	ND		0.0530	mg/L		106	(75%-125%)	PRB	10/14/23 14:44
Selenium	0.0500	J	0.00299		0.0538	mg/L		102	(75%-125%)		
Thallium	0.0500	U	ND		0.0479	mg/L		95.8	(75%-125%)		
QC1205544131 640869001 MSD											
Antimony	0.0500	U	ND		0.0508	mg/L	2.07	101	(0%-20%)		10/14/23 14:48
Arsenic	0.0500	J	0.00219		0.0528	mg/L	0.334	101	(0%-20%)		10/15/23 15:54
Barium	0.0500		0.0609		0.117	mg/L	1.29	111	(0%-20%)		10/14/23 14:48
Beryllium	0.0500		0.00187		0.0556	mg/L	2.12	107	(0%-20%)		
Boron	0.100		0.108		0.214	mg/L	0.707	106	(0%-20%)		10/16/23 10:31
Cadmium	0.0500	J	0.000410		0.0528	mg/L	2.47	105	(0%-20%)		10/14/23 14:48
Calcium	2.00		19.3		21.1	mg/L	0.633	N/A	(0%-20%)		
Chromium	0.0500	J	0.00462		0.0543	mg/L	0.793	99.3	(0%-20%)		
Cobalt	0.0500		0.00672		0.0559	mg/L	0.181	98.4	(0%-20%)		
Lead	0.0500	U	ND		0.0493	mg/L	0.306	98.4	(0%-20%)		
Lithium	0.0500	J	0.00944		0.0606	mg/L	0.261	102	(0%-20%)		
Molybdenum	0.0500	U	ND		0.0544	mg/L	2.52	109	(0%-20%)		

QC Summary

Workorder: **640869**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 2507328											
Selenium	0.0500	J	0.00299		0.0538	mg/L	0.00558	102	(0%-20%)	PRB	10/14/23 14:48
Thallium	0.0500	U	ND		0.0480	mg/L	0.142	96	(0%-20%)		
QC1205544132 640869001 SDILT											
Antimony		U	ND	U	ND	ug/L	N/A		(0%-20%)		10/14/23 14:55
Arsenic		J	2.19	U	ND	ug/L	N/A		(0%-20%)		10/15/23 15:58
Barium			60.9		12.1	ug/L	.317		(0%-20%)		10/14/23 14:55
Beryllium			1.87	J	0.369	ug/L	1.18		(0%-20%)		
Boron			108		22.8	ug/L	5.38		(0%-20%)		10/16/23 10:35
Cadmium		J	0.410	U	ND	ug/L	N/A		(0%-20%)		10/14/23 14:55
Calcium			19300		4020	ug/L	4.06		(0%-20%)		
Chromium		J	4.62	U	ND	ug/L	N/A		(0%-20%)		
Cobalt			6.72		1.44	ug/L	6.95		(0%-20%)		
Lead		U	ND	U	ND	ug/L	N/A		(0%-20%)		
Lithium		J	9.44	U	ND	ug/L	N/A		(0%-20%)		
Molybdenum		U	ND	U	ND	ug/L	N/A		(0%-20%)		
Selenium		J	2.99	U	ND	ug/L	N/A		(0%-20%)		

QC Summary

Workorder: **640869**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2507328										
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)	PRB	10/14/23 14:55
Metals Analysis-Mercury										
Batch 2507487										
QC1205544431 640813001 DUP										
Mercury	U	ND	U	ND	mg/L	N/A			JP2	10/13/23 11:53
QC1205544430 LCS										
Mercury	0.00200			0.00198	mg/L		99.2	(80%-120%)		10/13/23 11:47
QC1205544429 MB										
Mercury			U	ND	mg/L					10/13/23 11:45
QC1205544432 640813001 MS										
Mercury	0.00200	U	ND	0.00134	mg/L		67.1*	(75%-125%)		10/13/23 11:55
QC1205544434 640813001 PS										
Mercury	2.00	U	ND	1.38	ug/L		68.8*	(80%-120%)		10/13/23 11:58
QC1205544433 640813001 SDILT										
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		10/13/23 11:56
Solids Analysis										
Batch 2507350										
QC1205544191 640698013 DUP										
Total Dissolved Solids	U	ND	U	ND	mg/L	N/A			CH6	10/12/23 13:23
QC1205544190 LCS										
Total Dissolved Solids	300			303	mg/L		101	(95%-105%)		10/12/23 13:23
QC1205544189 MB										
Total Dissolved Solids			U	ND	mg/L					10/12/23 13:23

QC Summary

Workorder: **640869**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Solids Analysis										
Batch 2507357										
QC1205544196 640683001 DUP										
Total Dissolved Solids		235		228	mg/L	3.02		(0%-5%)	CH6	10/12/23 14:23
QC1205544195 LCS										
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)		10/12/23 14:23
QC1205544194 MB										
Total Dissolved Solids			U	ND	mg/L					10/12/23 14:23
Batch 2508295										
QC1205545882 641034002 DUP										
Total Dissolved Solids		395		386	mg/L	2.3		(0%-5%)	CH6	10/13/23 16:01
QC1205545878 LCS										
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)		10/13/23 16:01
QC1205545877 MB										
Total Dissolved Solids			U	ND	mg/L					10/13/23 16:01

Notes:

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.

QC Summary

Workorder: **640869**

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

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 #: 640869

Metals

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 36
Analytical Batch: 2507328

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 2507327

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

GEL Sample ID#	Client Sample Identification
640869001	ARK-AP1GWA-1
640869002	ARK-AP1-FB-01
640869003	ARK-AP1GWA-2
640869004	ARK-AP1-EB-01
640869005	ARK-AP1PZ-1
640869006	ARK-AP1PZ-2
640869007	ARK-AP1-FD-01
640869008	ARK-AP1PZ-4
640869009	ARK-AP1-FB-02
640869010	ARK-AP1PZ-3
640869011	ARK-AP1PZ-8
640869012	ARK-AP1PZ-5
640869013	ARK-AP1-EB-02
640869014	ARK-AP1PZ-7
640869015	ARK-AP1PZ-10
640869016	ARK-AP1PZ-11
640869017	ARK-AP1-FD-02
640869018	ARK-AP1PZ-9
1205544128	Method Blank (MB)**ICP-MS**
1205544129	Laboratory Control Sample (LCS)
1205544132	640869001(ARK-AP1GWA-1L) Serial Dilution (SD)
1205544130	640869001(ARK-AP1GWA-1S) Matrix Spike (MS)
1205544131	640869001(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

CRDL/PQL Requirements

The CRDL standard recoveries for SW846 6020B met the advisory control limits with the exception of calcium. Client sample concentrations were greater than two times the CRDL; therefore the data were not adversely affected. 640869006 (ARK-AP1PZ-2), 640869007 (ARK-AP1-FD-01), 640869008 (ARK-AP1PZ-4), 640869010 (ARK-AP1PZ-3), 640869011 (ARK-AP1PZ-8), 640869012 (ARK-AP1PZ-5), 640869014 (ARK-AP1PZ-7), 640869015 (ARK-AP1PZ-10) and 640869018 (ARK-AP1PZ-9).

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 640869005 (ARK-AP1PZ-1), 640869006 (ARK-AP1PZ-2), 640869007 (ARK-AP1-FD-01), 640869008 (ARK-AP1PZ-4), 640869010 (ARK-AP1PZ-3), 640869011 (ARK-AP1PZ-8), 640869012 (ARK-AP1PZ-5), 640869014 (ARK-AP1PZ-7), 640869015 (ARK-AP1PZ-10) and 640869018 (ARK-AP1PZ-9) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	640869									
	005	**006**	**007**	**008**	**010**	**011**	**012**	**014**	**015**	**018**
Boron	5X	5X	5X	25X	20X	20X	100X	20X	5X	5X
Calcium	1X	5X	5X	25X	20X	20X	100X	20X	5X	5X

Product: **Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**
Analytical Method: SW846 7470A
Analytical Procedure: GL-MA-E-010 REV# 40
Analytical Batch: 2507487

Preparation Method: SW846 7470A Prep
Preparation Procedure: GL-MA-E-010 REV# 40
Preparation Batch: 2507486

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

GEL Sample ID#	Client Sample Identification
640869001	ARK-AP1GWA-1
640869002	ARK-AP1-FB-01
640869003	ARK-AP1GWA-2
640869004	ARK-AP1-EB-01
640869005	ARK-AP1PZ-1
640869006	ARK-AP1PZ-2
640869007	ARK-AP1-FD-01
640869008	ARK-AP1PZ-4
640869009	ARK-AP1-FB-02
640869010	ARK-AP1PZ-3
640869011	ARK-AP1PZ-8
640869012	ARK-AP1PZ-5
640869013	ARK-AP1-EB-02

640869014	ARK-AP1PZ-7
640869015	ARK-AP1PZ-10
640869016	ARK-AP1PZ-11
640869017	ARK-AP1-FD-02
640869018	ARK-AP1PZ-9
1205544429	Method Blank (MB)**CVAA**
1205544430	Laboratory Control Sample (LCS)
1205544433	640813001(NonSDGL) Serial Dilution (SD)
1205544431	640813001(NonSDGD) Sample Duplicate (DUP)
1205544432	640813001(NonSDGS) Matrix Spike (MS)
1205544434	640813001(NonSDGPS) 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/MSD) Recovery Statement
The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike also did not meet the required control limits; thus, confirming matrix interferences and/or sample non-homogeneity.

Sample	Analyte	Value
1205544432 (Non SDG 640813001MS)	Mercury	67.1* (75%-125%)

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

Sample	Analyte	Value
1205544434 (Non SDG 640813001PS)	Mercury	68.8* (80%-120%)

General Chemistry

Product: **Ion Chromatography**
Analytical Method: EPA 300.0
Analytical Procedure: GL-GC-E-086 REV# 33
Analytical Batch: 2507800

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

GEL Sample ID#	Client Sample Identification
640869001	ARK-AP1GWA-1
640869002	ARK-AP1-FB-01
640869003	ARK-AP1GWA-2
640869004	ARK-AP1-EB-01
640869005	ARK-AP1PZ-1
640869006	ARK-AP1PZ-2
640869007	ARK-AP1-FD-01
640869008	ARK-AP1PZ-4
640869009	ARK-AP1-FB-02
640869010	ARK-AP1PZ-3
640869011	ARK-AP1PZ-8
640869012	ARK-AP1PZ-5
640869013	ARK-AP1-EB-02
640869014	ARK-AP1PZ-7
640869015	ARK-AP1PZ-10
640869016	ARK-AP1PZ-11
640869017	ARK-AP1-FD-02
640869018	ARK-AP1PZ-9
1205545076	Method Blank (MB)
1205545077	Laboratory Control Sample (LCS)
1205545078	640869001(ARK-AP1GWA-1) Sample Duplicate (DUP)
1205545079	640869003(ARK-AP1GWA-2) Sample Duplicate (DUP)
1205545080	640869001(ARK-AP1GWA-1) Post Spike (PS)
1205545081	640869003(ARK-AP1GWA-2) 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 1205545078 (ARK-AP1GWA-1DUP), 1205545080 (ARK-AP1GWA-1PS), 640869001 (ARK-AP1GWA-1), 640869005 (ARK-AP1PZ-1), 640869006 (ARK-AP1PZ-2), 640869007 (ARK-AP1-FD-01), 640869008 (ARK-AP1PZ-4), 640869010 (ARK-AP1PZ-3), 640869011 (ARK-AP1PZ-8), 640869012 (ARK-AP1PZ-5), 640869014 (ARK-AP1PZ-7), 640869015 (ARK-AP1PZ-10), 640869016 (ARK-AP1PZ-11), 640869017 (ARK-AP1-FD-02) and 640869018 (ARK-AP1PZ-9) were diluted because target analyte concentrations exceeded the calibration range. Samples 1205545078 (ARK-AP1GWA-1DUP), 1205545080 (ARK-AP1GWA-1PS), 640869001 (ARK-AP1GWA-1), 640869005 (ARK-AP1PZ-1), 640869006 (ARK-AP1PZ-2), 640869007 (ARK-AP1-FD-01), 640869008 (ARK-AP1PZ-4), 640869010 (ARK-AP1PZ-3), 640869011 (ARK-AP1PZ-8), 640869012 (ARK-AP1PZ-5), 640869014 (ARK-AP1PZ-7), 640869015 (ARK-AP1PZ-10), 640869016 (ARK-AP1PZ-11), 640869017 (ARK-AP1-FD-02) and 640869018 (ARK-AP1PZ-9) 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	640869									
	001	005	006	007	008	010	011	012	014	015

Chloride	5X	10X	2X	2X	5X	5X	2X	5X	5X	20X
Fluoride	1X	1X	2X	2X	5X	5X	2X	5X	5X	1X
Sulfate	5X	10X	50X	100X	200X	100X	100X	200X	100X	20X

Analyte	640869		
	016	**017**	**018**
Chloride	1X	1X	40X
Sulfate	5X	200X	40X

Miscellaneous Information

Manual Integrations
Sample 640869004 (ARK-AP1-EB-01) was manually integrated to correctly position the baseline as set in the calibration standards.

