2022 SEMI-ANNUAL GROUNDWATER MONITORING REPORT

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

February 28, 2023

Prepared for:

Georgia Power

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CERTIFICATION STATEMENT

This *2022 Semi-Annual Groundwater Monitoring Report, Plant Arkwright, Ash Pond 1 (AP-1) Landfill* has been prepared in compliance with the Interim Groundwater Monitoring Plan submitted to the Georgia Environmental Protection Division (GA EPD) on September 24, 2021. Plant Arkwright AP-1 Landfill was closed according to Solid Waste Management Tracking Number 011-030D(LI) since July 30, 2010. This report was prepared under the supervision of a licensed professional engineer and a licensed professional geologist with Stantec Consulting Services Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management, and 40 CFR Part 258.50(g).

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2/28/2023
Date

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2/28/23
Date

Table of Contents

LIST OF TABLES

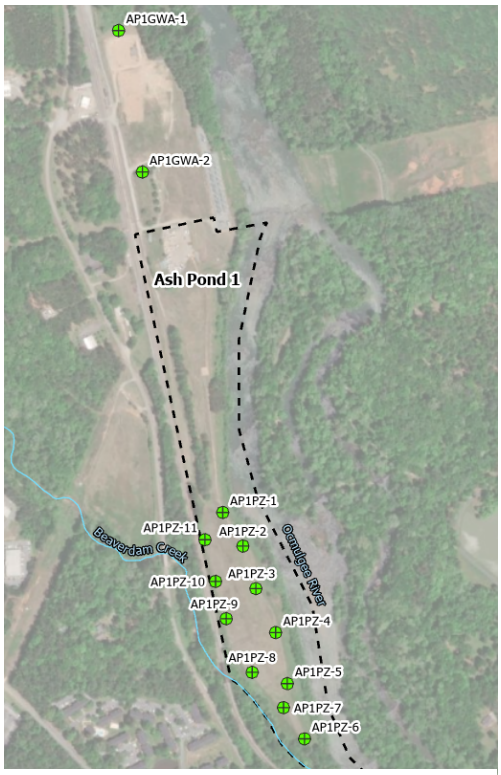
LIST OF FIGURES

LIST OF APPENDICES

Executive Summary

This summary of the *2022 Semi-Annual Groundwater Monitoring Report* provides the status of the groundwater monitoring program from July 2022 through December 2022 at Georgia Power Company (Georgia Power) former Plant Arkwright Ash Pond 1 (AP-1) Landfill Site (the Site).

Plant Arkwright is located in Bibb County, Georgia, approximately 6 miles northwest of the city of Macon. The plant address is 5241 Arkwright Road, Macon, Georgia 31210. When in operation, Plant Arkwright consisted of four 40-megawatt units. The Plant Arkwright coal-fired power plant was retired in 2002, decommissioned in 2003, and closed in 2010. The AP-1 Landfill received a closure certificate on July 30, 2010, under Solid Waste Permit Number 011-030D(LI). The Site is currently in post-closure care.



Plant Arkwright AP-1 Landfill

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 391-3-4-.10. The Groundwater Monitoring Plan, Revision 1, is a minor modification to Solid Waste Permit Number 011-030D(LI) and an interim plan, as requested by GA EPD on March 23, 2021, to be used until the new CCR unit solid waste handling permit is issued and the Site establishes a permanent groundwater monitoring network. Monitoring and reporting utilizing the existing interim groundwater monitoring network will be conducted on a semi-annual basis in accordance with this plan until CCR removal activities require the interim monitoring wells to be abandoned. The current interim groundwater monitoring well network at the Site consists of two upgradient wells (AP1GWA-1 and AP1GWA-2) and 11 downgradient wells (AP1PZ-1 through AP1PZ-11). Groundwater monitoring at AP-1 has been initiated in order to meet GA EPD requirements.

During the latter half of the 2022 reporting period, Stantec Consulting Services Inc. (Stantec) conducted one groundwater sampling event in August-September 2022. The samples were analyzed by GEL Laboratories LLC for the full suite of Appendix III constituents and the full suite of Appendix IV constituents.

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

Acronyms / Abbreviations

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

1.0 Introduction

This *2022 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 Groundwater Monitoring Plan, Revision 1 (Jacobs, 2021), submitted to Georgia Environmental Protection Division (GA EPD) on September 24, 2021. This interim plan is a minor modification to Solid Waste Permit Number 011-030D(LI), as requested by GA EPD on March 23, 2021. Groundwater monitoring at the Site will be conducted in accordance with this Groundwater Monitoring Plan until the new coal combustion residuals (CCR) unit solid waste handling permit is issued and the Site establishes a permanent groundwater monitoring network. This semi-annual report documents the activities completed between July 2022 and December 2022. One groundwater monitoring event was conducted during this monitoring period in August-September 2022.

1.1 Site Description and Background

The Site is located in Bibb County, Georgia, approximately 6 miles northwest of the city of Macon (Figure 1). The physical address of the Site is 5241 Arkwright Road, Macon, Georgia 31210. 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 powered Plant Arkwright 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 footprint covers approximately 31.22 acres.

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). The Site is currently in post-closure care. Because the unit ceased receiving waste prior to October 19, 2015, 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 in accordance with 40 CFR §257.50 (d) and (e). As such, a CCR unit solid waste handling permit application package for the Site was submitted to GA EPD in November 2018 and is currently under review.

1.2 Regional Geology & Hydrogeologic Setting

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

Topography of the District ranges from approximately 700 feet above mean sea level in the areas of southern Atlanta and Athens to approximately 500 feet above mean sea level at its southern limit along the Georgia Fall Line. Streams follow the surface topography of the underlying crystalline rocks eastward toward the Ocmulgee River. Typically, relief throughout the District ranges between 50 and 100 feet. However, the greatest relief occurs along the Ocmulgee River where the elevation changes from 150-200 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 7 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 Site is generally underlain by alluvial sands of varying grain sizes, with minor lenses of clay. More consolidated sediments include fine to medium sandy silt to silty sand, which is underlain by a silty sand saprolite. Borehole drilling performed at the Site indicated overburden thickness ranging from 22 feet to 62 feet, overlying a thin layer (5 to 10 feet) of partially weathered rock. 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 partially weathered rock (PWR) mantling the bedrock surface, whereas the bedrock unit is a zone comprised of weathered and fractured bedrock.

The water table unit is hydraulically connected to the underlying bedrock through fractures in the partially weathered and fractured bedrock (Southern Company Services, 2005) and is considered to be under unconfined conditions. Based on gauging of the currently installed interim monitoring wells, the potentiometric surface ranges from approximately 323 to 290 feet referenced to North American Vertical Datum of 1988 (19 to 57 feet below ground surface), respectively, in the northern and southern portions of the Site. The interim wells were installed to evaluate the uppermost occurrence of groundwater at the Site and form the monitoring network 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 indicate consistent water level elevations and the potentiometric surface map depicts groundwater flowing to the south, southeast, and northeast, in the direction of the Ocmulgee River and Beaverdam Creek (Figure 3).

1.3 Groundwater Monitoring Network

Georgia Power installed a temporary groundwater monitoring network within the uppermost aquifer at the Site. Wells were located to serve as upgradient, or downgradient monitoring points based on the groundwater flow direction (Table 1). The monitoring well locations are depicted in Figure 2. Due to Site access constraints and safety concerns, downgradient wells at AP-1 Landfill are installed through CCR and will be removed during the closure by removal of the unit. A permanent groundwater monitoring network will be installed following closure as noted in the 2018 CCR permit application.

2.0 Groundwater Monitoring Activities

The following describes monitoring-related activities performed between July 2022 and December 2022. Samples were collected from each of the wells in the monitoring network depicted in Figure 2. Table 2 presents a summary of the CCR groundwater sampling event completed for AP-1 Landfill during this monitoring period.

2.1 Monitoring Well Installation and Maintenance

The well network is inspected during each groundwater monitoring event to determine if any repairs or corrective actions are necessary to meet the requirements of the Georgia Water Well Standards Act (O.C.G.A § 12-5-134(5)(d)(vii)). Any issues identified with the wells (e.g., faded well identification signage, rusted locks and/or latches) are addressed before the following groundwater sampling event. The well inspection forms for the reporting period are provided in Appendix A. This documentation was performed under the direction of a professional geologist or engineer registered in the State of Georgia.

2.2 Additional Surface Water Sampling

Due to the close proximity of Beaverdam Creek and the Ocmulgee River in the downgradient direction, Georgia Power proactively collected surface water samples. Surface water samples were collected from four locations along the Ocmulgee River and two locations along Beaverdam Creek in August 2022, as depicted in Figure 2. Surface water samples were collected in accordance with Region 4 U.S. Environmental Protection Agency (US EPA) 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 Appendix III and Appendix IV constituents, with the exception of BC-0.3 for which radium was not collected or analyzed. Previously sampled OR+1.0 was not sampled due to unsafe access conditions in the Ocmulgee River.

Surface water samples were also submitted for analysis of total alkalinity, bicarbonate alkalinity, magnesium, potassium, and sodium. Sample bottles were placed in ice-packed coolers and submitted to Pace Analytical Services, LLC (Pace) of Peachtree Corners, Georgia following chain-of-custody protocol. The laboratory reports associated with the 2022 sampling event are provided in Appendix B. Georgia Power will continue collecting the surface water samples semi-annually during interim groundwater monitoring.

3.0 Sample Methodology & Analyses

The groundwater monitoring event completed at AP-1 Landfill in August-September 2022 consisted of collecting groundwater samples that were analyzed for the constituents listed in both Appendix III and Appendix IV. Groundwater analytical data and chain-of-custody records are presented in Appendix B. The following sections describe the 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 used 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 to develop a potentiometric surface contour map (Figure 3). Review of Figure 3 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. The groundwater flow directions observed during the August 30, 2022, gauging event is generally consistent with historical events at AP-1.

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

The general groundwater flow velocity was 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 calculations are presented in Table 4. Results for groundwater flow velocities ranged from 0.003 feet/day in the southern portion of the Site to 0.272 feet/day in the northeastern portion of the Site (1.1 and 99.1 feet/year, respectively) on August 30, 2022.

3.3 Groundwater Sampling

Groundwater samples were collected in early September for the August-September 2022 event. Sampling procedures were conducted in accordance with US EPA Region 4 Laboratory Services and Applied Science Division operating procedures. Monitoring wells were purged and sampled using low-flow sampling procedures. Dedicated and/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 3-5-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.
- 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) of Charleston, South Carolina, following chain-of-custody protocol. Stabilization logs and Equipment Calibration forms are included in Appendix B.