Product: **Solids, Total Dissolved**
Analytical Method: SM 2540C
Analytical Procedure: GL-GC-E-001 REV# 21
Analytical Batch: 2507350

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

GEL Sample ID#	Client Sample Identification
640869001	ARK-AP1GWA-1
640869002	ARK-AP1-FB-01
640869003	ARK-AP1GWA-2
1205544189	Method Blank (MB)
1205544190	Laboratory Control Sample (LCS)
1205544191	640698013(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# 21
Analytical Batch: 2507357

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

GEL Sample ID#	Client Sample Identification
640869004	ARK-AP1-EB-01
640869005	ARK-AP1PZ-1

640869006	ARK-AP1PZ-2
640869007	ARK-AP1-FD-01
640869008	ARK-AP1PZ-4
640869009	ARK-AP1-FB-02
640869010	ARK-AP1PZ-3
640869011	ARK-AP1PZ-8
640869012	ARK-AP1PZ-5
640869013	ARK-AP1-EB-02
640869014	ARK-AP1PZ-7
1205544194	Method Blank (MB)
1205544195	Laboratory Control Sample (LCS)
1205544196	640683001(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
A TDS meter was used to check the samples for interference prior to analysis. 640869006 (ARK-AP1PZ-2), 640869007 (ARK-AP1-FD-01), 640869008 (ARK-AP1PZ-4), 640869010 (ARK-AP1PZ-3), 640869011 (ARK-AP1PZ-8), 640869012 (ARK-AP1PZ-5) and 640869014 (ARK-AP1PZ-7).

Product: **Solids, Total Dissolved**
Analytical Method: SM 2540C
Analytical Procedure: GL-GC-E-001 REV# 21
Analytical Batch: 2508295

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

GEL Sample ID#	Client Sample Identification
640869015	ARK-AP1PZ-10
640869016	ARK-AP1PZ-11
640869017	ARK-AP1-FD-02
640869018	ARK-AP1PZ-9
1205545877	Method Blank (MB)
1205545878	Laboratory Control Sample (LCS)
1205545882	641034002(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.

Page: 1 of 2

Project # 175569434

GEL Quote #: 5 Coolers

COC Number [1]:

PO Number:

GEL Laboratories LLC

gel.com

Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

640869 640870

GEL Work Order Number: ***GEL Project Manager: Erin Trent***

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

Client Name: Georgia Power Phone # (937-344-6533)

Project/Site Name: Plant Arkwright Ash Pond 1 Fax:

Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308

Collected By: John Myer; Dylan Quintal

Send Results To: jabraham@southernco.com EDD@stantec.com
Cassidy.Sutherland@stantec.com

640869

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SDG 640869

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	NI Ag (App. I) (6020B)	NI Metals App. III (6020B)	Alkalinity (300.0 R2.1)	TDS (SM Method 2540C)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993	NI Metals App. IV (6020B)	NI RAD 226-228 Cmbd	NI Mercury (7470B)	NI Metals Al, K, Mg, Na, Fe, Mn (6020B)		<-- Preservative Type (6) Comments (task_code: ARK-CCR-ASSMT-2023S1)
ARK-AP1GWA-1	10-09-23	1345	N	N	WG			6		X		X	X	X	X	X			
ARK-AP1-FB-01	10-09-23	1405	FB	N	WQ			6		X		X	X	X	X	X			
ARK-AP1GWA-2	10-09-23	1430	N	N	WG			6		X		X	X	X	X	X			
ARK-AP1-EB-01	10-09-23	1500	EB	N	WQ			6		X		X	X	X	X	X			
ARK-AP1PZ-1	10-09-23	1620	N	N	WG			6		X		X	X	X	X	X			
ARK-AP1PZ-2	10-09-23	1700	N	N	WG			6		X		X	X	X	X	X			
ARK-AP1-FD-01	10-09-23	NA	FD	N	WQ			6		X		X	X	X	X	X			
ARK-AP1PZ-4	10-10-23	0910	N	N	WG			6		X		X	X	X	X	X			
ARK-AP1-FB-02	10-10-23	0930	FB	N	WQ			6		X		X	X	X	X	X			
ARK-AP1PZ-3	10-10-23	0930	N	N	WG			6		X		X	X	X	X	X			

Chain of Custody Signatures

	Relinquished By (Signed)	Print Name	Date	Received by (signed)	Print Name	Date
1		John Myer	10/11/23		Brandon Williams	
2						10/11/23
3						1528

TAT Requested: Normal: __X_ Rush: ____ Specify: _____ (Subject to Surcharge)

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:*** 2 °C

> For sample shipping and delivery details, see Sa

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

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

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

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Page: 2 of 2

Project # 175569434

GEL Quote #: 5 Coolers

COC Number [1]:

PO Number:

Page 3 of 6 SDG 640869

GEL Laboratories LLC

gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Project Manager: Erin Trent

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

Client Name: Georgia Power Phone # (937-344-6533)

Project/Site Name: Plant Arkwright Ash Pond 1 Fax:

Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308

Collected By: John Myer; Dylan Quintal

Send Results To: jabraham@southernco.com EDD@stantec.com
Cassidy.Sutherland@stantec.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	NI Ag (App. I) (6020B)	NI Metals App. III (6020B)	Alkalinity (300.0 R2.1)	TDS (SM Method 2540C)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993	NI Metals App. IV (6020B)	NI RAD 226-228 Cmbd	NI Mercury (7470B)	NI Metals Al, K, Mg, Na, Fe, Mn (6020B)		<-- Preservative Type (6)	Comments (task_code: ARK-CCR-ASSMT-2023S1)
ARK-AP1PZ-8	10-10-23	1155	N	N	WG			6		X		X	X	X	X	X				
ARK-AP1PZ-5	10-10-23	1120	N	N	WG			6		X		X	X	X	X	X				
ARK-AP1-EB-02	10-10-23	1210	EB	N	WQ			6		X		X	X	X	X	X				
ARK-AP1PZ-7	10-10-23	1350	N	N	WG			6		X		X	X	X	X	X				
ARK-AP1PZ-10	10-10-23	1420	N	N	WG			6		X		X	X	X	X	X				
ARK-AP1PZ-11	10-10-23	1615	N	N	WG			6		X		X	X	X	X	X				
ARK-AP1-FD-02	10-10-23	NA	FD	N	WQ			6		X		X	X	X	X	X				
ARK-AP1PZ-9	10-11-23	0820	N	N	WG			6		X		X	X	X	X	X				

Chain of Custody Signatures

	Relinquished By (Signed)	Print Name	Date	Received by (signed)	Print Name	Date
1		John Myer	10/11/23		Brandon Williams	
2						10/11/23
3						1528

TAT Requested: Normal: ___X_ Rush: _____ Specify: _____ (Subject to Surcharge)

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:*** 2 °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

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

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

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

640870
640869

ET

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: GPCC	**SDG/AR/COC/Work Order:**
Received By: QG	**Date Received:** 10/11/23
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier (Other) n/a

Suspected Hazard Information	Yes	No	
			*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 0 CPM / mR/Hr **Classified as: Rad 1 Rad 2 Rad 3**
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria		Yes	NA	No	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: (Wet Ice) Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 2°c
4	Daily check performed and passed on IR temperature gun?	✓			**Temperature Device Serial #:** IR1-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AT Date 10/12/23 Page 1 of 1

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 23 October 2023

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
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	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-04
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	T104704235-23-21
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

GEL Laboratories LLC
a member of The GEL Group INC

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2040 Savage Road Charleston, SC 29407
P 843.556.8171
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gel.com

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: 625986

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 and successful upload to database.

The sample was 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: 625986 GEL Work Order: 625986

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 Anna Johnson

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-6	Project:	GPCC00100
Sample ID:	625986001	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	13-JUN-23 15:52		
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		5.33			SU			EOS1	06/13/23	1552	2443847	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		7.77	0.335	1.00	mg/L		5	JLD1	06/14/23	2231	2444191	2
Fluoride	U	ND	0.165	0.500	mg/L		5					
Sulfate		2480	26.6	80.0	mg/L		200	JLD1	06/15/23	1330	2444191	3
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	1039	2444300	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Boron		6.95	0.520	1.50	mg/L	1.00	100	PRB	06/17/23	2127	2443846	5
Calcium		460	8.00	20.0	mg/L	1.00	100					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	06/17/23	1936	2443846	6
Arsenic	J	0.00324	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0228	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.00172	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		0.415	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00923	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	J	0.00251	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		3340	23.8	100	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	2443845
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	EK1	06/15/23	1250	2444297

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-6	Project:	GPCC00100
Sample ID:	625986001	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	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

QC Summary

Report Date: June 30, 2023

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

Contact: **Joju Abraham**

Workorder: **625986**

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

QC Summary

Workorder: **625986**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2443846										
QC1205432938 LCS										
Antimony	0.0500			0.0478	mg/L		95.7	(80%-120%)	PRB	06/17/23 19:33
Arsenic	0.0500			0.0486	mg/L		97.1	(80%-120%)		
Barium	0.0500			0.0496	mg/L		99.3	(80%-120%)		
Beryllium	0.0500			0.0581	mg/L		116	(80%-120%)		
Boron	0.100			0.0984	mg/L		98.4	(80%-120%)		06/17/23 21:23
Cadmium	0.0500			0.0495	mg/L		98.9	(80%-120%)		06/17/23 19:33
Calcium	2.00			2.00	mg/L		99.8	(80%-120%)		06/17/23 21:23
Chromium	0.0500			0.0478	mg/L		95.7	(80%-120%)		06/17/23 19:33
Cobalt	0.0500			0.0492	mg/L		98.4	(80%-120%)		
Lead	0.0500			0.0489	mg/L		97.8	(80%-120%)		
Lithium	0.0500			0.0533	mg/L		107	(80%-120%)		
Molybdenum	0.0500			0.0493	mg/L		98.6	(80%-120%)		
Selenium	0.0500			0.0472	mg/L		94.4	(80%-120%)		
Thallium	0.0500			0.0469	mg/L		93.7	(80%-120%)		
QC1205432937 MB										
Antimony			U	ND	mg/L					06/17/23 19:29

QC Summary

Workorder: **625986**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2443846										
Arsenic			U	ND	mg/L				PRB	06/17/23 19:29
Barium			U	ND	mg/L					
Beryllium			U	ND	mg/L					
Boron			U	ND	mg/L					06/17/23 21:20
Cadmium			U	ND	mg/L					06/17/23 19:29
Calcium			U	ND	mg/L					06/17/23 21:20
Chromium			U	ND	mg/L					06/17/23 19:29
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					
QC1205432939 625986001 MS										
Antimony	0.0500	U	ND	0.0503	mg/L		100	(75%-125%)		06/17/23 19:40
Arsenic	0.0500	J	0.00324	0.0553	mg/L		104	(75%-125%)		

QC Summary

Workorder: **625986**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 2443846											
Barium	0.0500		0.0228		0.0707	mg/L		95.8	(75%-125%)	PRB	06/17/23 19:40
Beryllium	0.0500		0.00172		0.0628	mg/L		122	(75%-125%)		
Boron	0.100		6.95		7.09	mg/L		N/A	(75%-125%)		06/17/23 21:31
Cadmium	0.0500	U	ND		0.0505	mg/L		101	(75%-125%)		06/17/23 19:40
Calcium	2.00		460		483	mg/L		N/A	(75%-125%)		06/17/23 21:31
Chromium	0.0500	U	ND		0.0488	mg/L		97	(75%-125%)		06/17/23 19:40
Cobalt	0.0500		0.415		0.466	mg/L		N/A	(75%-125%)		
Lead	0.0500	U	ND		0.0479	mg/L		95.7	(75%-125%)		
Lithium	0.0500	J	0.00923		0.0675	mg/L		116	(75%-125%)		
Molybdenum	0.0500	U	ND		0.0543	mg/L		108	(75%-125%)		
Selenium	0.0500	J	0.00251		0.0607	mg/L		116	(75%-125%)		
Thallium	0.0500	U	ND		0.0471	mg/L		94.1	(75%-125%)		
QC1205432940 625986001 MSD											
Antimony	0.0500	U	ND		0.0511	mg/L	1.61	102	(0%-20%)		06/17/23 19:43
Arsenic	0.0500	J	0.00324		0.0559	mg/L	0.988	105	(0%-20%)		
Barium	0.0500		0.0228		0.0702	mg/L	0.749	94.7	(0%-20%)		

QC Summary

Workorder: **625986**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 2443846											
Beryllium	0.0500		0.00172		0.0627	mg/L	0.132	122	(0%-20%)	PRB	06/17/23 19:43
Boron	0.100		6.95		6.62	mg/L	6.82	N/A	(0%-20%)		06/17/23 21:34
Cadmium	0.0500	U	ND		0.0501	mg/L	0.774	100	(0%-20%)		06/17/23 19:43
Calcium	2.00		460		455	mg/L	6.05	N/A	(0%-20%)		06/17/23 21:34
Chromium	0.0500	U	ND		0.0485	mg/L	0.516	96.5	(0%-20%)		06/17/23 19:43
Cobalt	0.0500		0.415		0.460	mg/L	1.25	N/A	(0%-20%)		
Lead	0.0500	U	ND		0.0473	mg/L	1.25	94.5	(0%-20%)		
Lithium	0.0500	J	0.00923		0.0668	mg/L	1.04	115	(0%-20%)		
Molybdenum	0.0500	U	ND		0.0535	mg/L	1.46	107	(0%-20%)		
Selenium	0.0500	J	0.00251		0.0596	mg/L	1.75	114	(0%-20%)		
Thallium	0.0500	U	ND		0.0461	mg/L	2.07	92.2	(0%-20%)		
QC1205432941 625986001 SDILT											
Antimony		U	ND	U	ND	ug/L	N/A		(0%-20%)		06/17/23 19:51
Arsenic		J	3.24	U	ND	ug/L	N/A		(0%-20%)		
Barium			22.8		4.32	ug/L	5.44		(0%-20%)		
Beryllium			1.72	J	0.296	ug/L	13.9		(0%-20%)		

QC Summary

Workorder: **625986**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2443846										
Boron		69.5	J	10.7	ug/L	22.8		(0%-20%)	PRB	06/17/23 21:38
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)		06/17/23 19:51
Calcium		4600		950	ug/L	3.2		(0%-20%)		06/17/23 21:38
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)		06/17/23 19:51
Cobalt		415		84.0	ug/L	1.19		(0%-20%)		
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)		
Lithium	J	9.23	U	ND	ug/L	N/A		(0%-20%)		
Molybdenum	U	ND	U	ND	ug/L	N/A		(0%-20%)		
Selenium	J	2.51	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

QC Summary

Workorder: **625986**

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

QC Summary

Workorder: **625986**

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

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.