3.4 Laboratory Analyses

Laboratory analyses of groundwater samples was performed by GEL, while analysis of surface water samples was performed by Pace. Both laboratories are accredited by the National Environmental Laboratory Accreditation Program (NELAP) and maintain NELAP certifications for the constituents analyzed for this project. In addition, both GEL and Pace are certified to perform analysis in the State of Georgia. Tables 5 summarizes the analytical results from the August-September 2022 groundwater sampling and Tables 6 summarizes the analytical results from the August 2022 surface water sampling event, as reported by the laboratories. Analytical methods used for groundwater and surface water sample analysis are listed on the analytical laboratory reports included 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 is used) were collected at a rate of one QA/QC sample per 10 groundwater samples to assess the adequacy of the decontamination activities. Blind field duplicate samples were collected by filling additional containers at the same location during the sampling event at a rate of one QA/QC sample per 10 groundwater samples. Field blanks were also collected to evaluate ambient conditions at the sampling locations at a rate of one QA/QC sample per 10 groundwater samples.

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

The analytical results provided in Table 5 provides concentrations from the August 2022 groundwater sampling event 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 Appendix III and IV constituents for the August-September 2022 groundwater monitoring events and August 2022 surface water sampling events, 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 *2022 Semi-Annual Groundwater Monitoring Report* was prepared to fulfill the requirements of the Interim Groundwater Monitoring Plan (Jacobs, 2021). The next semi-annual sampling event is scheduled for February 2023. The February 2023 semi-annual monitoring event will include sampling and analysis of the full suites of Appendix III and IV constituents.

7.0 References

Clark, W.Z., and Zisa, A.C., 1976, Physiographic Map of Georgia: 1:2,000,000, Georgia Department of Natural Resources, Geologic and Water Resources Division, Atlanta, Georgia.

Driscoll, F.G. 1986. Ground Water and Wells, 2nd Edition, Johnson Filtration Systems, Inc., St. Paul. Minnesota, 1089p.

Freeze, R.A. and Cherry, JA. 1979, Groundwater, Prentice-Hall, Englewood Cliffs, New Jersey, 604 pp.

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Jacobs, 2021. Groundwater Monitoring Plan, Revision 1 – Georgia Power Company Former Plant Arkwright – AP1 Landfill, Permit No. 011-030D(LI), Bibb County, Georgia., September 2021.

LeGrand, H. E. 1962. Geology and Ground-water Resources of the Macon Area, Georgia. The Geological Survey Bulletin No. 72.

Southern Company Services, Inc., 2005. Plant Arkwright Ash Ponds 2 and 3 and Ash Monofill Site Acceptability Report, Revision 1.

US EPA, 1989. US EPA 530/SW-89-031 Interim Final RCRA Investigation (RFI) Guidance, Volume I and II.

US EPA, 2002. Data Validation Standard Operating Procedures and Quality Assurance Manual., November

TABLES

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

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

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

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

Well ID	Hydraulic Location	Summary of Sampling Event
		September 7-8, 2022
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

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)[2]
Measurement Date		8/30/2022	
AP1GWA-1	345.44	24.95	320.49
AP1GWA-2	341.42	18.65	322.77
AP1PZ-1	338.97	44.97	294.00
AP1PZ-2	339.58	42.16	297.42
AP1PZ-3	338.57	43.43	295.14
AP1PZ-4	338.36	47.17	291.19
AP1PZ-5	339.81	49.05	290.76
AP1PZ-6	347.56	57.30	290.26
AP1PZ-7	340.91	50.51	290.40
AP1PZ-8	338.31	46.94	291.37
AP1PZ-9	337.62	41.40	296.22
AP1PZ-10	338.38	34.95	303.43
AP1PZ-11	338.98	34.95	304.03

Notes:

1. Groundwater elevations are feet referenced to North American Vertical Datum of 1988 (NAVD88)
2. Groundwater elevations were measured as depth to water from the top of casing (TOC).

TABLE 4
GROUNDWATER FLOW VELOCITY CALCULATIONS
Georgia Power Company - Plant Arkwright
AP-1 Landfill
Macon, Georgia

Potentiometric Map Date	Location	Groundwater Elevations in Well Pairs (h_1, h_2) (feet)		Change in Elevation (Δh) (feet)	Distance Measured (L) (feet)	Hydraulic Gradient (i) (feet/foot)	Average Hydraulic Conductivity (K) (feet/day)	Estimated Effective Porosity (n_e)	Calculated Groundwater Flow Velocity (V) (feet/day)	Calculated Groundwater Flow Velocity (V) (feet/year)
August 30, 2022	AP1PZ-8 to AP1PZ-6	291.37	290.26	1.11	575	0.002	0.31	0.2	0.003	1.1
	AP1PZ-11 to AP1PZ-1	304.03	294.00	10.03	222	0.045	1.20	0.2	0.272	99.1

Notes:

1. The geometric mean of the in-situ hydraulic conductivity (K) slug test values for AP1PZ-8 and AP1PZ-6 used for AP1PZ-8 to AP1PZ-6 calculation; the slug test K value for AP1PZ-11 used for the AP1PZ-11 to AP1PZ-1 calculatior
2. Effective porosity of 20% was selected for the silty sands/sandy silts overburden based on a review of several sources, including Driscoll, 1986; US EPA, 1989; Freeze and Cherry, 1979.

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

	Substance	Well ID												
		AP1GWA-1	AP1GWA-2	AP1PZ-1	AP1PZ-2	AP1PZ-3	AP1PZ-4	AP1PZ-5	AP1PZ-6	AP1PZ-7	AP1PZ-8	AP1PZ-9	AP1PZ-10	AP1PZ-11
		9/7/2022	9/7/2022	9/7/2022	9/8/2022	9/7/2022	9/7/2022	9/8/2022	9/7/2022	9/7/2022	9/07/2022	9/07/2022	9/7/2022	9/8/2022
APPENDIX III	Boron	0.109	0.0210	0.336	0.413	1.51	3.72	7.44	7.29	2.46	2.81	0.695	3.22	0.163
	Calcium	18.8	4.98	31.8	143	381	370	552	461	338	300	69.6	835	27.3
	Chloride	1.86 J	2.22 J	2.58 J	3.35	4.92	5.10	7.55	8.49	8.77	2.88 J	6.84	9.91	1.45
	Fluoride	0.354	0.109	0.158	0.177	0.0468 J	0.249	0.263	<0.0330	0.255	0.166	0.671	0.524	0.173
	Sulfate	59.4	1.41 J	112	616	1390	1420	1920	2520	1390	731	351	232	52.3
	TDS	156	66.0	248	961	2010	2210	3070	3570	2190	1390	577	500	198
	pH	5.42	6.00	6.41	6.11	5.47	6.37	6.12	5.56	6.21	6.52	4.84	6.55	6.77
APPENDIX IV	Antimony	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	Arsenic	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.00359 J	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	Barium	0.0523	0.0330	0.0452	0.0207	0.0237	0.0426	0.0405	0.0235	0.0511	0.0506	0.0254	0.0334	0.0221
	Beryllium	0.00131	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000859	<0.000200	<0.000200	0.000527	<0.000200	<0.000200
	Cadmium	0.000317 J	<0.000300	<0.000300	<0.000300	0.00144	<0.000300	<0.000300	<0.000300	<0.000300	<0.000300	0.000975 J	<0.000300	<0.000300
	Chromium	0.00417 J	0.00501 J	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300	<0.00300
	Cobalt	0.00406	0.000341 J	0.000850 J	0.0616	0.0626	0.000335 J	0.0332	0.417	0.000739 J	0.000936 J	0.101	0.00189	<0.000300
	Lead	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
	Lithium	0.00757 J	<0.00300	0.00421 J	0.0127	0.0638	0.00652 J	0.273	0.00800 J	<0.00300	<0.00300	0.135	0.0172	<0.00300
	Mercury	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670	<0.0000670
	Molybdenum	<0.000200	<0.000200	0.000572 J	<0.000200	0.000673 J	0.00233	0.0410	0.000369 J	0.00233	0.489	0.000281 J	0.00265	0.00136
	Radium	1.77	1.49 U	1.33 U	1.76 U	2.43	2.32	1.41 U	0.959 U	0.479 U	0.958 U	0.482 U	1.34 U	1.06 U
	Selenium	0.00322 J	<0.00150	0.00163 J	<0.00150	<0.00150	<0.00150	<0.00150	0.00273 J	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
	Thallium	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600

Notes:

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

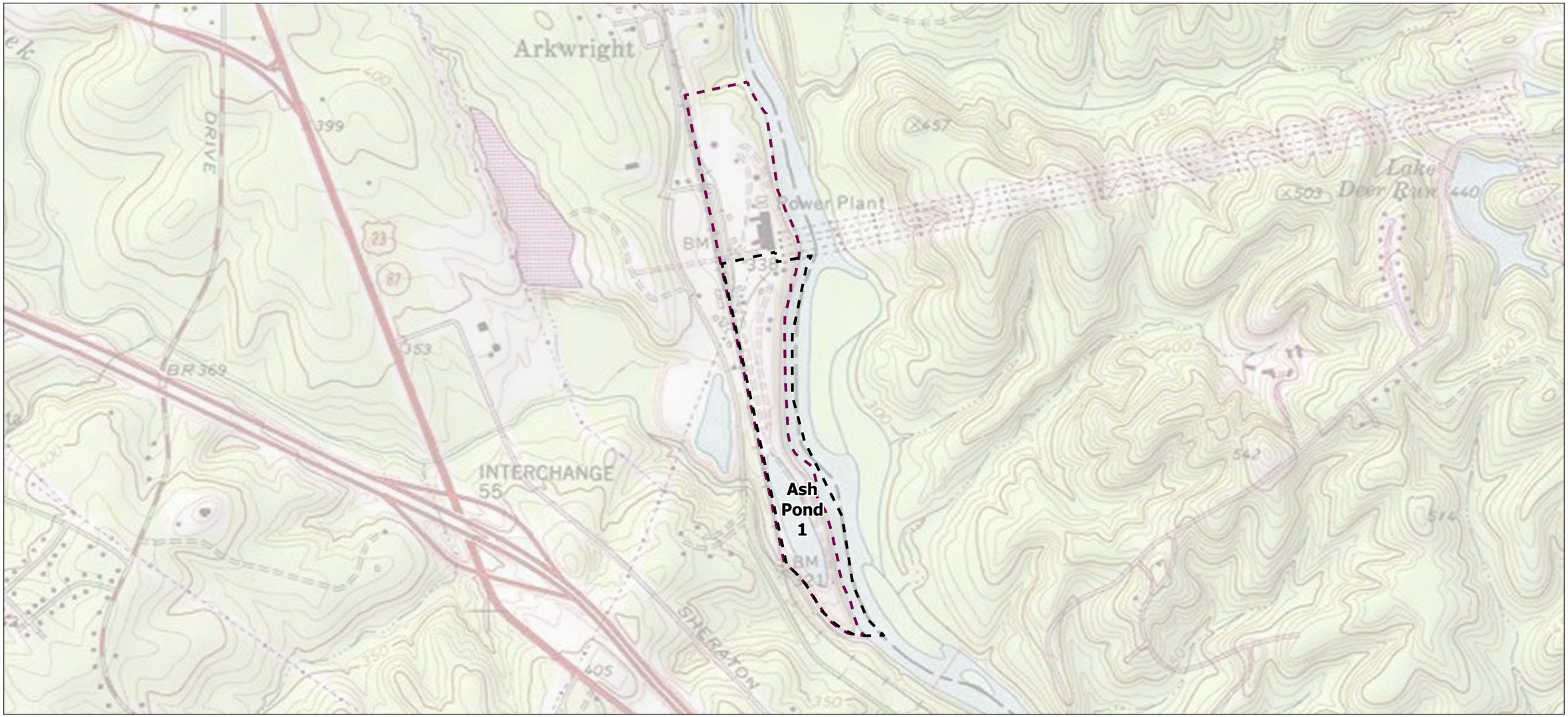
TABLE 6
ANALYTICAL DATA SUMMARY - SURFACE WATER
Georgia Power Company - Plant Arkwright
AP-1 Landfill
Macon, Georgia