Metals

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 35
Analytical Batch: 2443846

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 2443845

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

GEL Sample ID#	Client Sample Identification
625986001	ARK-AP1PZ-6
1205432937	Method Blank (MB)**ICP-MS**
1205432938	Laboratory Control Sample (LCS)
1205432941	625986001(ARK-AP1PZ-6L) Serial Dilution (SD)
1205432939	625986001(ARK-AP1PZ-6S) Matrix Spike (MS)
1205432940	625986001(ARK-AP1PZ-6SD) 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 were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	**625986**
	001
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: 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).

GEL Sample ID#	Client Sample Identification
625986001	ARK-AP1PZ-6
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).

GEL Sample ID#	Client Sample Identification
625986001	ARK-AP1PZ-6
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) and 625986001 (ARK-AP1PZ-6) were diluted because target analyte concentrations exceeded the calibration range. Sample 625986001 (ARK-AP1PZ-6) was diluted to minimize matrix effects on instrument performance. Sample 625986001 (ARK-AP1PZ-6) was 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	625986
	001
Chloride	5X
Fluoride	5X
Sulfate	200X

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).

GEL Sample ID#	Client Sample Identification
625986001	ARK-AP1PZ-6
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. 625986001 (ARK-AP1PZ-6). 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.

Page 1 of 1 SDG: 625986 Rev1

Project # 175569434
GEL Quote #:
COC Number [1]:
PO Number:

GEL Laboratories LLC
gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

625986
625987

GEL Work Order Number: *GEL Project Manager: Erin Trent*

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

Client Name: Georgia Power Phone # (937-344-6533)
Project/Site Name: Plant Arkwright Ash Pond 1 Fax:
Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
Collected By: Bryan Pennell
Send Results To: jabraham@southernco.com EDD@stantec.com
brian.steele@stantec.com edgar.smith@stantec.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Ag (App. I) (6020B)	Metals App. III (6020B)	Alkalinity (300.0 R2.1)	TDS (SM Method 2540C)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993	Metals App. IV (6020B)	RAD 226-228 Cmbd	Mercury (7470B)	Metals Al, K, Mg, Na, Fe, Mn (6020B)		<-- Preservative Type (6) / Comments (task_code: ARK-CCR-ASSMT-2023S1)
									NI	NI				NI	NI	NI	NI		
ARK-AP1PZ-6-20230613	6/13/2023	1552	N	N	GW	N	OT	6		X		X	X	X	X	X			pH: 5.33

6-13-23

Chain of Custody Signatures

	Relinquished By (Signed)	Print Name	Date	Received by (signed)	Print Name	Date
1		BRYAN PENNELL	6-13-23			06.14.23 1000
2						
3						

TAT Requested: Normal: __X___ Rush: _____ Specify: _____ (Subject to Surcharge)

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

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

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

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

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Page 1 of 1 SDG 625986 Rev1

Project # 175569434
GEL Quote #:
COC Number (1):
PO Number:

GEL Laboratories LLC
gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: *GEL Project Manager: Erin Trent*

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

Client Name: Georgia Power Phone # (937-344-6533)
Project/Site Name: Plant Arkwright Ash Pond 1 Fax:
Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
Collected By: Bryan Pennell
Send Results To: jabraham@southernco.com EDD@stantec.com brian.steele@stantec.com edgar.smith@stantec.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Ag (App. I) (6020B) NI	Metals App. III (6020B) NI	Alkalinity (300.0 R2.1)	TDS (SM Method 2540C)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B) NI	RAD 226-228 Cmbd NI	Mercury (7470B) NI	Metals Al, K, Mg, Na, Fe, Mn (6020B) NI		<-- Preservative Type (6)
																			Comments (task_code: ARK-CCR-ASSMT-2023S1)
ARK-AP1PZ-6-20230613	6/13/2023	1552	N	N	GW	N	OT	6		X		X	X	X	X	X			pH: 5.33

6-13-23

Chain of Custody Signatures

	Relinquished By (Signed)	Print Name	Date	Received by (signed)	Print Name	Date
1		BRYAN PENNELL	6-13-23			6.14.23 1000
2						
3						

TAT Requested: Normal: __X___ Rush: _____ Specify: _____ (Subject to Surcharge)

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

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

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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**).

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7.) **KNOWN OR POSSIBLE HAZARDS**

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

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: GPCC	SDG/AR/COC/Work Order: 625986 / 625987
Received By: SNS	Date Received: 6/14/23
Carrier and Tracking Number	Circle Applicable: (FedEx Express) FedEx Ground UPS Field Services Courier Other 399598403522-1C 3511-1C

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		X	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 5 CPM/ mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		X	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		X	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	X			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	X			Preservation Method: (Wet Ice) Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:_____
4	Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: IR1-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	X			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			X	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	X			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	X			
13	COC form is properly signed in relinquished/received sections?	X			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials MG Date 6/15/23 Page 1 of 1

GL-CHL-SR-001 Rev 7

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

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

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: 625987

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 sample was 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: 625987 GEL Work Order: 625987

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 Erin B. Trent

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 ComplianceAP1

Client Sample ID: ARK-AP1PZ-6
Sample ID: 625987001
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.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.68	+/-1.46	2.39	+/-1.53	3.00	pCi/L			JE1	06/23/23	1509	2445900	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		3.69	+/-1.65	2.39	+/-1.77		pCi/L		1	LXB3	07/06/23	1001	2448609	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		2.01	+/-0.768	0.560	+/-0.901	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	74.4	(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

QC Summary

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

Atlanta, Georgia

Contact: **Joju Abraham**

Workorder: **625987**

Report Date: July 12, 2023

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	06/23/2315:09
	Uncert:	+/-0.944		+/-1.03						
	TPU:	+/-0.950		+/-1.08						
QC1205436475 LCS										
Radium-228	80.4			88.8	pCi/L		111	(75%-125%)	JE1	06/23/2315:09
	Uncert:			+/-4.76						
	TPU:			+/-23.1						
QC1205436473 MB										
Radium-228			U	0.213	pCi/L				JE1	06/23/2315:09
	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	06/27/2309:24
	Uncert:	+/-0.575		+/-0.739						
	TPU:	+/-0.582		+/-0.781						
QC1205436431 LCS										
Radium-226	26.4			26.5	pCi/L		100	(75%-125%)	LXP1	06/27/2309:24
	Uncert:			+/-2.78						
	TPU:			+/-5.69						
QC1205436428 MB										
Radium-226			U	0.326	pCi/L				LXP1	06/27/2309:24
	Uncert:			+/-0.394						
	TPU:			+/-0.400						
QC1205436430 625648001 MS										
Radium-226	127 U	0.580		117	pCi/L		92.1	(75%-125%)	LXP1	06/27/2309:24
	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

QC Summary

Workorder: **625987**

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 acceptence 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 #: 625987

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).

GEL Sample ID#	Client Sample Identification
625987001	ARK-AP1PZ-6

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).

GEL Sample ID#	Client Sample Identification
625987001	ARK-AP1PZ-6
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).

GEL Sample ID#	Client Sample Identification
625987001	ARK-AP1PZ-6
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.

Page 68 of 115 DG: 625987 Rev1

Project # 175569434
GEL Quote #:
COC Number [1]:
PO Number:

GEL Laboratories LLC
gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

625986
625987

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

GEL Work Order Number: ***GEL Project Manager: Erin Trent***

Client Name: Georgia Power — Phone # (937-344-6533)
Project/Site Name: Plant Arkwright Ash Pond 1 — Fax:
Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
Collected By: Bryan Pennell
Send Results To: jabraham@southernco.com EDD@stantec.com
brian.steele@stantec.com edgar.smith@stantec.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	Ag (App. I) (6020B) NI	Metals App. III (6020B) NI	Alkalinity (300.0 R2.1)	TDS (SM Method 2540C)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993	Metals App. IV (6020B) NI	RAD 226-228 Cmbd NI	Mercury (7470B) NI	Metals Al, K, Mg, Na, Fe, Mn (6020B) NI		<-- Preservative Type (6)	Comments (task_code: ARK-CCR-ASSMT-2023S1)
ARK-AP1PZ-6-20230613	6/13/2023	1552	N	N	GW	N	OT	6		X		X	X	X	X	X			pH: 5.33	

6-13-23

Chain of Custody Signatures

	Relinquished By (Signed)	Print Name	Date		Received by (signed)	Print Name	Date
1		BRYAN PENNELL	6-13-23	1			06.14.23 1000
2				2			
3				3			

TAT Requested: Normal: __X___ Rush: _____ Specify: _____ (Subject to Surcharge)

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:*** 1 °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

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

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

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Page 9 of 11 SDG: 625987 Rev1

Project # 175569434
GEL Quote #:
COC Number (1):
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: **GEL Project Manager: Erin Trent**

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

Client Name: Georgia Power Phone # (937-344-6533)
Project/Site Name: Plant Arkwright Ash Pond 1 Fax:
Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
Collected By: Bryan Pennell
Send Results To: jabraham@southernco.com EDD@stantec.com
brian.steele@stantec.com edgar.smith@stantec.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Ag (App. I) (6020B)	Metals App. III (6020B)	Alkalinity (300.0 R2.1)	TDS (SM Method 2540C)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993	Metals App. IV (6020B)	RAD 226-228 Cmbd	Mercury (7470B)	Metals Al, K, Mg, Na, Fe, Mn (6020B)		<-- Preservative Type (6)
									NI	NI				NI	NI	NI	NI		Comments (task_code: ARK-CCR-ASSMT-2023S1)
ARK-AP1PZ-6-20230613	6/13/2023	1552	N	N	GW	N	OT	6		X		X	X	X	X	X			pH: 5.33

Chain of Custody Signatures

	Relinquished By (Signed)	Print Name	Date	Received by (signed)	Print Name	Date
1		BRYAN PENNELL	6-13-23			6.14.23 1000
2						
3						

TAT Requested: Normal: __X___ Rush: _____ Specify: _____ (Subject to Surcharge)

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*

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

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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**).

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7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: GPCC	SDG/AR/COC/Work Order: 625986 / 625987
Received By: SNS	Date Received: 6/14/23
Carrier and Tracking Number	Circle Applicable: (FedEx Express) FedEx Ground UPS Field Services Courier Other 399598403522-1C 3511-1C

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		X	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): ___ CPM/ mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		X	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		X	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	X			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	X			Preservation Method: (Wet Ice) Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:___
4	Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: IR1-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	X			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			X	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	X			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	X			
13	COC form is properly signed in relinquished/received sections?	X			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials MG Date 6/15/23 Page 1 of 1

GL-CHL-SR-001 Rev 7

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

GEL Laboratories LLC

a member of The GEL Group INC

October 23, 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: 640870

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 11, 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. The laboratory received the following sample(s):

Laboratory ID	Client ID	Matrix	Date Collected	Date Recieved
640870001	ARK-AP1GWA-1	Ground Water	09/10/23 13:45	11/10/23 15:28
640870002	ARK-AP1-FB-01	Ground Water	09/10/23 14:05	11/10/23 15:28
640870003	ARK-AP1GWA-2	Ground Water	09/10/23 14:30	11/10/23 15:28
640870004	ARK-AP1-EB-01	Ground Water	09/10/23 15:00	11/10/23 15:28
640870005	ARK-AP1PZ-1	Ground Water	09/10/23 16:20	11/10/23 15:28
640870006	ARK-AP1PZ-2	Ground Water	09/10/23 17:00	11/10/23 15:28
640870007	ARK-AP1-FD-01	Ground Water	09/10/23 00:00	11/10/23 15:28
640870008	ARK-AP1PZ-4	Ground Water	10/10/23 09:10	11/10/23 15:28
640870009	ARK-AP1-FB-02	Ground Water	10/10/23 09:30	11/10/23 15:28
640870010	ARK-AP1PZ-3	Ground Water	10/10/23 09:30	11/10/23 15:28
640870011	ARK-AP1PZ-8	Ground Water	10/10/23 11:55	11/10/23 15:28
640870012	ARK-AP1PZ-5	Ground Water	10/10/23 11:20	11/10/23 15:28
640870013	ARK-AP1-EB-02	Ground Water	10/10/23 12:10	11/10/23 15:28
640870014	ARK-AP1PZ-7	Ground Water	10/10/23 13:50	11/10/23 15:28
640870015	ARK-AP1PZ-10	Ground Water	10/10/23 14:20	11/10/23 15:28
640870016	ARK-AP1PZ-11	Ground Water	10/10/23 16:15	11/10/23 15:28

640870017	ARK-AP1-FD-02	Ground Water	10/10/23 00:00	11/10/23 15:28
640870018	ARK-AP1PZ-9	Ground Water	11/10/23 08:20	11/10/23 15:28

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.