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

Notes:

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

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, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

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 7/25/2022
TR by MP on 7/25/2022
IR by MD on 7/25/2022

Client/Project 175569434
Georgia Power
2022 Semiannual Groundwater Monitoring Report
Plant Arkwright Ash Pond 1

Figure No.
1

Title
Site Location Map

Notes

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

Legend

- Piezometer Location
- Surface Water Sampling Location
- Beaverdam Creek
- Ash Pond 1 Landfill Permit Boundary

0 500 1,000 Feet

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

N

Stantec

Georgia Power

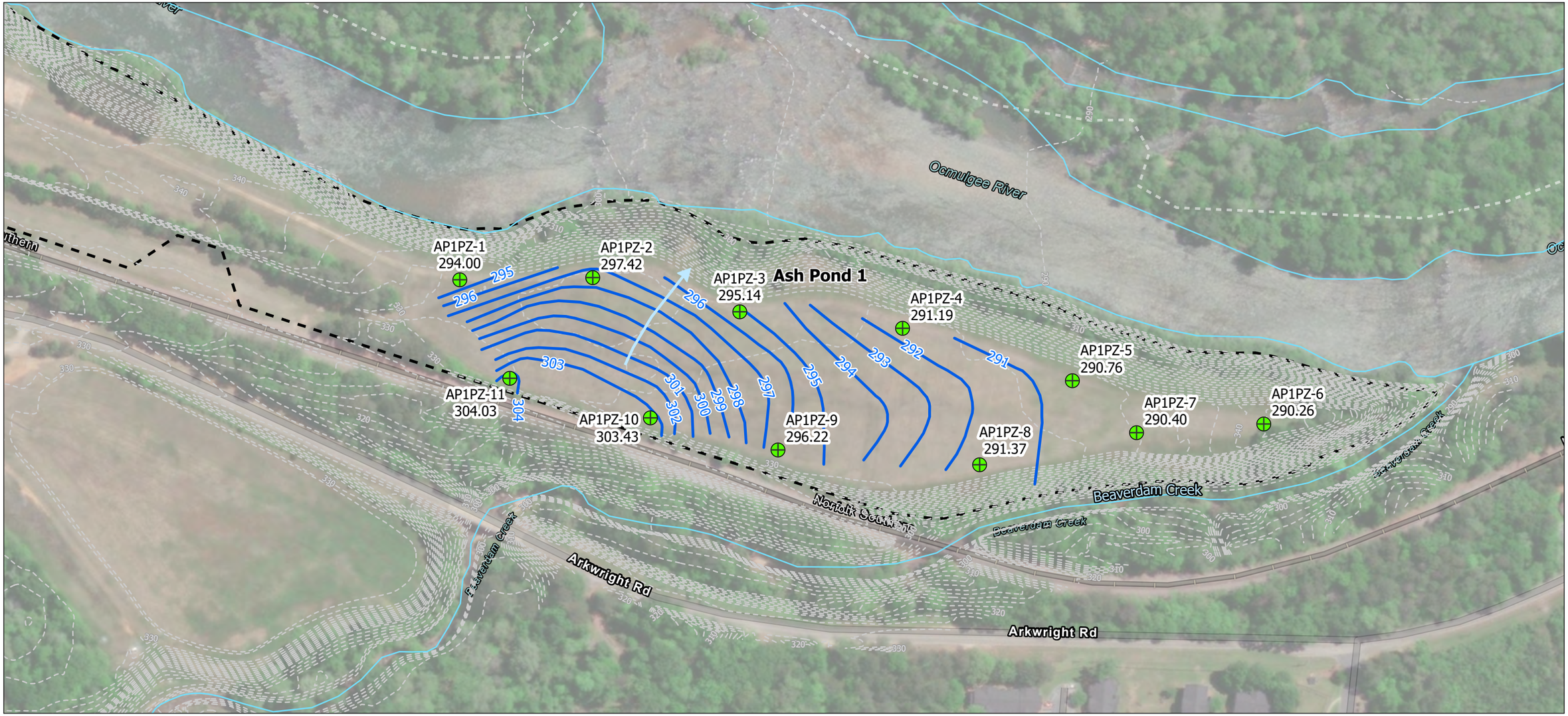
Project Location
Macon, Georgia

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

Client/Project
175569434
Georgia Power
2022 Semiannual Groundwater Monitoring Report
Plant Arkwright Ash Pond 1

Figure No.
2

Title
Piezometer and Surface Water Location 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: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Piezometer Location
- Beaverdam Creek/Ocmulgee River (Approximate)
- Interpreted Groundwater Flow Direction
- Potentiometric Surface Contour Aug 2022 (feet (ft) NAVD88)
- Topographic Contour 2018 (2 ft interval)
- Approximate Limits of Ash Pond 1 Landfill

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

BRIAN STEELE
GEORGIA REGISTERED PROFESSIONAL GEOLOGIST
2/28/23
No. PG002171

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 9/27/2022
TR by MP on 9/27/2022
IR by MD on 9/27/2022

Client/Project 175569434
Georgia Power
2022 Semiannual Groundwater Monitoring Report
Plant Arkwright Ash Pond 1

Figure No.
6

Title
Potentiometric Surface Contour Map AP-1 Landfill August 2022

U:\175569434\gis\mxds\GW_20220101GW_20220101_AP1GW_20220101_AP1.aprx Revised: 2022-09-27 By: mbough

APPENDIX A
WELL INSPECTIONS

APPENDIX B
FIELD SAMPLING DATA AND ANALYTICAL DATA REPORTS

B.1 Field Sampling Data

Low-Flow Test Report:

Test Date / Time: 9/7/2022 9:29:47 AM
Project: Plant Arkwright AP-1
Operator Name: E. Scheiben

Location Name: AP1GWA-1 **Latitude: 32.9299897952187** **Longitude: -83.7009504809976** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 27.5 ft** **Total Depth: 37.5 ft** **Initial Depth to Water: 24.36 ft**	**Pump Type: Peristaltic** **Tubing Type: LDPE** **Tubing Inner Diameter: 0.17 in** **Tubing Length: 37.5 ft** **Pump Intake From TOC: 32.5 ft** **Estimated Total Volume Pumped: 13500 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728648**

Test Notes:
AP1GWA-1 collected at 10:20
EB-01 collected at 09:05

Weather Conditions:
Overcast

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/7/2022 9:29 AM	00:00	5.67 pH	21.22 °C	208.89 µS/cm	3.31 mg/L	25.00 NTU	64.6 mV	24.36 ft	300.00 ml/min
9/7/2022 9:34 AM	05:00	5.46 pH	20.45 °C	216.04 µS/cm	2.81 mg/L	25.10 NTU	133.8 mV	24.36 ft	300.00 ml/min
9/7/2022 9:39 AM	10:00	5.42 pH	20.42 °C	215.69 µS/cm	2.82 mg/L	10.10 NTU	101.8 mV	24.36 ft	300.00 ml/min
9/7/2022 9:44 AM	15:00	5.41 pH	20.42 °C	215.99 µS/cm	2.81 mg/L	8.31 NTU	101.2 mV	24.36 ft	300.00 ml/min
9/7/2022 9:49 AM	20:00	5.41 pH	20.37 °C	216.16 µS/cm	2.81 mg/L	5.66 NTU	105.9 mV	24.36 ft	300.00 ml/min
9/7/2022 9:54 AM	25:00	5.42 pH	20.37 °C	215.83 µS/cm	2.81 mg/L	2.29 NTU	142.1 mV	24.36 ft	300.00 ml/min
9/7/2022 9:59 AM	30:00	5.43 pH	20.40 °C	213.44 µS/cm	2.80 mg/L	2.46 NTU	108.8 mV	24.36 ft	300.00 ml/min
9/7/2022 10:04 AM	35:00	5.42 pH	20.42 °C	213.46 µS/cm	2.80 mg/L	2.34 NTU	107.6 mV	24.36 ft	300.00 ml/min
9/7/2022 10:09 AM	40:00	5.42 pH	20.42 °C	213.09 µS/cm	2.80 mg/L	1.44 NTU	107.6 mV	24.36 ft	300.00 ml/min
9/7/2022 10:14 AM	45:00	5.42 pH	20.46 °C	212.00 µS/cm	2.79 mg/L	1.91 NTU	108.1 mV	24.36 ft	300.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 9/7/2022 11:11:02 AM
Project: Plant Arkwright AP-1
Operator Name: E. Scheiben

Location Name: AP1GWA-2 **Latitude: 32.930034257851** **Longitude: -83.7009518221021** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 21.1 ft** **Total Depth: 31.1 ft** **Initial Depth to Water: 18.38 ft**	**Pump Type: Peristaltic** **Tubing Type: LDPE** **Tubing Inner Diameter: 0.17 in** **Tubing Length: 31.1 ft** **Pump Intake From TOC: 26.1 ft** **Estimated Total Volume Pumped: 14000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 350 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728648**

Test Notes:

Weather Conditions:
Overcast

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/7/2022 11:11 AM	00:00	6.05 pH	21.92 °C	76.06 µS/cm	4.07 mg/L	16.30 NTU	152.4 mV	18.38 ft	350.00 ml/min
9/7/2022 11:16 AM	05:00	6.02 pH	21.72 °C	74.69 µS/cm	4.05 mg/L	27.50 NTU	116.0 mV	18.38 ft	350.00 ml/min
9/7/2022 11:21 AM	10:00	6.00 pH	21.69 °C	74.98 µS/cm	3.97 mg/L	15.80 NTU	106.9 mV	18.38 ft	350.00 ml/min
9/7/2022 11:26 AM	15:00	6.00 pH	21.71 °C	75.34 µS/cm	3.79 mg/L	9.99 NTU	103.6 mV	18.38 ft	350.00 ml/min
9/7/2022 11:31 AM	20:00	6.00 pH	21.72 °C	75.71 µS/cm	3.65 mg/L	7.39 NTU	126.0 mV	18.38 ft	350.00 ml/min
9/7/2022 11:36 AM	25:00	6.00 pH	21.76 °C	76.35 µS/cm	3.56 mg/L	6.05 NTU	90.9 mV	18.38 ft	350.00 ml/min
9/7/2022 11:41 AM	30:00	6.00 pH	21.84 °C	76.71 µS/cm	3.45 mg/L	3.99 NTU	76.0 mV	18.38 ft	350.00 ml/min
9/7/2022 11:46 AM	35:00	6.00 pH	21.83 °C	77.28 µS/cm	3.39 mg/L	3.29 NTU	64.8 mV	18.38 ft	350.00 ml/min
9/7/2022 11:51 AM	40:00	6.00 pH	21.80 °C	77.71 µS/cm	3.27 mg/L	2.73 NTU	67.9 mV	18.38 ft	350.00 ml/min

Samples

Sample ID:	Description:

AP1GWA-2	Sample collected at 11:55

Low-Flow Test Report:

Test Date / Time: 9/7/2022 12:52:00 PM
Project: Plant Arkwright AP-1
Operator Name: E. Scheiben

Location Name: AP1PZ-1 **Latitude: 32.9273225592229** **Longitude: -83.7005008757114** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 77.62 ft** **Total Depth: 87.62 ft** **Initial Depth to Water: 44.16 ft**	**Pump Type: Peristaltic** **Tubing Type: LDPE** **Tubing Inner Diameter: 0.17 in** **Tubing Length: 87.62 ft** **Pump Intake From TOC: 85.62 ft** **Estimated Total Volume Pumped: 5000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 2.05 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728648**

Test Notes:

Weather Conditions:
Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/7/2022 12:52 PM	00:00	6.36 pH	30.44 °C	325.27 µS/cm	1.67 mg/L	14.50 NTU	-19.3 mV	44.16 ft	100.00 ml/min
9/7/2022 12:57 PM	05:00	6.42 pH	24.32 °C	352.77 µS/cm	0.83 mg/L	13.70 NTU	30.3 mV	45.25 ft	100.00 ml/min
9/7/2022 1:02 PM	10:00	6.43 pH	23.55 °C	354.92 µS/cm	0.68 mg/L	11.70 NTU	60.7 mV	45.58 ft	100.00 ml/min
9/7/2022 1:07 PM	15:00	6.42 pH	23.43 °C	353.71 µS/cm	0.60 mg/L	9.07 NTU	58.5 mV	45.69 ft	100.00 ml/min
9/7/2022 1:12 PM	20:00	6.43 pH	23.31 °C	354.72 µS/cm	0.58 mg/L	6.69 NTU	73.1 mV	45.89 ft	100.00 ml/min
9/7/2022 1:17 PM	25:00	6.43 pH	23.14 °C	353.40 µS/cm	0.51 mg/L	5.64 NTU	76.1 mV	45.92 ft	100.00 ml/min
9/7/2022 1:22 PM	30:00	6.43 pH	22.92 °C	355.56 µS/cm	0.50 mg/L	5.33 NTU	76.6 mV	46.07 ft	100.00 ml/min
9/7/2022 1:27 PM	35:00	6.42 pH	22.77 °C	353.02 µS/cm	0.50 mg/L	4.38 NTU	62.7 mV	46.10 ft	100.00 ml/min
9/7/2022 1:32 PM	40:00	6.41 pH	22.80 °C	354.71 µS/cm	0.47 mg/L	4.46 NTU	74.2 mV	46.15 ft	100.00 ml/min
9/7/2022 1:37 PM	45:00	6.41 pH	22.81 °C	353.09 µS/cm	0.47 mg/L	4.23 NTU	75.7 mV	46.18 ft	100.00 ml/min
9/7/2022 1:42 PM	50:00	6.41 pH	22.95 °C	353.64 µS/cm	0.48 mg/L	4.25 NTU	62.8 mV	46.21 ft	100.00 ml/min

Samples

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

Low-Flow Test Report:

Test Date / Time: 9/8/2022 9:26:48 AM
Project: Plant Arkwright AP-1
Operator Name: E. Scheiben

Location Name: AP1PZ-2 **Latitude: 32.9204371278322** **Longitude: -83.6983309686184** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 52.67 ft** **Total Depth: 62.67 ft** **Initial Depth to Water: 42.4 ft**	**Pump Type: Dedicated Bladder QED** **Tubing Type: LDPE** **Tubing Inner Diameter: 0.17 in** **Tubing Length: 62 ft** **Pump Intake From TOC: 57 ft** **Estimated Total Volume Pumped: 5912 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 120 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728648**

Test Notes:

Weather Conditions:
Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/8/2022 9:26 AM	00:00	7.49 pH	23.72 °C	969.08 µS/cm	8.21 mg/L		106.3 mV	42.40 ft	120.00 ml/min
9/8/2022 9:28 AM	01:28	6.82 pH	22.74 °C	1,157.2 µS/cm	1.91 mg/L	12.00 NTU	96.0 mV	42.40 ft	120.00 ml/min
9/8/2022 9:33 AM	06:28	6.27 pH	21.44 °C	1,067.1 µS/cm	0.95 mg/L	10.30 NTU	98.0 mV	42.40 ft	120.00 ml/min
9/8/2022 9:38 AM	11:28	6.20 pH	21.38 °C	1,063.3 µS/cm	0.71 mg/L	11.40 NTU	90.6 mV	42.40 ft	120.00 ml/min
9/8/2022 9:43 AM	16:28	6.18 pH	21.40 °C	1,061.7 µS/cm	0.60 mg/L	9.85 NTU	86.6 mV	42.40 ft	120.00 ml/min
9/8/2022 9:48 AM	21:28	6.17 pH	21.46 °C	1,078.1 µS/cm	0.46 mg/L	7.49 NTU	63.8 mV	42.40 ft	120.00 ml/min
9/8/2022 9:53 AM	26:28	6.16 pH	21.45 °C	1,093.4 µS/cm	0.41 mg/L	5.90 NTU	54.3 mV	42.40 ft	120.00 ml/min
9/8/2022 9:58 AM	31:28	6.14 pH	21.42 °C	1,089.9 µS/cm	0.37 mg/L	6.27 NTU	49.2 mV	42.40 ft	120.00 ml/min
9/8/2022 10:01 AM	34:16	6.14 pH	21.55 °C	1,107.5 µS/cm	0.37 mg/L	5.68 NTU	50.5 mV	42.40 ft	120.00 ml/min
9/8/2022 10:06 AM	39:16	6.12 pH	21.55 °C	1,114.3 µS/cm	0.35 mg/L	4.26 NTU	51.5 mV	42.40 ft	120.00 ml/min
9/8/2022 10:11 AM	44:16	6.11 pH	21.61 °C	1,127.1 µS/cm	0.36 mg/L	3.08 NTU	53.0 mV	42.40 ft	120.00 ml/min
9/8/2022 10:16 AM	49:16	6.11 pH	21.59 °C	1,134.0 µS/cm	0.34 mg/L	2.60 NTU	64.6 mV	42.40 ft	120.00 ml/min

Samples

Sample ID:	Description:
AP1PZ-2	Collected at 1025

Low-Flow Test Report:

Test Date / Time: 9/7/2022 5:35:31 PM
Project: Plant Arkwright AP-1
Operator Name: J. Bankston

Location Name: AP1PZ-3 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 57.38 ft** **Total Depth: 67.38 ft** **Initial Depth to Water: 42.6 ft**	**Pump Type: Dedicated bladder pump** **Tubing Type: Poly** **Pump Intake From TOC: 62.38 ft** **Estimated Total Volume Pumped: 15000 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0.98 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850724**

Test Notes:

Weather Conditions:
Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.3	+/- 10	+/- 10	+/- 5	
9/7/2022 5:35 PM	00:00	5.58 pH	28.12 °C	2,408.8 µS/cm	1.98 mg/L	2.81 NTU	127.2 mV	42.60 ft	300 ml/min
9/7/2022 5:40 PM	05:00	5.59 pH	27.99 °C	2,392.5 µS/cm	1.63 mg/L	3.71 NTU	127.3 mV	42.17 ft	300 ml/min
9/7/2022 5:45 PM	10:00	5.54 pH	27.28 °C	2,375.5 µS/cm	1.42 mg/L	4.97 NTU	123.4 mV	43.60 ft	300 ml/min
9/7/2022 5:50 PM	15:00	5.52 pH	26.46 °C	2,397.1 µS/cm	1.13 mg/L	4.76 NTU	124.7 mV	43.52 ft	300 ml/min
9/7/2022 5:55 PM	20:01	5.49 pH	27.31 °C	2,413.5 µS/cm	0.59 mg/L	4.11 NTU	125.9 mV	43.50 ft	300 ml/min
9/7/2022 6:00 PM	25:01	5.49 pH	26.35 °C	2,390.8 µS/cm	0.50 mg/L	4.18 NTU	144.5 mV	43.55 ft	300 ml/min
9/7/2022 6:05 PM	30:01	5.48 pH	26.44 °C	2,392.7 µS/cm	0.41 mg/L	2.90 NTU	119.2 mV	43.58 ft	300 ml/min
9/7/2022 6:10 PM	35:01	5.48 pH	25.91 °C	2,389.8 µS/cm	0.42 mg/L	2.89 NTU	140.5 mV	43.55 ft	300 ml/min
9/7/2022 6:15 PM	40:01	5.48 pH	25.14 °C	2,380.7 µS/cm	0.38 mg/L	2.48 NTU	117.0 mV	43.53 ft	300 ml/min
9/7/2022 6:20 PM	45:01	5.48 pH	25.19 °C	2,392.4 µS/cm	0.37 mg/L	1.79 NTU	116.3 mV	43.49 ft	300 ml/min
9/7/2022 6:25 PM	50:01	5.47 pH	25.28 °C	2,394.3 µS/cm	0.36 mg/L	1.57 NTU	116.5 mV	43.58 ft	300 ml/min

Samples

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

Low-Flow Test Report:

Test Date / Time: 9/7/2022 2:51:43 PM
Project: Plant Arkwright AP-1
Operator Name: E. Scheiben

Location Name: AP1PZ-4 **Latitude: 32.9210630471097** **Longitude: -83.698776550591** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 57.44 ft** **Total Depth: 67.44 ft** **Initial Depth to Water: 47.06 ft**	**Pump Type: Peristaltic** **Tubing Type: LDPE** **Tubing Inner Diameter: 0.17 in** **Tubing Length: 68 ft** **Pump Intake From TOC: 63 ft** **Estimated Total Volume Pumped: 4500 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 0.65 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728648**

Test Notes:

Weather Conditions:
Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/7/2022 2:51 PM	00:00	6.44 pH	32.44 °C	2,153.4 µS/cm	2.98 mg/L	6.27 NTU	-31.8 mV	47.06 ft	100.00 ml/min
9/7/2022 2:56 PM	05:00	6.46 pH	24.40 °C	2,400.0 µS/cm	1.37 mg/L	6.79 NTU	-33.2 mV	47.06 ft	100.00 ml/min
9/7/2022 3:01 PM	10:00	6.45 pH	23.50 °C	2,418.4 µS/cm	0.98 mg/L	5.96 NTU	-56.6 mV	47.56 ft	100.00 ml/min
9/7/2022 3:06 PM	15:00	6.45 pH	23.46 °C	2,419.6 µS/cm	0.84 mg/L	4.75 NTU	-56.4 mV	47.64 ft	100.00 ml/min
9/7/2022 3:11 PM	20:00	6.43 pH	23.50 °C	2,417.1 µS/cm	0.67 mg/L	4.08 NTU	-58.6 mV	47.69 ft	100.00 ml/min
9/7/2022 3:16 PM	25:00	6.42 pH	23.27 °C	2,410.9 µS/cm	0.58 mg/L	4.11 NTU	-59.8 mV	47.71 ft	100.00 ml/min
9/7/2022 3:21 PM	30:00	6.41 pH	23.46 °C	2,409.4 µS/cm	0.52 mg/L	3.45 NTU	-35.4 mV	47.71 ft	100.00 ml/min
9/7/2022 3:26 PM	35:00	6.40 pH	23.35 °C	2,402.8 µS/cm	0.49 mg/L	2.83 NTU	-59.5 mV	47.71 ft	100.00 ml/min
9/7/2022 3:31 PM	40:00	6.39 pH	23.41 °C	2,393.9 µS/cm	0.44 mg/L	2.36 NTU	-60.0 mV	47.71 ft	100.00 ml/min
9/7/2022 3:36 PM	45:00	6.37 pH	23.32 °C	2,391.1 µS/cm	0.44 mg/L	2.54 NTU	-35.3 mV	47.71 ft	100.00 ml/min

Samples

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

Low-Flow Test Report:

Test Date / Time: 9/8/2022 11:37:45 AM
Project: Plant Arkwright AP-1
Operator Name: E. Scheiben

Location Name: AP1PZ-5 **Latitude: 32.917865859031** **Longitude: -83.6973610147834** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 57.25 ft** **Total Depth: 67.25 ft** **Initial Depth to Water: 48.89 ft**	**Pump Type: Dedicated Bladder QED** **Tubing Type: LDPE** **Tubing Inner Diameter: 0.17 in** **Tubing Length: 67 ft** **Pump Intake From TOC: 62.25 ft** **Estimated Total Volume Pumped: 3631.667 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728648**

Test Notes:

Weather Conditions:
Partly cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/8/2022 11:37 AM	00:00	6.21 pH	29.03 °C	2,760.6 µS/cm	4.37 mg/L		-28.0 mV	48.89 ft	100.00 ml/min
9/8/2022 11:42 AM	05:00	6.17 pH	22.31 °C	3,054.2 µS/cm	1.08 mg/L	4.31 NTU	-27.0 mV	48.89 ft	100.00 ml/min
9/8/2022 11:47 AM	10:00	6.16 pH	21.66 °C	3,079.7 µS/cm	0.93 mg/L	4.88 NTU	-49.5 mV	48.89 ft	100.00 ml/min
9/8/2022 11:52 AM	15:00	6.14 pH	21.51 °C	3,077.4 µS/cm	0.72 mg/L	2.72 NTU	-50.5 mV	48.89 ft	100.00 ml/min
9/8/2022 11:59 AM	21:19	6.13 pH	21.59 °C	3,069.2 µS/cm	0.61 mg/L	2.27 NTU	-27.8 mV	48.89 ft	100.00 ml/min
9/8/2022 12:04 PM	26:19	6.12 pH	21.38 °C	3,079.0 µS/cm	0.51 mg/L	1.78 NTU	-26.7 mV	48.89 ft	100.00 ml/min
9/8/2022 12:09 PM	31:19	6.12 pH	21.38 °C	3,081.4 µS/cm	0.45 mg/L	1.36 NTU	-53.8 mV	48.89 ft	100.00 ml/min
9/8/2022 12:14 PM	36:19	6.12 pH	21.47 °C	3,076.5 µS/cm	0.43 mg/L	1.41 NTU	-54.5 mV	48.89 ft	100.00 ml/min

Samples

Sample ID:	Description:
AP1PZ-5	Collected at 1225

Low-Flow Test Report:

Test Date / Time: 9/7/2022 5:52:37 PM
Project: Plant Arkwright AP-1
Operator Name: J. Meyer

Location Name: AP1PZ-6 **Well Diameter: 2 in** **Screen Length: 10 ft** **Top of Screen: 62.2 ft** **Total Depth: 72.2 ft** **Initial Depth to Water: 56.7 ft**	**Pump Intake From TOC: 67.5 ft** **Estimated Total Volume Pumped: 5878 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 120 ml/min** **Final Draw Down: 0 ft**	**Casing Type: PVC** **Pump Type: QED Bladder Pump** **Tubing Type: LDPE** **Tubing Inner Diameter: 0.17 in** **Tubing Length: 67 ft** **Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test Notes:

Weather Conditions:
Sunny 88 F

Low-Flow Readings:

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

Samples

Sample ID:	Description:

AP1PZ-6	Sample collected at 1845

Low-Flow Test Report:

Test Date / Time: 9/7/2022 1:32:54 PM
Project: Plant Arkwright AP-1
Operator Name: J. Bankston

Location Name: AP1PZ-7 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 58.3 ft** **Total Depth: 68.3 ft** **Initial Depth to Water: 49.45 ft**	**Pump Type: Dedicated bladder pump** **Tubing Type: Poly** **Pump Intake From TOC: 63.3 ft** **Estimated Total Volume Pumped: 1766.667 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 3.16 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850724**

Test Notes:

Weather Conditions:
Partly cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3	+/- 0.3	+/- 10	+/- 10	+/- 5	
9/7/2022 1:32 PM	00:00	6.25 pH	25.37 °C	2.59 mS/cm	1.10 mg/L	6.39 NTU	-27.4 mV	49.77 ft	100.00 ml/min
9/7/2022 1:35 PM	03:00	6.24 pH	25.32 °C	2.60 mS/cm	0.96 mg/L	6.22 NTU	-26.8 mV	51.40 ft	100.00 ml/min
9/7/2022 1:38 PM	06:00	6.21 pH	25.59 °C	2.60 mS/cm	0.72 mg/L	7.20 NTU	-27.3 mV	51.73 ft	100.00 ml/min
9/7/2022 1:39 PM	06:54	6.21 pH	25.59 °C	2.60 mS/cm	0.64 mg/L	7.10 NTU	-27.3 mV	51.73 ft	100.00 ml/min
9/7/2022 1:42 PM	09:27	6.21 pH	25.50 °C	2.60 mS/cm	0.53 mg/L	5.67 NTU	-27.2 mV	52.03 ft	100.00 ml/min
9/7/2022 1:45 PM	12:27	6.21 pH	25.77 °C	2.59 mS/cm	0.43 mg/L	3.94 NTU	-26.3 mV	52.22 ft	100.00 ml/min
9/7/2022 1:47 PM	14:40	6.21 pH	25.87 °C	2.58 mS/cm	0.41 mg/L	4.14 NTU	-24.8 mV	52.49 ft	100.00 ml/min
9/7/2022 1:50 PM	17:40	6.21 pH	25.57 °C	2.55 mS/cm	0.38 mg/L	4.46 NTU	-20.9 mV	52.61 ft	100.00 ml/min

Samples

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

Low-Flow Test Report:

Test Date / Time: 9/7/2022 3:18:18 PM
Project: Plant Arkwright AP-1
Operator Name: J. Bankston

Location Name: AP1PZ-8 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 56.09 ft** **Total Depth: 66.09 ft** **Initial Depth to Water: 46.3 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: Poly** **Pump Intake From TOC: 61.09 ft** **Estimated Total Volume Pumped: 6756.667 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 2.82 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850724**

Test Notes:

Weather Conditions:
Partly cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10	+/- 10	+/- 5	
9/7/2022 3:18 PM	00:00	6.56 pH	25.32 °C	1,819.3 µS/cm	1.50 mg/L	10.10 NTU	-38.4 mV	46.30 ft	100.00 ml/min
9/7/2022 3:18 PM	00:21	6.55 pH	25.40 °C	1,827.9 µS/cm	1.46 mg/L	10.00 NTU	-41.7 mV	46.79 ft	100.00 ml/min
9/7/2022 3:23 PM	05:21	6.53 pH	26.64 °C	1,802.5 µS/cm	2.19 mg/L	6.40 NTU	-34.9 mV	47.90 ft	100.00 ml/min
9/7/2022 3:28 PM	10:21	6.53 pH	26.37 °C	1,808.0 µS/cm	3.03 mg/L	5.13 NTU	-34.2 mV	48.50 ft	100.00 ml/min
9/7/2022 3:33 PM	15:21	6.52 pH	25.53 °C	1,799.5 µS/cm	2.06 mg/L	2.98 NTU	-37.0 mV	48.75 ft	100.00 ml/min
9/7/2022 3:38 PM	20:21	6.53 pH	25.07 °C	1,804.3 µS/cm	0.92 mg/L	1.81 NTU	-33.0 mV	48.77 ft	100.00 ml/min
9/7/2022 3:43 PM	25:21	6.53 pH	25.01 °C	1,814.6 µS/cm	1.32 mg/L	1.18 NTU	-37.1 mV	48.92 ft	100.00 ml/min
9/7/2022 3:48 PM	30:21	6.52 pH	25.08 °C	1,815.6 µS/cm	0.79 mg/L	0.90 NTU	-32.9 mV	48.98 ft	100.00 ml/min
9/7/2022 3:53 PM	35:21	6.53 pH	24.24 °C	1,815.6 µS/cm	0.92 mg/L	0.99 NTU	-37.2 mV	48.99 ft	100.00 ml/min
9/7/2022 3:58 PM	40:21	6.52 pH	24.46 °C	1,843.4 µS/cm	0.84 mg/L	0.79 NTU	-33.6 mV	49.02 ft	100.00 ml/min
9/7/2022 4:03 PM	45:21	6.52 pH	26.00 °C	1,825.9 µS/cm	0.46 mg/L	1.32 NTU	-34.7 mV	49.10 ft	100.00 ml/min
9/7/2022 4:08 PM	50:21	6.52 pH	26.14 °C	1,814.1 µS/cm	0.38 mg/L	0.58 NTU	-34.2 mV	49.11 ft	100.00 ml/min
9/7/2022 4:15 PM	56:59	6.52 pH	25.69 °C	1,847.9 µS/cm	0.30 mg/L	0.60 NTU	-34.5 mV	49.18 ft	100.00 ml/min