Prep Methods and Prep Dates

Not Applicable

Analysis Methods and Analysis Dates

Method	Run Date ID
Calculation	23-OCT-2023
EPA 903.1 Modified	23-OCT-2023
EPA 904.0/SW846 9320 Modified	16-OCT-2023

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,

Amanda Turner 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: 640870 GEL Work Order: 640870

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 Amanda Tenn

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: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1GWA-1
Sample ID: 640870001
Matrix: WG
Collect Date: 09-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228		2.41	+/-1.09	1.37	+/-1.25	3.00	pCi/L			JE1	10/16/23	0816	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		4.31	+/-1.35	1.37	+/-1.51		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		1.90	+/-0.801	0.580	+/-0.848	1.00	pCi/L			LXP1	10/23/23	0818	2508813	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"	2507338	66.4	(15%-125%)

Notes:

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

Column headers are defined as follows:

DF: Dilution Factor
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: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1-FB-01 Project: GPCC00100
Sample ID: 640870002 Client ID: GPCC001
Matrix: WQ
Collect Date: 09-OCT-23
Receive Date: 11-OCT-23
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.12	+/-1.18	1.96	+/-1.21	3.00	pCi/L			JE1	10/16/23	0816	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.23	+/-1.36	1.96	+/-1.40		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		1.11	+/-0.667	0.704	+/-0.688	1.00	pCi/L			LXP1	10/23/23	0818	2508813	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"	2507338	69.1	(15%-125%)

Notes:

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

Column headers are defined as follows:

DF: Dilution Factor
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: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1GWA-2 Project: GPCC00100
Sample ID: 640870003 Client ID: GPCC001
Matrix: WG
Collect Date: 09-OCT-23
Receive Date: 11-OCT-23
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.754	+/-1.07	1.84	+/-1.09	3.00	pCi/L			JE1	10/16/23	0816	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		6.78	+/-1.83	1.84	+/-2.05		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		6.03	+/-1.48	0.547	+/-1.73	1.00	pCi/L			LXP1	10/23/23	0818	2508813	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"	2507338	72.4	(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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Certificate of Analysis

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Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1-EB-01 Project: GPCC00100
Sample ID: 640870004 Client ID: GPCC001
Matrix: WQ
Collect Date: 09-OCT-23
Receive Date: 11-OCT-23
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.24	+/-1.22	2.01	+/-1.26	3.00	pCi/L			JE1	10/16/23	0816	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.38	+/-1.25	2.01	+/-1.29		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.130	+/-0.256	0.508	+/-0.257	1.00	pCi/L			LXP1	10/23/23	0852	2508813	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"	2507338	69.4	(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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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1PZ-1
Sample ID: 640870005
Matrix: WG
Collect Date: 09-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228		2.01	+/-1.04	1.42	+/-1.16	3.00	pCi/L			JE1	10/16/23	0816	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		4.93	+/-1.43	1.42	+/-1.59		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		2.92	+/-0.983	0.494	+/-1.09	1.00	pCi/L			LXP1	10/23/23	0852	2508813	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"	2507338	68.6	(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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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1PZ-2
Sample ID: 640870006
Matrix: WG
Collect Date: 09-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.39	+/-1.07	1.65	+/-1.13	3.00	pCi/L			JE1	10/16/23	0816	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		7.40	+/-1.78	1.65	+/-2.05		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		6.01	+/-1.43	0.676	+/-1.71	1.00	pCi/L			LXP1	10/23/23	0852	2508813	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"	2507338	63.8	(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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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1-FD-01 Project: GPCC00100
Sample ID: 640870007 Client ID: GPCC001
Matrix: WG
Collect Date: 09-OCT-23
Receive Date: 11-OCT-23
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.66	+/-1.20	1.85	+/-1.28	3.00	pCi/L			JE1	10/16/23	0816	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		7.98	+/-2.05	1.85	+/-2.39		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		6.33	+/-1.66	0.996	+/-2.02	1.00	pCi/L			LXP1	10/23/23	0852	2508813	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"	2507338	60.3	(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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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1PZ-4 Project: GPCC00100
Sample ID: 640870008 Client ID: GPCC001
Matrix: WG
Collect Date: 10-OCT-23
Receive Date: 11-OCT-23
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	2.16	+/-1.68	2.70	+/-1.77	3.00	pCi/L			JE1	10/16/23	0819	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		5.33	+/-1.96	2.70	+/-2.14		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		3.16	+/-1.01	0.481	+/-1.21	1.00	pCi/L			LXP1	10/23/23	0852	2508813	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"	2507338	62.9	(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
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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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1-FB-02
Sample ID: 640870009
Matrix: WQ
Collect Date: 10-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228		2.02	+/-1.05	1.43	+/-1.17	3.00	pCi/L			JE1	10/16/23	0821	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.51	+/-1.13	1.43	+/-1.25		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.489	+/-0.437	0.573	+/-0.449	1.00	pCi/L			LXP1	10/23/23	0852	2508813	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"	2507338	68.6	(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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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1PZ-3 Project: GPCC00100
Sample ID: 640870010 Client ID: GPCC001
Matrix: WG
Collect Date: 10-OCT-23
Receive Date: 11-OCT-23
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		3.12	+/-1.40	1.86	+/-1.61	3.00	pCi/L			JE1	10/16/23	0821	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		12.5	+/-2.28	1.86	+/-2.99		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		9.36	+/-1.80	0.761	+/-2.52	1.00	pCi/L			LXP1	10/23/23	0852	2508813	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"	2507338	57.7	(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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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1PZ-8
Sample ID: 640870011
Matrix: WG
Collect Date: 10-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228		1.84	+/-0.907	1.17	+/-1.02	3.00	pCi/L			JE1	10/16/23	0821	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		3.27	+/-1.13	1.17	+/-1.27		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		1.44	+/-0.671	0.531	+/-0.748	1.00	pCi/L			LXP1	10/23/23	0852	2508813	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"	2507338	71.3	(15%-125%)

Notes:

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

Column headers are defined as follows:

DF: Dilution Factor
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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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1PZ-5
Sample ID: 640870012
Matrix: WG
Collect Date: 10-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	-0.394	+/-1.54	2.87	+/-1.54	3.00	pCi/L			JE1	10/16/23	0821	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		4.50	+/-2.00	2.87	+/-2.27		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		4.50	+/-1.28	0.542	+/-1.66	1.00	pCi/L			LXP1	10/23/23	0927	2508813	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"	2507338	59.1	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1-EB-02
Sample ID: 640870013
Matrix: WQ
Collect Date: 10-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.38	+/-1.34	2.21	+/-1.39	3.00	pCi/L			JE1	10/16/23	0821	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.91	+/-1.44	2.21	+/-1.49		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.527	+/-0.523	0.761	+/-0.529	1.00	pCi/L			LXP1	10/23/23	0927	2508813	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"	2507338	66.8	(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
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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1PZ-7
Sample ID: 640870014
Matrix: WG
Collect Date: 10-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.986	+/-1.17	1.98	+/-1.20	3.00	pCi/L			JE1	10/16/23	0822	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.64	+/-1.29	1.98	+/-1.32		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.652	+/-0.529	0.587	+/-0.545	1.00	pCi/L			LXP1	10/23/23	0927	2508813	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"	2507338	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
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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Atlanta, Georgia 30308 Report Date: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1PZ-10
Sample ID: 640870015
Matrix: WG
Collect Date: 10-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.06	+/-0.958	1.53	+/-0.995	3.00	pCi/L			JE1	10/16/23	0822	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		11.6	+/-2.32	1.53	+/-2.85		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		10.5	+/-2.11	1.15	+/-2.67	1.00	pCi/L			LXP1	10/23/23	0927	2508813	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"	2507338	64.6	(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: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1PZ-11
Sample ID: 640870016
Matrix: WG
Collect Date: 10-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.798	+/-1.05	1.78	+/-1.07	3.00	pCi/L			JE1	10/16/23	0814	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.77	+/-1.23	1.78	+/-1.27		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.977	+/-0.648	0.813	+/-0.685	1.00	pCi/L			LXP1	10/23/23	0927	2508813	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"	2507338	76.2	(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: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1-FD-02
Sample ID: 640870017
Matrix: WG
Collect Date: 10-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228		1.92	+/-1.03	1.44	+/-1.15	3.00	pCi/L			JE1	10/16/23	0814	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		3.72	+/-1.32	1.44	+/-1.48		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		1.80	+/-0.818	0.633	+/-0.927	1.00	pCi/L			LXP1	10/23/23	0927	2508813	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"	2507338	64.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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: October 23, 2023

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: ARK-AP1PZ-9
Sample ID: 640870018
Matrix: WG
Collect Date: 11-OCT-23
Receive Date: 11-OCT-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														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	2.25	+/-1.57	2.47	+/-1.67	3.00	pCi/L			JE1	10/16/23	0815	2507338	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		5.37	+/-1.91	2.47	+/-2.12		pCi/L			NXL1	10/23/23	1409	2508821	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		3.12	+/-1.09	0.740	+/-1.30	1.00	pCi/L			LXP1	10/23/23	0927	2508813	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"	2507338	62.6	(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

Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 640870

Product: **Radium-226+Radium-228 Calculation**
Analytical Method: Calculation
Analytical Procedure: GL-RAD-D-003 REV# 45
Analytical Batch: 2508821

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

GEL Sample ID#	Client Sample Identification
640870001	ARK-AP1GWA-1
640870002	ARK-AP1-FB-01
640870003	ARK-AP1GWA-2
640870004	ARK-AP1-EB-01
640870005	ARK-AP1PZ-1
640870006	ARK-AP1PZ-2
640870007	ARK-AP1-FD-01
640870008	ARK-AP1PZ-4
640870009	ARK-AP1-FB-02
640870010	ARK-AP1PZ-3
640870011	ARK-AP1PZ-8
640870012	ARK-AP1PZ-5
640870013	ARK-AP1-EB-02
640870014	ARK-AP1PZ-7
640870015	ARK-AP1PZ-10
640870016	ARK-AP1PZ-11
640870017	ARK-AP1-FD-02
640870018	ARK-AP1PZ-9

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: 2507338

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

GEL Sample ID#	Client Sample Identification
640870001	ARK-AP1GWA-1

640870002	ARK-AP1-FB-01
640870003	ARK-AP1GWA-2
640870004	ARK-AP1-EB-01
640870005	ARK-AP1PZ-1
640870006	ARK-AP1PZ-2
640870007	ARK-AP1-FD-01
640870008	ARK-AP1PZ-4
640870009	ARK-AP1-FB-02
640870010	ARK-AP1PZ-3
640870011	ARK-AP1PZ-8
640870012	ARK-AP1PZ-5
640870013	ARK-AP1-EB-02
640870014	ARK-AP1PZ-7
640870015	ARK-AP1PZ-10
640870016	ARK-AP1PZ-11
640870017	ARK-AP1-FD-02
640870018	ARK-AP1PZ-9
1205544152	Method Blank (MB)
1205544153	640870001(ARK-AP1GWA-1) Sample Duplicate (DUP)
1205544154	Laboratory Control Sample (LCS)

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

Data Summary:

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

Technical Information

Recounts
Sample 1205544152 (MB) was recounted due to a suspected blank false positive. The recount is reported.

Product: **Lucas Cell, Ra226, Liquid**
Analytical Method: EPA 903.1 Modified
Analytical Procedure: GL-RAD-A-008 REV# 15
Analytical Batch: 2508813

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

GEL Sample ID#	Client Sample Identification
640870001	ARK-AP1GWA-1
640870002	ARK-AP1-FB-01
640870003	ARK-AP1GWA-2
640870004	ARK-AP1-EB-01
640870005	ARK-AP1PZ-1
640870006	ARK-AP1PZ-2
640870007	ARK-AP1-FD-01
640870008	ARK-AP1PZ-4
640870009	ARK-AP1-FB-02
640870010	ARK-AP1PZ-3

640870011	ARK-AP1PZ-8
640870012	ARK-AP1PZ-5
640870013	ARK-AP1-EB-02
640870014	ARK-AP1PZ-7
640870015	ARK-AP1PZ-10
640870016	ARK-AP1PZ-11
640870017	ARK-AP1-FD-02
640870018	ARK-AP1PZ-9
1205546778	Method Blank (MB)
1205546779	640870001(ARK-AP1GWA-1) Sample Duplicate (DUP)
1205546780	640870001(ARK-AP1GWA-1) Matrix Spike (MS)
1205546781	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, 1205546780 (ARK-AP1GWA-1MS), 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.

QC Summary

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

Atlanta, Georgia

Contact: **Joju Abraham**

Workorder: **640870**

Report Date: October 23, 2023

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 2507338										
QC1205544153 640870001 DUP										
Radium-228		2.41	U	1.61	pCi/L	39.9		(0% - 100%)	JE1	10/16/2309:05
Uncert:		+/-1.09		+/-1.09						
TPU:		+/-1.25		+/-1.17						
QC1205544154 LCS										
Radium-228	76.7			67.0	pCi/L		87.3	(75%-125%)	JE1	10/16/2309:05
Uncert:				+/-4.44						
TPU:				+/-17.7						
QC1205544152 MB										
Radium-228			U	2.84	pCi/L				JE1	10/16/2310:40
Uncert:				+/-1.87						
TPU:				+/-2.00						
Rad Ra-226										
Batch 2508813										
QC1205546779 640870001 DUP										
Radium-226		1.90		2.13	pCi/L	11.5		(0% - 100%)	LXP1	10/23/2310:02
Uncert:		+/-0.801		+/-0.886						
TPU:		+/-0.848		+/-0.957						
QC1205546781 LCS										
Radium-226	27.1			23.8	pCi/L		88	(75%-125%)	LXP1	10/23/2310:02
Uncert:				+/-2.72						
TPU:				+/-6.04						
QC1205546778 MB										
Radium-226			U	0.468	pCi/L				LXP1	10/23/2309:27
Uncert:				+/-0.519						
TPU:				+/-0.526						
QC1205546780 640870001 MS										
Radium-226	135	1.90		148	pCi/L		109	(75%-125%)	LXP1	10/23/2310:02
Uncert:		+/-0.801		+/-17.0						
TPU:		+/-0.848		+/-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

QC Summary

Workorder: **640870**

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 acceptence 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.

Page: 1 of 2

Project # 175569434

GEL Quote #: 5 Coolers

COC Number (1):

PO Number:

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SDG: 640870

GEL Laboratories LLC 640869 640870

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Chain of Custody and Analytical Request

GEL Work Order Number: **GEL Project Manager: Erin Trent**

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

Client Name: Georgia Power Phone # (937-344-6533)

Project/Site Name: Plant Arkwright Ash Pond 1 Fax:

Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308

Collected By: John Myer; Dylan Quintal Send Results To: jabraham@southernco.com EDD@stantec.com Cassidy.Sutherland@stantec.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	NI Ag (App. I) (6020B)	NI Metals App. III (6020B)	Alkalinity (300.0 R2.1)	TDS (SM Method 2540C)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993)	NI Metals App. IV (6020B)	NI RAD 226-228 Cmbd	NI Mercury (7470B)	NI Metals Al, K, Mg, Na, Fe, Mn (6020B)		<-- Preservative Type (6)	Comments (task_code: ARK-CCR-ASSMT-2023S1)
ARK-AP1GWA-1	10-09-23	1345	N	N	WG			6		X		X	X	X	X	X				
ARK-AP1-FB-01	10-09-23	1405	FB	N	WQ			6		X		X	X	X	X	X				
ARK-AP1GWA-2	10-09-23	1430	N	N	WG			6		X		X	X	X	X	X				
ARK-AP1-EB-01	10-09-23	1500	EB	N	WQ			6		X		X	X	X	X	X				
ARK-AP1PZ-1	10-09-23	1620	N	N	WG			6		X		X	X	X	X	X				
ARK-AP1PZ-2	10-09-23	1700	N	N	WG			6		X		X	X	X	X	X				
ARK-AP1-FD-01	10-09-23	NA	FD	N	WQ			6		X		X	X	X	X	X				
ARK-AP1PZ-4	10-10-23	0910	N	N	WG			6		X		X	X	X	X	X				
ARK-AP1-FB-02	10-10-23	0930	FB	N	WQ			6		X		X	X	X	X	X				
ARK-AP1PZ-3	10-10-23	0930	N	N	WG			6		X		X	X	X	X	X				

Chain of Custody Signatures

	Relinquished By (Signed)	Print Name	Date	Received by (signed)	Print Name	Date
1		John Myer	10/11/23		Brandon Williams	
2						10/11/23
3						1528

TAT Requested: Normal: __X_ Rush: ____ Specify: _____ (Subject to Surcharge)

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:*** 2 °C

> ***For sample shipping and delivery details, see Sa***

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

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

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

7.) **KNOWN OR POSSIBLE HAZARDS**

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

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Page: 2 of 2
Project # 175569434
GEL Quote #: 5 Coolers
COC Number [1]:
PO Number:

Page 29 of 31 SDG: 640870

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Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: **GEL Project Manager: Erin Trent**

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

Client Name: Georgia Power Phone # (937-344-6533)

Project/Site Name: Plant Arkwright Ash Pond 1 Fax:

Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308

Collected By: John Myer; Dylan Quintal

Send Results To: jabraham@southernco.com EDD@stantec.com
Cassidy.Sutherland@stantec.com

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	NI Ag (App. I) (6020B)	NI Metals App. III (6020B)	Alkalinity (300.0 R2.1)	TDS (SM Method 2540C)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993)	NI Metals App. IV (6020B)	NI RAD 226-228 Cmbd	NI Mercury (7470B)	NI Metals Al, K, Mg, Na, Fe, Mn (6020B)		<-- Preservative Type (6)
																			Comments (task_code: ARK-CCR-ASSMT-2023S1)
ARK-AP1PZ-8	10-10-23	1155	N	N	WG			6		X		X	X	X	X	X			
ARK-AP1PZ-5	10-10-23	1120	N	N	WG			6		X		X	X	X	X	X			
ARK-AP1-EB-02	10-10-23	1210	EB	N	WQ			6		X		X	X	X	X	X			
ARK-AP1PZ-7	10-10-23	1350	N	N	WG			6		X		X	X	X	X	X			
ARK-AP1PZ-10	10-10-23	1420	N	N	WG			6		X		X	X	X	X	X			
ARK-AP1PZ-11	10-10-23	1615	N	N	WG			6		X		X	X	X	X	X			
ARK-AP1-FD-02	10-10-23	NA	FD	N	WQ			6		X		X	X	X	X	X			
ARK-AP1PZ-9	10-11-23	0820	N	N	WG			6		X		X	X	X	X	X			

Chain of Custody Signatures

	Relinquished By (Signed)	Print Name	Date	Received by (signed)	Print Name	Date
1		John Myer	10/11/23		Brandon Williams	
2						10/11/23
3						1528

TAT Requested: Normal: __X_ Rush: ____ Specify: _____ (Subject to Surcharge)

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:*** 2 °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

Sample Collection Time Zone : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

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

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

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

640870
640869

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

ET

Client: GPCC	**SDG/AR/COC/Work Order:**
Received By: QG	**Date Received:** 10/11/23
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier (Other) n/a

Suspected Hazard Information	Yes	No	
			*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 0 CPM / mR/Hr **Classified as: Rad 1 Rad 2 Rad 3**
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: (Wet Ice) Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 2°c
4	Daily check performed and passed on IR temperature gun?	✓			**Temperature Device Serial #:** IR1-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?				If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AT Date 10/12/23 Page 1 of 1

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 23 October 2023

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
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	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-04
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	T104704235-23-21
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

October 20, 2023

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

RE: Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on October 03, 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
770-734-4205
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Jordan Gamble, ARCADIS - Atlanta
Ben Hodges, Georgia Power-CCR
Warren Johnson, ARCADIS - Atlanta
Laura Midkiff, Georgia Power
Noelia Muskus Ruiz, Georgia Power
Charles Steele, Arcadis - Atlanta
Tina Sullivan, ERM

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CERTIFICATIONS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
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 #: PA014572023-03
New Hampshire/TNI Certification #: 297622
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 #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
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

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SAMPLE SUMMARY

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92691202001	**ARK-BC-0.3**	Water	10/03/23 12:45	10/03/23 15:46
92691202002	**ARK-BC-0.1**	Water	10/03/23 11:21	10/03/23 15:46
92691202003	**ARK-OR-0.8**	Water	10/03/23 09:35	10/03/23 15:46
92691202004	**ARK-OR-0.1**	Water	10/03/23 11:50	10/03/23 15:46
92691202005	**ARK-OR-0.3**	Water	10/03/23 10:12	10/03/23 15:46
92691202006	**ARK-OR+0.25**	Water	10/03/23 12:12	10/03/23 15:46

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SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92691202001	**ARK-BC-0.3**	EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92691202002	**ARK-BC-0.1**	EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92691202003	**ARK-OR-0.8**	EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92691202004	**ARK-OR-0.1**	EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92691202005	**ARK-OR-0.3**	EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92691202006	**ARK-OR+0.25**	EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Sample: ARK-BC-0.3 **Lab ID: 92691202001** Collected: 10/03/23 12:45 Received: 10/03/23 15:46 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	**0.0706 ± 0.571 (1.12) C:NA T:90%**	pCi/L	10/19/23 13:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.231 ± 0.383 (0.834) C:80% T:79%**	pCi/L	10/18/23 11:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.302 ± 0.954 (1.95)**	pCi/L	10/20/23 16:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Sample: ARK-BC-0.1 **Lab ID: 92691202002** Collected: 10/03/23 11:21 Received: 10/03/23 15:46 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	**-0.134 ± 0.490 (1.06) C:NA T:92%**	pCi/L	10/19/23 13:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.297 ± 0.399 (0.854) C:77% T:84%**	pCi/L	10/18/23 11:45	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.297 ± 0.889 (1.91)**	pCi/L	10/20/23 16:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Sample: ARK-OR-0.8 **Lab ID: 92691202003** Collected: 10/03/23 09:35 Received: 10/03/23 15:46 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	**-0.123 ± 0.295 (0.737) C:NA T:96%**	pCi/L	10/19/23 13:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.106 ± 0.368 (0.829) C:77% T:76%**	pCi/L	10/18/23 11:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.106 ± 0.663 (1.57)**	pCi/L	10/20/23 16:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Sample: ARK-OR-0.1 **Lab ID: 92691202004** Collected: 10/03/23 11:50 Received: 10/03/23 15:46 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 ± 0.567 (1.15) C:NA T:90%**	pCi/L	10/19/23 13:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.549 ± 0.366 (0.700) C:79% T:83%**	pCi/L	10/18/23 11:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.549 ± 0.933 (1.85)**	pCi/L	10/20/23 16:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Sample: ARK-OR-0.3 **Lab ID: 92691202005** Collected: 10/03/23 10:12 Received: 10/03/23 15:46 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 ± 0.432 (0.913) C:NA T:92%**	pCi/L	10/19/23 13:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.160 ± 0.333 (0.734) C:81% T:83%**	pCi/L	10/18/23 11:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.160 ± 0.765 (1.65)**	pCi/L	10/20/23 16:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Sample: ARK-OR+0.25 **Lab ID: 92691202006** Collected: 10/03/23 12:12 Received: 10/03/23 15:46 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 ± 0.464 (0.950) C:NA T:91%**	pCi/L	10/19/23 13:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.187 ± 0.344 (0.754) C:80% T:77%**	pCi/L	10/18/23 11:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.187 ± 0.808 (1.70)**	pCi/L	10/20/23 16:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

QC Batch: 620910
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92691202001, 92691202002, 92691202003, 92691202004, 92691202005, 92691202006

METHOD BLANK: 3026015 Matrix: Water
Associated Lab Samples: 92691202001, 92691202002, 92691202003, 92691202004, 92691202005, 92691202006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.112 ± 0.300 (0.672) C:79% T:87%	pCi/L	10/18/23 11:43	

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

REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

QC Batch: 620909
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92691202001, 92691202002, 92691202003, 92691202004, 92691202005, 92691202006

METHOD BLANK: 3026014 Matrix: Water
Associated Lab Samples: 92691202001, 92691202002, 92691202003, 92691202004, 92691202005, 92691202006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.504 ± 0.400 (0.520) C:NA T:93%	pCi/L	10/19/23 13:00	

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

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.

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Arkwright-CCR Ash Pond
Pace Project No.: 92691202

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92691202001	**ARK-BC-0.3**	EPA 903.1	620909		
92691202002	**ARK-BC-0.1**	EPA 903.1	620909		
92691202003	**ARK-OR-0.8**	EPA 903.1	620909		
92691202004	**ARK-OR-0.1**	EPA 903.1	620909		
92691202005	**ARK-OR-0.3**	EPA 903.1	620909		
92691202006	**ARK-OR+0.25**	EPA 903.1	620909		
92691202001	**ARK-BC-0.3**	EPA 904.0	620910		
92691202002	**ARK-BC-0.1**	EPA 904.0	620910		
92691202003	**ARK-OR-0.8**	EPA 904.0	620910		
92691202004	**ARK-OR-0.1**	EPA 904.0	620910		
92691202005	**ARK-OR-0.3**	EPA 904.0	620910		
92691202006	**ARK-OR+0.25**	EPA 904.0	620910		
92691202001	**ARK-BC-0.3**	Total Radium Calculation	623972		
92691202002	**ARK-BC-0.1**	Total Radium Calculation	623972		
92691202003	**ARK-OR-0.8**	Total Radium Calculation	623972		
92691202004	**ARK-OR-0.1**	Total Radium Calculation	623972		
92691202005	**ARK-OR-0.3**	Total Radium Calculation	623972		
92691202006	**ARK-OR+0.25**	Total Radium Calculation	623972		

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

WO# : 92691202

92691202

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	ARCADIS - Atlanta	Report To:	Kelley Sharpe, Warren Johnson	Attention:	
Address:	2839 Paces Ferry Rd	Copy To:	Ben Hodges, Joju Abraham	Company Name:	
Atlanta, GA 30339				Address:	
Email:	kelley.sharpe@arcadis.com	Purchase Order #:	GPC62474-0003	Pace Quote:	
Phone:	(770)384-6584 Fax:	Project Name:	Plant Arkwright/CCR-Ash Pond Closure	Pace Project Manager:	maiya.parks@pacelabs.com,
Requested Due Date:	5 Day TAT	Project #:		Pace Profile #:	15836

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Total/Bicarb Alkalinity	Cl, F, SO4	TDS	App. III Metals - B, Ca	App. IV Metals (Client List)	Metals - Mg, Na, K	Radium 226/228	Residual Chlorine (Y/N)
1	ARK-BC-0.3	WG	G	10/3/23	1245				5	X		X							X	X	X	X	X	X	X	
2	ARK-BC-0.1	WG	G	10/3/23	1121				5	X		X							X	X	X	X	X	X	X	
3	ARK-OR-0.8	WG	G	10/3/23	0935				5	X		X							X	X	X	X	X	X	X	
4	ARK-OR-0.1	WG	G	10/3/23	1150				5	X		X							X	X	X	X	X	X	X	
5	ARK-OR-0.3	WG	G	10/3/23	1012				5	X		X							X	X	X	X	X	X	X	
6	ARK-OR+0.25	WG	G	10/3/23	1212				5	X		X							X	X	X	X	X	X	X	
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App. IV - Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl + Hg	Arcadis	10/3/23	1546	TLL - PACE	10-3-23	1546	
ARK-CCR-ASSMT-202382 1003							