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

Samples

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

Low-Flow Test Report:

Test Date / Time: 9/7/2022 3:43:27 PM
Project: Plant Arkwright AP-1
Operator Name: J. Meyer

Location Name: AP1PZ-9 **Well Diameter: 2 in** **Screen Length: 10 ft** **Top of Screen: 46.3 ft** **Total Depth: 56.3 ft** **Initial Depth to Water: 42.1 ft**	**Pump Intake From TOC: 52.3 ft** **Estimated Total Volume Pumped: 2726.667 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 2.9 ft**	**Casing Type: PVC** **Pump Type: QED Bladder Pump** **Tubing Type: LDPE** **Tubing Inner Diameter: 0.17 in** **Tubing Length: 56 ft** **Instrument Used: Aqua TROLL 400** **Serial Number: 728623**

Test Notes:

Weather Conditions:
Sunny 89 F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 0.5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
9/7/2022 3:43 PM	00:00	5.37 pH	24.33 °C	710.20 µS/cm	1.86 mg/L	11.10 NTU	141.2 mV	42.25 ft	100.00 ml/min
9/7/2022 3:48 PM	05:00	5.22 pH	23.25 °C	711.36 µS/cm	1.24 mg/L	9.12 NTU	156.0 mV	42.80 ft	100.00 ml/min
9/7/2022 3:53 PM	10:00	5.00 pH	22.80 °C	704.56 µS/cm	1.49 mg/L	5.97 NTU	178.2 mV	43.28 ft	100.00 ml/min
9/7/2022 3:58 PM	15:00	4.89 pH	22.50 °C	704.01 µS/cm	1.93 mg/L	3.01 NTU	190.1 mV	43.89 ft	100.00 ml/min
9/7/2022 3:58 PM	15:16	4.88 pH	22.49 °C	704.47 µS/cm	1.94 mg/L	3.01 NTU	196.2 mV	43.89 ft	100.00 ml/min
9/7/2022 4:01 PM	18:16	4.84 pH	22.72 °C	705.47 µS/cm	2.10 mg/L	4.31 NTU	194.3 mV	44.25 ft	100.00 ml/min
9/7/2022 4:04 PM	21:16	4.82 pH	22.90 °C	703.93 µS/cm	2.18 mg/L	4.54 NTU	197.5 mV	44.50 ft	100.00 ml/min
9/7/2022 4:07 PM	24:16	4.82 pH	22.98 °C	702.83 µS/cm	2.24 mg/L	1.71 NTU	197.3 mV	44.81 ft	100.00 ml/min
9/7/2022 4:10 PM	27:16	4.84 pH	23.06 °C	702.65 µS/cm	2.28 mg/L	2.08 NTU	196.1 mV	45.00 ft	100.00 ml/min

Samples

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

Low-Flow Test Report:

Test Date / Time: 9/7/2022 1:40:35 PM
Project: Plant Arkwright AP-1
Operator Name: J. Meyer

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

Test Notes:

Weather Conditions:
Sunny 87 F

Low-Flow Readings:

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

Samples

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

Low-Flow Test Report:

Test Date / Time: 9/8/2022 9:51:29 AM
Project: Plant Arkwright AP-1
Operator Name: J. Meyer

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

Test Notes:

Weather Conditions:
Sunny 74 F

Low-Flow Readings:

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

Samples

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

B.2 Calibration Data

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Date: 8/30/2022
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Page 1 **of** 1
Goal/Task: Groundwater Sampling

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

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

Calibration Standards Information

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

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

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 8/30/2022

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

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

Calibration Standards Information

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

Instruments	**Manufacturer**	**Model**	**Serial Number**	**Calibrated Within Acceptance Criteria:**
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	21030D000600	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024
Explanations:	NA (JM 9/22/22)			

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 8/30/2022

Page 1 **of** 1

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

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

Calibration Standards Information

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

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

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 8/31/2022

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

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

Calibration Standards Information

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

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

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

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

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Date: 8/31/2022
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Page 1 **of** 1
Goal/Task: Groundwater Sampling

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

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

Calibration Standards Information

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

	Instruments			
	Manufacturer	**Model**	**Serial Number**	**Calibrated Within Acceptance Criteria:**
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	21030D000600	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024
Explanations:	NA (JM 9/22/22)			

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

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

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Date: 8/31/2022
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Page 1 **of** 1
Goal/Task: Groundwater Sampling

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

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

Calibration Standards Information

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

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

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 9/1/2022

Page 1 **of** 1

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

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

Calibration Standards Information

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

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

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 9/1/2022

Page 1 **of** 1

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

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

Calibration Standards Information

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

	Instruments			
	Manufacturer	**Model**	**Serial Number**	**Calibrated Within Acceptance Criteria:**
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	21030D000600	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024
Explanations:	NA (JM 9/22/22)			

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 9/1/2022

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

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

Calibration Standards Information

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

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

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

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

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright
Date: 9/2/2022
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434
Page 1 **of** 1
Goal/Task: Groundwater Sampling

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

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

Calibration Standards Information

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

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

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 9/2/2022

Page 1 **of** 1

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

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

Calibration Standards Information

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

	Instruments			
	Manufacturer	**Model**	**Serial Number**	**Calibrated Within Acceptance Criteria:**
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	21030D000600	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024
Explanations:	NA (JM 9/22/22)			

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 9/2/2022

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

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

Calibration Standards Information

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

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

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 9/6/2022

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

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

Calibration Standards Information

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

	Manufacturer	**Instruments Model**	**Serial Number**	**Calibrated Within Acceptance Criteria:**
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	19010C073360	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024
Explanations:	NA (JM 9/22/2022)			

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 9/7/2022

Page 1 **of** 1

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

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

Calibration Standards Information

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

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

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 9/7/2022

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

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

Calibration Standards Information

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

Instruments	**Manufacturer**	**Model**	**Serial Number**	**Calibrated Within Acceptance Criteria:**
Water Quality Meter	InSitu	AquaTroll 400	850033	yes
Turbidity Meter	Hach	2100Q	19010C073360	yes
NIST Thermometer	Thomas Instruments	NIST Thermometer	221620127	Expiration Date: 6/24/2024
Explanations:	NA (JM 9/22/22)			

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

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

EQUIPMENT CALIBRATION FORM

Project Name: Arkwright Groundwater Sampling
Plant Name: Plant Arkwright **Date:** 9/7/2022
Plant Address: 5001 Arkwright Road, Macon, GA 31210
Project Number: 175569434 **Page** 1 **of** 1
Goal/Task: Groundwater Sampling

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

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

Calibration Standards Information

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

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

Prepared By: Jackson Bankston *Date:* 9/7/2022 *Signature:*

Review By: Edgar Smith *Date:* 9/15/2022 *Signature:*

EQUIPMENT CALIBRATION FORM

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

Date: 9/8/2022

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

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

Calibration Standards Information

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

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

Explanations: NA

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

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

EQUIPMENT CALIBRATION FORM

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

Date: 10/20/2022

Page 1 **of** 1

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

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

Calibration Standards Information

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

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

Explanations: Specific Conductivity drifted out of calibration by EOD.

Prepared By: Jackson Bankston *Date:* 10/20/2022 *Signature:* Jackson Bankston

Review By: Brian Steele *Date:* 12/12/2022 *Signature:*

B.3 Groundwater & Surface Water Laboratory Analytical Reports

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

September 22, 2022

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

Re: Arkwright CCR Groundwater Compliance AP1
Work Orders: 592388 and 592528

Dear Joju Abraham:

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

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

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

Sincerely,

Erin Trent

Erin Trent
Project Manager

Purchase Order: GPC82177-0002
Enclosures

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

Certificate of Analysis Report
for

GPCC001 Georgia Power Company

Client SDG: 592528 GEL Work Order: 592528

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a Tracer compound

** Analyte is a surrogate compound

J See case narrative for an explanation

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

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

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

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

Reviewed by Erin B Trent

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

Certificate of Analysis Report
for

GPCC001 Georgia Power Company

Client SDG: 592388 GEL Work Order: 592388

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a Tracer compound

** Analyte is a surrogate compound

J See case narrative for an explanation

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

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

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

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

Reviewed by Erin B Trent

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

Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-11	Project:	GPCC00100
Sample ID:	592528001	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	08-SEP-22 10:15		
Receive Date:	09-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.77			SU			EOS1	09/08/22	1015	2314508	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		1.45	0.0670	0.200	mg/L		1	HXC1	09/16/22	1201	2317683	2
Fluoride		0.173	0.0330	0.100	mg/L		1					
Sulfate		52.3	0.665	2.00	mg/L		5	HXC1	09/17/22	0122	2317683	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/13/22	1312	2315121	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1603	2314769	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0221	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron		0.163	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		27.3	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00136	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		198	2.38	10.0	mg/L			CH6	09/12/22	1120	2315106	6

The following Prep Methods were performed:

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

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-11	Project:	GPCC00100
Sample ID:	592528001	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	DUP-02	Project:	GPCC00100
Sample ID:	592528002	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	08-SEP-22 12:00		
Receive Date:	09-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		1.41	0.0670	0.200	mg/L		1	HXC1	09/16/22	1232	2317683	1
Fluoride		0.176	0.0330	0.100	mg/L		1					
Sulfate		52.9	0.665	2.00	mg/L		5	HXC1	09/17/22	0255	2317683	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/13/22	1314	2315121	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1621	2314769	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0216	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron		0.158	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		26.7	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00116	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		199	2.38	10.0	mg/L			CH6	09/12/22	1120	2315106	5

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	DUP-02	Project:	GPCC00100
Sample ID:	592528002	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