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER:	Garrett G	DATE Signed:	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
SIGNATURE of SAMPLER:						

DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

tory receiving samples:

ville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☑ Kernersville ☐

ple Condition on Receipt

Client Name: Arcadis - Atlanta

Project #:

WO#: 92691202

PM: MP Due Date: 10/25/23

CLIENT: GA-ArcadAtl

r: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client

mmercial ☐ Pace ☐ Other:____

y Seal Present? ☐ Yes ☑ No Seals Intact? ☐ Yes ☐ No

Date/Initials Person Examining Contents: 10-3-23 JCC

t Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☐ N/A

ometer:

☑ IR Gun ID: 083 Type of Ice: ☐ Wet ☐ Blue ☐ None

Temp: 3.3 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

Temp Corrected (°C): 3.3

Regulated Soil (☐ N/A, water sample)

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

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

				Comments/Discrepancy:
ain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
amples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
ort Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
ush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
ufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
orrect Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
ontainers Intact?	☑ Yes	☐ No	☐ N/A	7.
issolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
ample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W				
eadspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
rip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
rip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

Field Data Required? ☐ Yes ☐ No

ENTS/SAMPLE DISCREPANCY

Lot ID of split containers:

NOTIFICATION/RESOLUTION

n contacted: Date/Time:

oject Manager SCURF Review: Date:

oject Manager SRF Review: Date:

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

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

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

****Bottom half of box is to list number of bottles**

*****Check all unpreserved Nitrates for chlorine**

Project # **WO#: 92691202**

PM: MP **Due Date: 10/25/23**

CLIENT: GA-AreadAtl

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)	DG9Y-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)	8260/N	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		2				1																			2				
3		2				1																			2				
4		2				1																			2				
5		2				1																			2				
6		2				1																			2				
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 07, 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.: 92691209

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on October 03, 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 November 3, 2023 final report. Due to lab error, this report was revised to update the 6010 Metals list reported for sample 92691209-001 (ARK-BC-0.3). 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
770-734-4205
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Jordan Gamble, ARCADIS - Atlanta
Ben Hodges, Georgia Power-CCR
Warren Johnson, ARCADIS - Atlanta
Laura Midkiff, Georgia Power
Noelia Muskus Ruiz, Georgia Power
Tina Sullivan, ERM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

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
Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92691209001	**ARK-BC-0.3**	Water	10/03/23 12:45	10/03/23 15:46
92691209002	**ARK-BC-0.1**	Water	10/03/23 11:21	10/03/23 15:46
92691209003	**ARK-OR-0.8**	Water	10/03/23 09:55	10/03/23 15:46
92691209004	**ARK-OR-0.1**	Water	10/03/23 11:50	10/03/23 15:46
92691209005	**ARK-OR-0.3**	Water	10/03/23 10:12	10/03/23 15:46
92691209006	**ARK-OR+0.25**	Water	10/03/23 12:12	10/03/23 15:46

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92691209001	**ARK-BC-0.3**	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	YEG	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92691209002	**ARK-BC-0.1**	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	YEG	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92691209003	**ARK-OR-0.8**	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	YEG	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92691209004	**ARK-OR-0.1**	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	YEG	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92691209005	**ARK-OR-0.3**	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	YEG	2	PASI-A
		EPA 9056A	CDC	3	PASI-A
92691209006	**ARK-OR+0.25**	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	YEG	2	PASI-A
		EPA 9056A	CDC	3	PASI-A

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory

PASI-A = Pace Analytical Services - Asheville
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

Sample: ARK-BC-0.3 **Lab ID: 92691209001** Collected: 10/03/23 12:45 Received: 10/03/23 15:46 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	10/10/23 11:20	10/23/23 23:25	7440-42-8	
Potassium	**2.7**	mg/L	0.50	1	10/10/23 11:20	10/24/23 20:15	7440-09-7	
Sodium	**11.2**	mg/L	1.0	1	10/10/23 11:20	10/24/23 20:15	7440-23-5	M1
Calcium	**12.9**	mg/L	1.0	1	10/10/23 11:20	10/23/23 23:25	7440-70-2	L2,M0
Magnesium	**5.5**	mg/L	0.050	1	10/10/23 11:20	10/23/23 23:25	7439-95-4	M1
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	1	10/07/23 09:18	10/10/23 15:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 15:56	7440-38-2	
Barium	**0.037**	mg/L	0.0050	1	10/07/23 09:18	10/10/23 15:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 15:56	7440-41-7	
Cadmium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 15:56	7440-43-9	
Chromium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 15:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 15:56	7440-48-4	
Lead	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 15:56	7439-92-1	
Lithium	ND	mg/L	0.030	1	10/07/23 09:18	10/10/23 15:56	7439-93-2	L1
Molybdenum	ND	mg/L	0.010	1	10/07/23 09:18	10/10/23 15:56	7439-98-7	
Selenium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 15:56	7782-49-2	
Thallium	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 15:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	1	10/12/23 12:00	10/12/23 16:52	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**99.0**	mg/L	25.0	1		10/04/23 14:07		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**60.9**	mg/L	5.0	1		10/09/23 17:07		
Alkalinity, Total as CaCO3	**60.9**	mg/L	5.0	1		10/09/23 17:07		
9056 IC anions 28 Days	Analytical Method: EPA 9056A Pace Analytical Services - Asheville							
Chloride	**9.3**	mg/L	1.0	1		10/04/23 02:05	16887-00-6	
Fluoride	**0.16**	mg/L	0.10	1		10/04/23 02:05	16984-48-8	
Sulfate	**11.6**	mg/L	1.0	1		10/04/23 02:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

Sample: ARK-BC-0.1 **Lab ID: 92691209002** Collected: 10/03/23 11:21 Received: 10/03/23 15:46 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Boron	**0.045**	mg/L	0.040	1	10/31/23 12:33	11/02/23 19:05	7440-42-8	
Potassium	**2.8**	mg/L	0.50	1	10/31/23 12:33	11/02/23 19:05	7440-09-7	
Sodium	**11.3**	mg/L	1.0	1	10/31/23 12:33	11/02/23 19:05	7440-23-5	M1
Calcium	**15.0**	mg/L	1.0	1	10/31/23 12:33	11/02/23 19:05	7440-70-2	M1
Magnesium	**6.4**	mg/L	0.050	1	10/31/23 12:33	11/02/23 19:05	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	10/07/23 09:18	10/10/23 16:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:00	7440-38-2	
Barium	**0.036**	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:00	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 16:00	7440-41-7	
Cadmium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 16:00	7440-43-9	
Chromium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:00	7440-48-4	
Lead	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 16:00	7439-92-1	
Lithium	ND	mg/L	0.030	1	10/07/23 09:18	10/10/23 16:00	7439-93-2	L1
Molybdenum	ND	mg/L	0.010	1	10/07/23 09:18	10/10/23 16:00	7439-98-7	
Selenium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:00	7782-49-2	
Thallium	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 16:00	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	10/12/23 12:00	10/12/23 16:55	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**110**	mg/L	25.0	1		10/04/23 14:07		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**61.8**	mg/L	5.0	1		10/09/23 17:28		
Alkalinity, Total as CaCO3	**61.8**	mg/L	5.0	1		10/09/23 17:28		
9056 IC anions 28 Days	Analytical Method: EPA 9056A Pace Analytical Services - Asheville							
Chloride	**9.2**	mg/L	1.0	1		10/04/23 02:20	16887-00-6	
Fluoride	**0.14**	mg/L	0.10	1		10/04/23 02:20	16984-48-8	
Sulfate	**14.7**	mg/L	1.0	1		10/04/23 02:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

Sample: ARK-OR-0.8 **Lab ID: 92691209003** Collected: 10/03/23 09:55 Received: 10/03/23 15:46 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	10/10/23 11:20	10/23/23 23:51	7440-42-8	
Calcium	**7.4**	mg/L	1.0	1	10/10/23 11:20	10/23/23 23:51	7440-70-2	L2
Magnesium	**2.0**	mg/L	0.050	1	10/10/23 11:20	10/23/23 23:51	7439-95-4	
Potassium	**3.6**	mg/L	0.50	1	10/10/23 11:20	10/24/23 20:36	7440-09-7	
Sodium	**9.4**	mg/L	1.0	1	10/10/23 11:20	10/24/23 20:36	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	1	10/07/23 09:18	10/10/23 16:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:14	7440-38-2	
Barium	**0.021**	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 16:14	7440-41-7	
Cadmium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 16:14	7440-43-9	
Chromium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:14	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:14	7440-48-4	
Lead	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 16:14	7439-92-1	
Lithium	ND	mg/L	0.030	1	10/07/23 09:18	10/10/23 16:14	7439-93-2	L1
Molybdenum	ND	mg/L	0.010	1	10/07/23 09:18	10/10/23 16:14	7439-98-7	
Selenium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:14	7782-49-2	
Thallium	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 16:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	1	10/12/23 12:00	10/12/23 16:57	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**72.0**	mg/L	25.0	1		10/04/23 14:07		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**32.7**	mg/L	5.0	1		10/09/23 17:48		
Alkalinity, Total as CaCO3	**32.7**	mg/L	5.0	1		10/09/23 17:48		
9056 IC anions 28 Days	Analytical Method: EPA 9056A Pace Analytical Services - Asheville							
Chloride	**9.0**	mg/L	1.0	1		10/04/23 02:34	16887-00-6	
Fluoride	ND	mg/L	0.10	1		10/04/23 02:34	16984-48-8	
Sulfate	**6.4**	mg/L	1.0	1		10/04/23 02:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

Sample: ARK-OR-0.1 **Lab ID: 92691209004** Collected: 10/03/23 11:50 Received: 10/03/23 15:46 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	10/10/23 11:20	10/23/23 23:56	7440-42-8	
Calcium	**7.4**	mg/L	1.0	1	10/10/23 11:20	10/23/23 23:56	7440-70-2	L2
Magnesium	**2.0**	mg/L	0.050	1	10/10/23 11:20	10/23/23 23:56	7439-95-4	
Potassium	**3.3**	mg/L	0.50	1	10/10/23 11:20	10/24/23 20:41	7440-09-7	
Sodium	**9.5**	mg/L	1.0	1	10/10/23 11:20	10/24/23 20:41	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	1	10/07/23 09:18	10/10/23 16:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:18	7440-38-2	
Barium	**0.021**	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:18	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 16:18	7440-41-7	
Cadmium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 16:18	7440-43-9	
Chromium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:18	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:18	7440-48-4	
Lead	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 16:18	7439-92-1	
Lithium	ND	mg/L	0.030	1	10/07/23 09:18	10/10/23 16:18	7439-93-2	L1
Molybdenum	ND	mg/L	0.010	1	10/07/23 09:18	10/10/23 16:18	7439-98-7	
Selenium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:18	7782-49-2	
Thallium	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 16:18	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	10/12/23 12:00	10/12/23 17:05	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**72.0**	mg/L	25.0	1		10/04/23 14:10		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**33.1**	mg/L	5.0	1		10/09/23 18:04		
Alkalinity, Total as CaCO3	**33.1**	mg/L	5.0	1		10/09/23 18:04		
9056 IC anions 28 Days	Analytical Method: EPA 9056A Pace Analytical Services - Asheville							
Chloride	**8.9**	mg/L	1.0	1		10/04/23 02:49	16887-00-6	
Fluoride	ND	mg/L	0.10	1		10/04/23 02:49	16984-48-8	
Sulfate	**6.4**	mg/L	1.0	1		10/04/23 02:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

Sample: ARK-OR-0.3 **Lab ID: 92691209005** Collected: 10/03/23 10:12 Received: 10/03/23 15:46 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**3.5**	mg/L	0.50	1	10/10/23 11:20	10/24/23 20:46	7440-09-7	
Sodium	**9.1**	mg/L	1.0	1	10/10/23 11:20	10/24/23 20:46	7440-23-5	
Boron	ND	mg/L	0.040	1	10/10/23 11:20	10/24/23 00:01	7440-42-8	
Calcium	**7.2**	mg/L	1.0	1	10/10/23 11:20	10/24/23 00:01	7440-70-2	L2
Magnesium	**2.0**	mg/L	0.050	1	10/10/23 11:20	10/24/23 00:01	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	10/07/23 09:18	10/10/23 16:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:23	7440-38-2	
Barium	**0.020**	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:23	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 16:23	7440-41-7	
Cadmium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 16:23	7440-43-9	
Chromium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:23	7440-48-4	
Lead	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 16:23	7439-92-1	
Lithium	ND	mg/L	0.030	1	10/07/23 09:18	10/10/23 16:23	7439-93-2	L1
Molybdenum	ND	mg/L	0.010	1	10/07/23 09:18	10/10/23 16:23	7439-98-7	
Selenium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:23	7782-49-2	
Thallium	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 16:23	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	10/12/23 12:00	10/12/23 17:08	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**66.0**	mg/L	25.0	1		10/04/23 14:10		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**32.4**	mg/L	5.0	1		10/09/23 18:10		
Alkalinity, Total as CaCO3	**32.4**	mg/L	5.0	1		10/09/23 18:10		
9056 IC anions 28 Days	Analytical Method: EPA 9056A Pace Analytical Services - Asheville							
Chloride	**9.0**	mg/L	1.0	1		10/04/23 03:03	16887-00-6	
Fluoride	ND	mg/L	0.10	1		10/04/23 03:03	16984-48-8	
Sulfate	**6.3**	mg/L	1.0	1		10/04/23 03:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

Sample: ARK-OR+0.25 **Lab ID: 92691209006** Collected: 10/03/23 12:12 Received: 10/03/23 15:46 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	10/10/23 11:20	10/24/23 00:06	7440-42-8	
Calcium	**7.2**	mg/L	1.0	1	10/10/23 11:20	10/24/23 00:06	7440-70-2	L2
Magnesium	**2.0**	mg/L	0.050	1	10/10/23 11:20	10/24/23 00:06	7439-95-4	
Potassium	**3.4**	mg/L	0.50	1	10/10/23 11:20	10/24/23 20:51	7440-09-7	
Sodium	**9.2**	mg/L	1.0	1	10/10/23 11:20	10/24/23 20:51	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	1	10/07/23 09:18	10/10/23 16:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:27	7440-38-2	
Barium	**0.019**	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:27	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 16:27	7440-41-7	
Cadmium	ND	mg/L	0.00050	1	10/07/23 09:18	10/10/23 16:27	7440-43-9	
Chromium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:27	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:27	7440-48-4	
Lead	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 16:27	7439-92-1	
Lithium	ND	mg/L	0.030	1	10/07/23 09:18	10/10/23 16:27	7439-93-2	L1
Molybdenum	ND	mg/L	0.010	1	10/07/23 09:18	10/10/23 16:27	7439-98-7	
Selenium	ND	mg/L	0.0050	1	10/07/23 09:18	10/10/23 16:27	7782-49-2	
Thallium	ND	mg/L	0.0010	1	10/07/23 09:18	10/10/23 16:27	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	1	10/12/23 12:00	10/12/23 17:10	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**67.0**	mg/L	25.0	1		10/04/23 14:10		
2320B Alkalinity	Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	**33.1**	mg/L	5.0	1		10/09/23 18:16		
Alkalinity, Total as CaCO3	**33.1**	mg/L	5.0	1		10/09/23 18:16		
9056 IC anions 28 Days	Analytical Method: EPA 9056A Pace Analytical Services - Asheville							
Chloride	**9.0**	mg/L	1.0	1		10/04/23 03:47	16887-00-6	
Fluoride	ND	mg/L	0.10	1		10/04/23 03:47	16984-48-8	
Sulfate	**6.5**	mg/L	1.0	1		10/04/23 03:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

QC Batch: 805246
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92691209001, 92691209003, 92691209004, 92691209005, 92691209006

METHOD BLANK: 4169858 Matrix: Water
Associated Lab Samples: 92691209001, 92691209003, 92691209004, 92691209005, 92691209006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	10/23/23 23:04	
Calcium	mg/L	ND	1.0	10/23/23 23:04	
Magnesium	mg/L	ND	0.050	10/23/23 23:04	
Potassium	mg/L	ND	0.50	10/24/23 19:55	
Sodium	mg/L	ND	1.0	10/24/23 19:55	

LABORATORY CONTROL SAMPLE: 4169859

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.99	99	80-120	
Calcium	mg/L	1	.77J	77	80-120	L2
Magnesium	mg/L	1	0.94	94	80-120	
Potassium	mg/L	1	1.1	111	80-120	
Sodium	mg/L	1	1.1	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4169860 4169861

Parameter	Units	92691209001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	ND	1	1	1.1	1.1	105	104	75-125	1	20	
Calcium	mg/L	12.9	1	1	15.1	13.9	219	102	75-125	8	20	M0
Magnesium	mg/L	5.5	1	1	7.2	6.4	174	96	75-125	11	20	M1
Potassium	mg/L	2.7	1	1	3.7	3.9	106	122	75-125	4	20	
Sodium	mg/L	11.2	1	1	11.9	12.3	66	105	75-125	3	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

QC Batch: 809947
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92691209002

METHOD BLANK: 4193423 Matrix: Water
Associated Lab Samples: 92691209002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	11/02/23 18:54	
Calcium	mg/L	ND	1.0	11/02/23 18:54	
Magnesium	mg/L	ND	0.050	11/02/23 18:54	
Potassium	mg/L	ND	0.50	11/02/23 18:54	
Sodium	mg/L	ND	1.0	11/02/23 18:54	

LABORATORY CONTROL SAMPLE: 4193424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.95	95	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Magnesium	mg/L	1	1.0	103	80-120	
Potassium	mg/L	1	1.0	100	80-120	
Sodium	mg/L	1	.99J	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4193425 4193426

Parameter	Units	92691209002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.045	1	1	1.1	1.0	102	100	75-125	2	20	
Calcium	mg/L	15.0	1	1	16.3	15.6	125	58	75-125	4	20	M1
Magnesium	mg/L	6.4	1	1	7.6	7.3	117	91	75-125	3	20	
Potassium	mg/L	2.8	1	1	3.8	3.8	103	102	75-125	0	20	
Sodium	mg/L	11.3	1	1	12.6	12.3	132	94	75-125	3	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

QC Batch: 804826
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92691209001, 92691209002, 92691209003, 92691209004, 92691209005, 92691209006

METHOD BLANK: 4168100 Matrix: Water
Associated Lab Samples: 92691209001, 92691209002, 92691209003, 92691209004, 92691209005, 92691209006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	10/10/23 15:19	
Arsenic	mg/L	ND	0.0050	10/10/23 15:19	
Barium	mg/L	ND	0.0050	10/10/23 15:19	
Beryllium	mg/L	ND	0.00050	10/10/23 15:19	
Cadmium	mg/L	ND	0.00050	10/10/23 15:19	
Chromium	mg/L	ND	0.0050	10/10/23 15:19	
Cobalt	mg/L	ND	0.0050	10/10/23 15:19	
Lead	mg/L	ND	0.0010	10/10/23 15:19	
Lithium	mg/L	ND	0.030	10/10/23 15:19	
Molybdenum	mg/L	ND	0.010	10/10/23 15:19	
Selenium	mg/L	ND	0.0050	10/10/23 15:19	
Thallium	mg/L	ND	0.0010	10/10/23 15:19	

LABORATORY CONTROL SAMPLE: 4168101

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	106	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.10	104	80-120	
Beryllium	mg/L	0.1	0.12	116	80-120	
Cadmium	mg/L	0.1	0.11	105	80-120	
Chromium	mg/L	0.1	0.11	106	80-120	
Cobalt	mg/L	0.1	0.11	106	80-120	
Lead	mg/L	0.1	0.11	105	80-120	
Lithium	mg/L	0.1	0.13	129	80-120	L1
Molybdenum	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4168102 4168103

Parameter	Units	92687886008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	108	104	75-125	4	20	
Arsenic	mg/L	ND	0.1	0.1	0.11	0.10	105	101	75-125	4	20	
Barium	mg/L	1090 ug/L	0.1	0.1	1.2	1.1	71	30	75-125	4	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.097	102	97	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4168102 4168103

Parameter	Units	92687886008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	mg/L	ND	0.1	0.1	0.11	0.10	110	102	75-125	8	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	105	99	75-125	5	20	
Cobalt	mg/L	162 ug/L	0.1	0.1	0.27	0.26	107	95	75-125	5	20	
Lead	mg/L	ND	0.1	0.1	0.10	0.099	104	99	75-125	6	20	
Lithium	mg/L	ND	0.1	0.1	0.12	0.12	113	108	75-125	4	20	
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.10	105	101	75-125	4	20	
Selenium	mg/L	ND	0.1	0.1	0.11	0.10	104	101	75-125	4	20	
Thallium	mg/L	2.2 ug/L	0.1	0.1	0.11	0.10	103	98	75-125	6	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

QC Batch: 805706
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92691209001, 92691209002, 92691209003, 92691209004, 92691209005, 92691209006

METHOD BLANK: 4172220 Matrix: Water
Associated Lab Samples: 92691209001, 92691209002, 92691209003, 92691209004, 92691209005, 92691209006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	10/12/23 16:01	

LABORATORY CONTROL SAMPLE: 4172221

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0021	85	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4172222 4172223

Parameter	Units	92689717009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0026	0.0023	99	87	75-125	12	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

QC Batch: 804106 | 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: 92691209001, 92691209002, 92691209003, 92691209004, 92691209005, 92691209006

METHOD BLANK: 4164514 Matrix: Water
Associated Lab Samples: 92691209001, 92691209002, 92691209003, 92691209004, 92691209005, 92691209006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10/04/23 14:01	

LABORATORY CONTROL SAMPLE: 4164515

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	381	95	80-120	

SAMPLE DUPLICATE: 4164516

Parameter	Units	92691004001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	228	208	9	10	

SAMPLE DUPLICATE: 4164517

Parameter	Units	92691209003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	72.0	76.0	5	10	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

QC Batch: 804990
QC Batch Method: SM 2320B-2011
Analysis Method: SM 2320B-2011
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92691209001, 92691209002, 92691209003, 92691209004, 92691209005, 92691209006

METHOD BLANK: 4168576 Matrix: Water
Associated Lab Samples: 92691209001, 92691209002, 92691209003, 92691209004, 92691209005, 92691209006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	10/09/23 16:49	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	10/09/23 16:49	

LABORATORY CONTROL SAMPLE: 4168577

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.5	105	80-120	

LABORATORY CONTROL SAMPLE: 4168578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.9	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4168579 4168580

Parameter	Units	92691209001 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	60.9	50	50	111	112	101	103	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4168581 4168582

Parameter	Units	92691209002 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	61.8	50	50	114	112	104	101	80-120	2	25	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

QC Batch: 803939
QC Batch Method: EPA 9056A
Analysis Method: EPA 9056A
Analysis Description: 9056 IC anions 28 Days
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92691209001, 92691209002, 92691209003, 92691209004, 92691209005, 92691209006

METHOD BLANK: 4163719 Matrix: Water
Associated Lab Samples: 92691209001, 92691209002, 92691209003, 92691209004, 92691209005, 92691209006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/04/23 00:53	
Fluoride	mg/L	ND	0.10	10/04/23 00:53	
Sulfate	mg/L	ND	1.0	10/04/23 00:53	

LABORATORY CONTROL SAMPLE: 4163720

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.2	98	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	49.2	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4163721 4163722

Parameter	Units	92690697022 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.8	50	50	51.3	50.9	97	96	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	100	99	90-110	1	10	
Sulfate	mg/L	1.4	50	50	49.4	49.2	96	96	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4163723 4163724

Parameter	Units	92691157017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	11.1	50	50	58.5	58.6	95	95	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	103	103	90-110	0	10	
Sulfate	mg/L	5.8	50	50	52.9	53.3	94	95	90-110	1	10	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

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

L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Arkwright-CCR Ash Pond-Revised Report
Pace Project No.: 92691209

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92691209001	**ARK-BC-0.3**	EPA 3010A	805246	EPA 6010D	805325
92691209002	**ARK-BC-0.1**	EPA 3010A	809947	EPA 6010D	810055
92691209003	**ARK-OR-0.8**	EPA 3010A	805246	EPA 6010D	805325
92691209004	**ARK-OR-0.1**	EPA 3010A	805246	EPA 6010D	805325
92691209005	**ARK-OR-0.3**	EPA 3010A	805246	EPA 6010D	805325
92691209006	**ARK-OR+0.25**	EPA 3010A	805246	EPA 6010D	805325
92691209001	**ARK-BC-0.3**	EPA 3005A	804826	EPA 6020B	804860
92691209002	**ARK-BC-0.1**	EPA 3005A	804826	EPA 6020B	804860
92691209003	**ARK-OR-0.8**	EPA 3005A	804826	EPA 6020B	804860
92691209004	**ARK-OR-0.1**	EPA 3005A	804826	EPA 6020B	804860
92691209005	**ARK-OR-0.3**	EPA 3005A	804826	EPA 6020B	804860
92691209006	**ARK-OR+0.25**	EPA 3005A	804826	EPA 6020B	804860
92691209001	**ARK-BC-0.3**	EPA 7470A	805706	EPA 7470A	805878
92691209002	**ARK-BC-0.1**	EPA 7470A	805706	EPA 7470A	805878
92691209003	**ARK-OR-0.8**	EPA 7470A	805706	EPA 7470A	805878
92691209004	**ARK-OR-0.1**	EPA 7470A	805706	EPA 7470A	805878
92691209005	**ARK-OR-0.3**	EPA 7470A	805706	EPA 7470A	805878
92691209006	**ARK-OR+0.25**	EPA 7470A	805706	EPA 7470A	805878
92691209001	**ARK-BC-0.3**	SM 2540C-2015	804106		
92691209002	**ARK-BC-0.1**	SM 2540C-2015	804106		
92691209003	**ARK-OR-0.8**	SM 2540C-2015	804106		
92691209004	**ARK-OR-0.1**	SM 2540C-2015	804106		
92691209005	**ARK-OR-0.3**	SM 2540C-2015	804106		
92691209006	**ARK-OR+0.25**	SM 2540C-2015	804106		
92691209001	**ARK-BC-0.3**	SM 2320B-2011	804990		
92691209002	**ARK-BC-0.1**	SM 2320B-2011	804990		
92691209003	**ARK-OR-0.8**	SM 2320B-2011	804990		
92691209004	**ARK-OR-0.1**	SM 2320B-2011	804990		
92691209005	**ARK-OR-0.3**	SM 2320B-2011	804990		
92691209006	**ARK-OR+0.25**	SM 2320B-2011	804990		
92691209001	**ARK-BC-0.3**	EPA 9056A	803939		
92691209002	**ARK-BC-0.1**	EPA 9056A	803939		
92691209003	**ARK-OR-0.8**	EPA 9056A	803939		
92691209004	**ARK-OR-0.1**	EPA 9056A	803939		
92691209005	**ARK-OR-0.3**	EPA 9056A	803939		
92691209006	**ARK-OR+0.25**	EPA 9056A	803939		

REPORT OF LABORATORY ANALYSIS

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

WO# : 92691209

92691209

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	ARCADIS - Atlanta	Report To:	Kelley Sharpe, Warren Johnson	Attention:	
Address:	2839 Paces Ferry Rd	Copy To:	Ben Hodges, Joju Abraham	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	kelley.sharpe@arcadis.com	Purchase Order #:	GPC82474-0003	Pace Quote:	
Phone:	(770)384-6584 Fax:	Project Name:	Plant Arkwright/CCR-Ash Pond Closure	Pace Project Manager:	maiya.parks@pacelabs.com
Requested Due Date:	5 Day TAT	Project #:		Pace Profile #:	15836

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analysis Test Y/N	Total/Bicarb Alkalinity	Cl, F, SO4	TDS	App. III Metals - B, Ca	App. IV Metals (Client List)	Metals - Mg, Na, K	Radium 226/228	Residual Chlorine (Y/N)
1	ARK-BC-0.3	WG	G	10/3/23	1245				5	X		X							X	X	X	X	X	X	X	
2	ARK-BC-0.1	WG	G	10/3/23	1121				5	X		X							X	X	X	X	X	X	X	
3	ARK-OR-0.8	WG	G	10/3/23	0935				5	X		X							X	X	X	X	X	X	X	
4	ARK-OR-0.1	WG	G	10/3/23	1150				5	X		X							X	X	X	X	X	X	X	
5	ARK-OR-0.3	WG	G	10/3/23	1012				5	X		X							X	X	X	X	X	X	X	
6	ARK-OR+0.25	WG	G	10/3/23	1212				5	X		X							X	X	X	X	X	X	X	
7																										
8																										
9																										
10																										
11																										
12																										

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
App. IV - Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl + Hg	Arcadis	10/3/23	1546	TLL - PACE	10-3-23	1546	
ARK-CCR-ASSMT-202392 1003							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed:

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

oratory receiving samples:

heville ☐ **Eden** ☐ **Greenwood** ☐ **Huntersville** ☐ **Raleigh** ☐ **Mechanicsville** ☐ **Atlanta** ☑ **Kernersville** ☐

Sample Condition Upon Receipt

Client Name: Arcadis - Atlanta

Project #: **WO#: 92691209**

PM: MP **Due Date: 10/11/23**

CLIENT: GA-ArcadAtl

urier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client
Commercial ☐ Pace ☐ Other:____

tody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 10-3-23 JCC

king Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☐ N/A

rmometer:
☑ IR Gun ID: 083 **Type of Ice:** ☐ Wet ☐ Blue ☐ None

ler Temp: 3.3 **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

ler Temp Corrected (°C): 3.3

A 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?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

MENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

T NOTIFICATION/RESOLUTION

rson contacted: Date/Time:

Project Manager SCURF Review: **Date:**

Project Manager SRF Review: **Date:**

altrax ID: 69614

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt
	Effective Date: 11/14/2022

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

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

****Bottom half of box is to list number of bottles**

*****Check all unpreserved Nitrates for chlorine**

Project # **WO#: 92691209**

PM: MP **Due Date: 10/11/23**

CLIENT: GA-AreadAtl

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)	2/3P1N	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		2				1																			2				
3		2				1																			2				
4		2				1																			2				
5		2				1																			2				
6		2				1																			2				
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

B.4 Data Quality Evaluation

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed two data packages from GEL Laboratories (GEL) for the analysis of water samples collected August 9 through August 11, 2023, at the Georgia Power Arkwright Plant AP1 site. Samples were collected according to the Field Sampling Plan – Plant Arkwright (Amec Foster Wheeler, 2016).

Analyses requested included:

- SW-846 6020B – Total 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)
- EPA Method 904/ SW846 9320 Modified – 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

Eleven (11) groundwater samples, two (2) field blanks, two (2) equipment blank, and two (2) 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 temperature ranges of 0.0 to 2.0°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:

SDG 640869

- Chloride was detected in the blanks ARK-AP1-FB-01,ARK-AP1-EB-01 (10/09/2023), and ARK-AP1-EB-02 (10/10/2023) at a concentration above the laboratory RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Associated samples reported with detected concentrations less than 10 times the blank concentration have been qualified as estimated.
- Arsenic was detected in the blank ARK-AP1-FB-01, ARK-AP1-EB-01 (10/09/2023), and ARK-AP1-FB-02 (10/10/2023) at a concentration below the laboratory RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Associated samples reported with detected concentrations less than 10 times the blank concentration have been qualified as estimated.
- Calcium and molybdenum were detected in the blank ARK-AP1-EB-02 (10/10/2023) at a concentration below the laboratory RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Associated samples reported with detected concentrations less than 10 times the blank concentration have been qualified as estimated.

SDG 640870

- Radium 226 was detected in the blank ARK-AP1-FB-01 (10/09/2023) 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.
- Radium 228 was detected in the blank ARK-AP1-FB-02 (10/10/2023) 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 with the following exception.

SDG 640870

- The laboratory duplicate for radium 228 in sample ARK-AP1GWA-1 had a high RPD and has been qualified as estimated.

Field Precision

Two sets of field duplicate samples were collected for this sampling event (see Table 3a and 3b 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.

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Analyses	Sample Date
ARK-AP1GWA-1	640869001	640869	6020B, 7470A, 300, 2540C	10/09/2023
ARK-AP1-FB-01	640869002	640869	6020B, 7470A, 300, 2540C	10/09/2023
ARK-AP1GWA-2	640869003	640869	6020B, 7470A, 300, 2540C	10/09/2023
ARK-AP1-EB-01	640869004	640869	6020B, 7470A, 300, 2540C	10/09/2023
ARK-AP1PZ-1	640869005	640869	6020B, 7470A, 300, 2540C	10/09/2023
ARK-AP1PZ-2	640869006	640869	6020B, 7470A, 300, 2540C	10/09/2023
ARK-AP1-FD-01	640869007	640869	6020B, 7470A, 300, 2540C	10/09/2023
ARK-AP1PZ-4	640869008	640869	6020B, 7470A, 300, 2540C	10/10/2023
ARK-AP1-FB-02	640869009	640869	6020B, 7470A, 300, 2540C	10/10/2023
ARK-AP1PZ-3	640869010	640869	6020B, 7470A, 300, 2540C	10/10/2023
ARK-AP1PZ-8	640869011	640869	6020B, 7470A, 300, 2540C	10/10/2023
ARK-AP1PZ-5	640869012	640869	6020B, 7470A, 300, 2540C	10/10/2023
ARK-AP1-EB-02	640869013	640869	6020B, 7470A, 300, 2540C	10/10/2023
ARK-AP1PZ-7	640869014	640869	6020B, 7470A, 300, 2540C	10/10/2023
ARK-AP1PZ-10	640869015	640869	6020B, 7470A, 300, 2540C	10/10/2023
ARK-AP1PZ-11	640869016	640869	6020B, 7470A, 300, 2540C	10/10/2023

Field Identification	Laboratory Identification	SDG	Analyses	Sample Date
ARK-AP1-FD-02	640869017	640869	6020B, 7470A, 300, 2540C	10/10/2023
ARK-AP1PZ-11	640869018	640869	6020B, 7470A, 300, 2540C	10/11/2023
ARK-AP1GWA-1	640870001	640870	903.1, 904	10/09/2023
ARK-AP1-FB-01	640870002	640870	903.1, 904	10/09/2023
ARK-AP1GWA-2	640870003	640870	903.1, 904	10/09/2023
ARK-AP1-EB-01	640870004	640870	903.1, 904	10/09/2023
ARK-AP1PZ-1	640870005	640870	903.1, 904	10/09/2023
ARK-AP1PZ-2	640870006	640870	903.1, 904	10/09/2023
ARK-AP1-FD-01	640870007	640870	903.1, 904	10/09/2023
ARK-AP1PZ-4	640870008	640870	903.1, 904	10/10/2023
ARK-AP1-FB-02	640870009	640870	903.1, 904	10/10/2023
ARK-AP1PZ-3	640870010	640870	903.1, 904	10/10/2023
ARK-AP1PZ-8	640870011	640870	903.1, 904	10/10/2023
ARK-AP1PZ-5	640870012	640870	903.1, 904	10/10/2023
ARK-AP1-EB-02	640870013	640870	903.1, 904	10/10/2023
ARK-AP1PZ-7	640870014	640870	903.1, 904	10/10/2023
ARK-AP1PZ-10	640870015	640870	903.1, 904	10/10/2023
ARK-AP1PZ-11	640870016	640870	903.1, 904	10/10/2023
ARK-AP1-FD-02	640870017	640870	903.1, 904	10/10/2023
ARK-AP1PZ-11	640870018	640870	903.1, 904	10/11/2023

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification / Code	Reason for Qualification
ARK-AP1GWA-2	Chloride	J+ / BFH	Detected in FB
ARK-AP1PZ-1	Chloride	J+ / BFH	Detected in FB
ARK-AP1PZ-2	Chloride	J+ / BFH	Detected in FB
ARK-AP1-FD-01	Chloride	J+ / BFH	Detected in FB
ARK-AP1GWA-1	Chloride	J+ / BFH	Detected in FB
ARK-AP1PZ-11	Chloride	J+ / BEH	Detected in EB
ARK-AP1-FD-02	Chloride	J+ / BEH	Detected in EB
ARK-AP1GWA-2	Arsenic	J+ / BEH	Detected in EB
ARK-AP1PZ-1	Arsenic	J+ / BEH	Detected in EB
ARK-AP1GWA-1	Arsenic	J+ / BEH	Detected in EB
ARK-AP1PZ-4	Arsenic	J+ / BEH	Detected in EB
ARK-AP1PZ-3	Arsenic	J+ / BEH	Detected in EB
ARK-AP1PZ-8	Arsenic	J+ / BEH	Detected in EB
ARK-AP1PZ-5	Arsenic	J+ / BEH	Detected in EB
ARK-AP1PZ-7	Arsenic	J+ / BEH	Detected in EB
ARK-AP1PZ-10	Arsenic	J+ / BEH	Detected in EB
ARK-AP1PZ-11	Arsenic	J+ / BEH	Detected in EB
ARK-AP1-FD-02	Arsenic	J+ / BEH	Detected in EB
ARK-AP1PZ-3	Molybdenum	J+ / BEH	Detected in EB
ARK-AP1PZ-11	Molybdenum	J+ / BEH	Detected in EB
ARK-AP1-FD-02	Molybdenum	J+ / BEH	Detected in EB
ARK-AP1GWA-1	Radium 226	J+ / BFH	Detected in FB
ARK-AP1GWA-2	Radium 226	J+ / BFH	Detected in FB
ARK-AP1PZ-1	Radium 226	J+ / BFH	Detected in FB
ARK-AP1PZ-2	Radium 226	J+ / BFH	Detected in FB
ARK-AP1-FD-01	Radium 226	J+ / BFH	Detected in FB

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification / Code	Reason for Qualification
ARK-AP1PZ-4	Radium 228	J+ / BFH	Detected in FB
ARK-AP1-FB-02	Radium 228	J+ / BFH	Detected in FB
ARK-AP1PZ-3	Radium 228	J+ / BFH	Detected in FB
ARK-AP1PZ-8	Radium 228	J+ / BFH	Detected in FB
ARK-AP1PZ-5	Radium 228	J+ / BFH	Detected in FB
ARK-AP1-EB-02	Radium 228	J+ / BFH	Detected in FB
ARK-AP1PZ-7	Radium 228	J+ / BFH	Detected in FB
ARK-AP1PZ-10	Radium 228	J+ / BFH	Detected in FB
ARK-AP1PZ-11	Radium 228	J+ / BFH	Detected in FB
ARK-AP1-FD-02	Radium 228	J+ / BFH	Detected in FB
ARK-AP1GWA-1	Radium 228	J / LD1	High LD RPD

BFH – Blank Field High – detected in the field blank (FB) above the RL
BLL – Blank Lab Low – detected in the lab method blank (MB) less than the RL
J+ – The analyte was detected in an associated blank; estimated data with a high bias.

Table 3a – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
ARK-AP1PZ-2/ ARK-AP1-FD-01	Sulfate	801	804	0.4%	A
	Chloride	2.98	3.06	2.6%	A
	Fluoride	0.262	0.283	7.7%	A
	Calcium	205	218	6.1%	A
	Barium	0.0300	0.0313	4.2%	A
	Cadmium	0.000689 J	0.000635 J	<5*RL, <2*RL	A*
	Cobalt	0.169	0.192	12.7%	A
	Lithium	0.0214	0.0238	<5*RL, <2*RL	A*
	Boron	0.470	0.492	4.6%	A
	TDS	1170	1210	3.4%	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.

Table 3b – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
ARK-AP1PZ-11/ ARK-AP1-FD-02	Sulfate	54.3	80.1	<5*RL, <2*RL	A*
	Chloride	1.20	1.21	0.8%	A
	Fluoride	0.202	0.297	<5*RL, <2*RL	A*
	Arsenic	0.00303 J	0.00319 J	<5*RL, <2*RL	A*
	Boron	0.143	0.146	2.1%	A
	Calcium	27.6	28.0	1.4%	A
	Barium	0.0234	0.0242	3.4%	A
	Molybdenum	0.000342 J	0.000326 J	<5*RL, <2*RL	A*
	TDS	198	197	0.5%	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.