Client Sample ID: AP1PZ-2
Sample ID: 592528003
Matrix: WG
Collect Date: 08-SEP-22 10:25
Receive Date: 09-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.11			SU			EOS1	09/08/22	1025	2314508	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.35	0.0670	0.200	mg/L		1	HXC1	09/16/22	1302	2317683	2
Fluoride		0.177	0.0330	0.100	mg/L		1					
Sulfate		616	6.65	20.0	mg/L		50	HXC1	09/17/22	0326	2317683	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/13/22	1316	2315121	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1625	2314769	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0207	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0616	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0127	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.413	0.0520	0.150	mg/L	1.00	10	PRB	09/19/22	1630	2314769	6
Calcium		143	0.800	2.00	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		961	2.38	10.0	mg/L			CH6	09/13/22	1112	2315610	7

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-2	Project:	GPCC00100
Sample ID:	592528003	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-5	Project:	GPCC00100
Sample ID:	592528004	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	08-SEP-22 12:25		
Receive Date:	09-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.12			SU			EOS1	09/08/22	1225	2314508	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		7.55	0.0670	0.200	mg/L		1	HXC1	09/16/22	1333	2317683	2
Fluoride		0.263	0.0330	0.100	mg/L		1					
Sulfate		1920	26.6	80.0	mg/L		200	HXC1	09/17/22	0356	2317683	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/13/22	1318	2315121	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1641	2314769	5
Arsenic	J	0.00359	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0405	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0332	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.273	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.0410	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		7.44	0.520	1.50	mg/L	1.00	100	PRB	09/19/22	1714	2314769	6
Calcium		552	8.00	20.0	mg/L	1.00	100					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		3070	2.38	10.0	mg/L			CH6	09/13/22	1112	2315610	7

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-5	Project:	GPCC00100
Sample ID:	592528004	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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	J	0.186	0.0670	0.200	mg/L		1	JLD1	09/09/22	0300	2314142	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1104	2314311	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	PRB	09/19/22	1134	2314178	3
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000218	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/19/22	1233	2314178	4
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	5

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	EB-01	Project:	GPCC00100
Sample ID:	592388001	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Project: GPCC00100
Client ID: GPCC001

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

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1GWA-1	Project:	GPCC00100
Sample ID:	592388002	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.22	0.0670	0.200	mg/L		1	JLD1	09/09/22	0402	2314142	1
Fluoride		0.109	0.0330	0.100	mg/L		1					
Sulfate		1.41	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1107	2314311	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1643	2314178	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0330	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron		0.0210	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		4.98	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00501	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000341	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		66.0	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	4

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1GWA-2	Project:	GPCC00100
Sample ID:	592388003	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.255	0.0670	0.200	mg/L		1	JLD1	09/09/22	0433	2314142	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1116	2314311	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1647	2314178	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	4

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	FB-01	Project:	GPCC00100
Sample ID:	592388004	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.58	0.0670	0.200	mg/L		1	JLD1	09/09/22	0504	2314142	1
Fluoride		0.158	0.0330	0.100	mg/L		1					
Sulfate		112	1.33	4.00	mg/L		10	JLD1	09/09/22	1218	2314142	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1121	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1307	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0452	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		31.8	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000850	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00421	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000572	0.000200	0.00100	mg/L	1.00	1					
Selenium	J	0.00163	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		0.336	0.0260	0.0750	mg/L	1.00	5	PRB	09/18/22	1620	2314178	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		248	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-1	Project:	GPCC00100
Sample ID:	592388005	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		8.77	0.0670	0.200	mg/L		1	JLD1	09/09/22	1237	2314387	1
Fluoride		0.255	0.0330	0.100	mg/L		1					
Sulfate		1390	13.3	40.0	mg/L		100	JLD1	09/09/22	2304	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1123	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1311	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0511	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000739	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00233	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		2.46	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1624	2314178	5
Calcium		338	4.00	10.0	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2190	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-7	Project:	GPCC00100
Sample ID:	592388006	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		9.91	0.0670	0.200	mg/L		1	JLD1	09/09/22	0535	2314142	1
Fluoride		0.524	0.0330	0.100	mg/L		1					
Sulfate		232	3.33	10.0	mg/L		25	JLD1	09/09/22	1248	2314142	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1124	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1314	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0334	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00189	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0172	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00265	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		3.22	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1627	2314178	5
Calcium		835	4.00	10.0	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		500	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-10	Project:	GPCC00100
Sample ID:	592388007	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.319	0.0670	0.200	mg/L		1	JLD1	09/09/22	0605	2314142	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1126	2314311	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1650	2314178	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	4

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	FB-02	Project:	GPCC00100
Sample ID:	592388008	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.10	0.0670	0.200	mg/L		1	JLD1	09/09/22	1307	2314387	1
Fluoride		0.249	0.0330	0.100	mg/L		1					
Sulfate		1420	26.6	80.0	mg/L		200	JLD1	09/09/22	2334	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1128	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1321	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0426	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000335	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00652	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00233	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		3.72	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1631	2314178	5
Calcium		370	4.00	10.0	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2210	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-4	Project:	GPCC00100
Sample ID:	592388009	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.13	0.0670	0.200	mg/L		1	JLD1	09/09/22	1337	2314387	1
Fluoride		0.243	0.0330	0.100	mg/L		1					
Sulfate		1430	26.6	80.0	mg/L		200	JLD1	09/10/22	0004	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1130	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1325	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0430	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000327	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00664	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00230	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		3.68	0.520	1.50	mg/L	1.00	100	PRB	09/18/22	1654	2314178	5
Calcium		381	8.00	20.0	mg/L	1.00	100					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2230	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	DUP-01	Project:	GPCC00100
Sample ID:	592388010	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-9	Project:	GPCC00100
Sample ID:	592388011	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.88	0.0670	0.200	mg/L		1	JLD1	09/09/22	1436	2314387	1
Fluoride		0.166	0.0330	0.100	mg/L		1					
Sulfate		731	13.3	40.0	mg/L		100	JLD1	09/10/22	0104	2314387	2
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1133	2314311	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1348	2314178	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0506	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000936	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Boron		2.81	0.260	0.750	mg/L	1.00	50	PRB	09/18/22	1709	2314178	5
Calcium		300	4.00	10.0	mg/L	1.00	50					
Molybdenum		0.489	0.0100	0.0500	mg/L	1.00	50					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1390	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	6

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	J	0.191	0.0670	0.200	mg/L		1	JLD1	09/09/22	1606	2314387	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	J	0.167	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	AXS5	09/12/22	1135	2314311	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/18/22	1712	2314178	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	J	0.00134	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		0.204	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/09/22	1638	2314703	4

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	EB-02	Project:	GPCC00100
Sample ID:	592388013	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Project: GPCC00100
Client ID: GPCC001

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

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-3	Project:	GPCC00100
Sample ID:	592388014	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

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

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

Project: GPCC00100
Client ID: GPCC001

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

The following Prep Methods were performed:

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

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Certificate of Analysis

Report Date: September 22, 2022

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

Client Sample ID:	AP1PZ-6	Project:	GPCC00100
Sample ID:	592388015	Client ID:	GPCC001

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

DF: Dilution Factor	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: September 22, 2022

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

Contact: **Joju Abraham**

Workorder: **592528**

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

QC Summary

Workorder: **592528**

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

QC Summary

Workorder: **592528**

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

QC Summary

Workorder: **592528**

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

QC Summary

Workorder: **592528**

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

QC Summary

Workorder: **592528**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2314769										
Boron		163		35.4	ug/L	8.61		(0%-20%)	PRB	09/19/22 16:18
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)		
Calcium		27300		5220	ug/L	4.4		(0%-20%)		
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)		
Cobalt	U	ND	U	ND	ug/L	N/A		(0%-20%)		
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)		
Lithium	U	ND	U	ND	ug/L	N/A		(0%-20%)		
Molybdenum		1.36	J	0.237	ug/L	12.9		(0%-20%)		
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)		
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		
Metals Analysis-Mercury										
Batch 2315121										
QC1205188329 592595001 DUP										
Mercury		0.000353		0.000359	mg/L	1.69 ^		(+/-0.000200)	JP2	09/13/22 13:21
QC1205188328 LCS										
Mercury	0.00200			0.00205	mg/L		103	(80%-120%)		09/13/22 13:11
QC1205188327 MB										
Mercury			U	ND	mg/L					09/13/22 13:09

QC Summary

Workorder: **592528**

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

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range

QC Summary

Workorder: **592528**

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

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

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

QC Summary

Report Date: September 22, 2022

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

Contact: **Joju Abraham**

Workorder: **592388**

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

QC Summary

Workorder: **592388**

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

QC Summary

Workorder: **592388**

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

QC Summary

Workorder: **592388**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2314178										
Barium			U	ND	mg/L				PRB	09/18/22 12:18
Beryllium			U	ND	mg/L					
Boron			U	ND	mg/L					
Cadmium			U	ND	mg/L					
Calcium			U	ND	mg/L					
Chromium			U	ND	mg/L					
Cobalt			U	ND	mg/L					
Lead			U	ND	mg/L					
Lithium			U	ND	mg/L					
Molybdenum			U	ND	mg/L					
Selenium			U	ND	mg/L					
Thallium			U	ND	mg/L					
QC1205186328 592388002 MS										
Antimony	0.0500	U	ND	0.0500	mg/L		100	(75%-125%)		09/19/22 12:37
Arsenic	0.0500	U	ND	0.0488	mg/L		95.8	(75%-125%)		09/19/22 11:41
Barium	0.0500		0.0523	0.0516	mg/L		0*	(75%-125%)		

QC Summary

Workorder: **592388**

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

QC Summary

Workorder: **592388**

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

QC Summary

Workorder: **592388**

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

QC Summary

Workorder: **592388**

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

Notes:

The Qualifiers in this report are defined as follows:

<	Result is less than value reported
>	Result is greater than value reported
B	The target analyte was detected in the associated blank.
E	%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
FB	Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
H	Analytical holding time was exceeded
J	See case narrative for an explanation
J	Value is estimated
N	Metals--The Matrix spike sample recovery is not within specified control limits
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.

QC Summary

Workorder: **592388**

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

R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.

R Sample results are rejected

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Y Other specific qualifiers were required to properly define the results. Consult case narrative.

Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

d 5-day BOD--The 2:1 depletion requirement was not met for this sample

e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

Technical Case Narrative
Georgia Power Company
SDG #: 592528

Metals

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 35
Analytical Batch: 2314769

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 2314768

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

GEL Sample ID#	Client Sample Identification
592528001	AP1PZ-11
592528002	DUP-02
592528003	AP1PZ-2
592528004	AP1PZ-5
1205187547	Method Blank (MB)**ICP-MS**
1205187548	Laboratory Control Sample (LCS)
1205187551	592528001(AP1PZ-11L) Serial Dilution (SD)
1205187549	592528001(AP1PZ-11S) Matrix Spike (MS)
1205187550	592528001(AP1PZ-11SD) Matrix Spike Duplicate (MSD)

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

Data Summary:

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

Calibration Information

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

Technical Information

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 592528003 (AP1PZ-2) and 592528004 (AP1PZ-5) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

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

Product: **Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**
Analytical Method: SW846 7470A
Analytical Procedure: GL-MA-E-010 REV# 38
Analytical Batch: 2315121

Preparation Method: SW846 7470A Prep
Preparation Procedure: GL-MA-E-010 REV# 38
Preparation Batch: 2315120

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

GEL Sample ID#	Client Sample Identification
592528001	AP1PZ-11
592528002	DUP-02
592528003	AP1PZ-2
592528004	AP1PZ-5
1205188327	Method Blank (MB)**CVAA**
1205188328	Laboratory Control Sample (LCS)
1205188331	592595001(NonSDGL) Serial Dilution (SD)
1205188329	592595001(NonSDGD) Sample Duplicate (DUP)
1205188330	592595001(NonSDGS) Matrix Spike (MS)

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

Data Summary:

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

General Chemistry

Product: **Ion Chromatography**
Analytical Method: EPA 300.0
Analytical Procedure: GL-GC-E-086 REV# 30
Analytical Batch: 2317683

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

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

1205193505	Method Blank (MB)
1205193506	Laboratory Control Sample (LCS)
1205193507	592528001(AP1PZ-11) Sample Duplicate (DUP)
1205193509	592528001(AP1PZ-11) Post Spike (PS)

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

Data Summary:

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

Technical Information

Sample Dilutions
The following samples 1205193507 (AP1PZ-11DUP), 1205193509 (AP1PZ-11PS), 592528001 (AP1PZ-11), 592528002 (DUP-02), 592528003 (AP1PZ-2) and 592528004 (AP1PZ-5) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	592528			
	001	002	003	004
Sulfate	5X	5X	50X	200X

Product: **Solids, Total Dissolved**
Analytical Method: SM 2540C
Analytical Procedure: GL-GC-E-001 REV# 19
Analytical Batch: 2315106

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

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

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

Data Summary:

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

Product: **Solids, Total Dissolved**
Analytical Method: SM 2540C
Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2315610

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

GEL Sample ID#	Client Sample Identification
592528003	AP1PZ-2
592528004	AP1PZ-5
1205189364	Method Blank (MB)
1205189365	Laboratory Control Sample (LCS)
1205189371	592607004(NonSDG) Sample Duplicate (DUP)

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

Data Summary:

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

Certification Statement

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

Metals

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 35
Analytical Batch: 2314178

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 2314177

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

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

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

Data Summary:

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

Calibration Information

ICSA/ICSAB Statement

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

Quality Control (QC) Information

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

Sample	Analyte	Value
1205186328 (AP1GWA-1MS)	Barium	-1.38* (75%-125%)
	Boron	8.15* (75%-125%)
1205186329 (AP1GWA-1MSD)	Barium	-1.22* (75%-125%)
	Boron	9.7* (75%-125%)

Technical Information

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 592388005 (AP1PZ-1), 592388006 (AP1PZ-7), 592388007 (AP1PZ-10), 592388009 (AP1PZ-4), 592388010 (DUP-01), 592388011 (AP1PZ-9), 592388012 (AP1PZ-8), 592388014 (AP1PZ-3) and 592388015 (AP1PZ-6) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

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

Product: **Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**
Analytical Method: SW846 7470A
Analytical Procedure: GL-MA-E-010 REV# 38
Analytical Batch: 2314311

Preparation Method: SW846 7470A Prep
Preparation Procedure: GL-MA-E-010 REV# 38
Preparation Batch: 2314310

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

GEL Sample ID#	Client Sample Identification
592388001	EB-01
592388002	AP1GWA-1

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

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

Data Summary:

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

General Chemistry

Product: **Ion Chromatography**
Analytical Method: EPA 300.0
Analytical Procedure: GL-GC-E-086 REV# 30
Analytical Batch: 2314142

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

GEL Sample ID#	Client Sample Identification
592388001	EB-01
592388002	AP1GWA-1
592388003	AP1GWA-2
592388004	FB-01
592388005	AP1PZ-1
592388007	AP1PZ-10
592388008	FB-02
1205186281	Method Blank (MB)
1205186282	Laboratory Control Sample (LCS)
1205186285	592010001(NonSDG) Sample Duplicate (DUP)
1205186286	592010001(NonSDG) Post Spike (PS)

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

Data Summary:

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

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1205186286 (Non SDG 592010001PS)	179* (90%-110%)

Technical Information

Sample Dilutions
The following samples 1205186285 (Non SDG 592010001DUP), 1205186286 (Non SDG 592010001PS), 592388002 (AP1GWA-1), 592388005 (AP1PZ-1) and 592388007 (AP1PZ-10) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	592388		
	002	005	007
Sulfate	10X	10X	25X

Product: **Ion Chromatography**
Analytical Method: EPA 300.0
Analytical Procedure: GL-GC-E-086 REV# 30
Analytical Batch: 2314387

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

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

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

Data Summary:

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

Technical Information

Sample Dilutions
The following samples 1205186796 (ARAMW-7DUP), 1205186797 (ARAMW-7PS), 592388006 (AP1PZ-7), 592388009 (AP1PZ-4), 592388010 (DUP-01), 592388011 (AP1PZ-9), 592388012 (AP1PZ-8), 592388014 (AP1PZ-3) and 592388015 (AP1PZ-6) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	592388						
	006	009	010	011	012	014	015
Sulfate	100X	200X	200X	40X	100X	100X	200X

Product: **Solids, Total Dissolved**
Analytical Method: SM 2540C
Analytical Procedure: GL-GC-E-001 REV# 19
Analytical Batch: 2314703

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

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

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

Data Summary:

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

Certification Statement

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

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

S92528
S92534

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 AP-1 Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
Collected By: John Myer, Emily Scheiben, Jackson Bankston
Send Results To: jabraham@southernco.com EDD@stantec.com brian.steele@stantec.com edgar.smith@stantec.com

Page 66 of 74 SDG: 592388

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 Metals App. III, IV (6020B)	TDS (SM Method 2540C)	NI RAD 226-228 Cmbd	NI Mercury (7470B)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993	NI Metals App. IV (6020B) (Co only)	NI Ag (App. I) (6020B)	Alkalinity (300.0 R2.1)	NI Metals Al, K, Mg, Na, Fe, Mn (6020B)		<-- Preservative Type (6)
AP1PZ-11	09/08/22	1015	N	N	WG			5	X	X	X	X	X						pH: 6.77
DUP-02	09/08/22	NA	FD	N	WQ			5	X	X	X	X	X						NA
AP1PZ-2	09/08/22	1025	N	N	WG			5	X	X	X	X	X						pH: 6.11
AP1PZ-5	09/08/22	1225	N	N	WG			5	X	X	X	X	X						pH: 6.12

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	9/8/22	1435	FedEx	9/8/22	1700
2				[signature]	9/9/22	9:28
3						

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

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

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.)*

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

EVOT

Client: GPCC	**SDG/AR/COC/Work Order:** 592528 | 592534
Received By: Shanequa Patterson	**Date Received:** 9/9/22
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		X	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 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: 3.2
4	Daily check performed and passed on IR temperature gun?	X			**Temperature Device Serial #:** IR2-22 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 AM Date 9/13/22 Page 1 of 1

Page: 1 of 2
Project # 175569434
GEL Quote #:
COC Number (1): 4 Coolers
PO Number:

GEL Laboratories LLC
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: 592388 GEL Project Manager: Erin Trent

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

592388 SDG 592388

Client Name: Georgia Power — Phone # (937) 344-6533
Project/Site Name: Plant Arkwright AP-1 — Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
Collected By: John Myer, Emily Scheiben, Jackson Bankston
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	NI Metals App. III, IV (6020B)	TDS (SM Method 2540C)	NI RAD 226-228 Cmbd	NI Mercury (7470B)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993	NI Metals App. IV (6020B) (Co only)	NI Ag (App. I) (6020B)	Alkalinity (300.0 R2.1)	NI Metals Al, K, Mg, Na, Fe, Mn (6020B)	<-- Preservative Type (6)
EB-01	09/07/22	0905	EB	N	WQ			5	X	X	X	X	X					NA
AP1GWA-1	09/07/22	1020	N	N	WG			5	X	X	X	X	X					pH: 5.42
AP1GWA-2	09/07/22	1155	N	N	WG			5	X	X	X	X	X					pH: 6.00
FB-01	09/07/22	1210	FB	N	WQ			5	X	X	X	X	X					NA
AP1PZ-1	09/07/22	1350	N	N	WG			5	X	X	X	X	X					pH: 6.41
AP1PZ-7	09/07/22	1400	N	N	WG			5	X	X	X	X	X					pH: 6.21
AP1PZ-10	09/07/22	1430	N	N	WG			5	X	X	X	X	X					pH: 6.55
FB-02	09/07/22	1445	FB	N	WQ			5	X	X	X	X	X					NA
AP1PZ-4	09/07/22	1545	N	N	WG			5	X	X	X	X	X					pH: 6.37
DUP-01	09/07/22	NA	FD	N	WQ			5	X	X	X	X	X					NA

Comments
Note: extra sample is required for sample specific QC

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

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

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	9/8/22	0910	[signature]	9/8/22	810
2	[signature]	9/8/22	1243	[signature]	9/8/22	1243
3						

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

1.) Chain of Custody Number = Client Determined

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

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

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=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 #:
QC Number (1): 4 Coolers
PO Number:

GEL Laboratories LLC

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Chain of Custody and Analytical Request

GEL Work Order Number: 542388 *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 AP-1 — Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
Collected By: John Myer, Emily Scheiben, Jackson Bankston
Send Results To: jabraham@southernco.com EDD@stantec.com brian.steele@stantec.com edgar.smith@stantec.com

Page 72 of 74 SDG: 542388

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	Metals App. III, IV (6020B) NI	TDS (SM Method 2540C)	RAD 226-228 Cmbd NI	Mercury (7470B) NI	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B) (Co only) NI	Ag (App. I) (6020B) NI	Alkalinity (300.0 R2.1)	Metals Al, K, Mg, Na, Fe, Mn (6020B) NI		<-- Preservative Type (6) Comments
AP1PZ-9	09/07/22	1615	N	N	WG			5	X	X	X	X	X						pH: 4.84
AP1PZ-8	09/07/22	1627	N	N	WG			5	X	X	X	X	X						pH: 6.52
EB-02	09/07/22	1705	EB	N	WQ			5	X	X	X	X	X						NA
AP1PZ-3	09/07/22	1830	N	N	WG			5	X	X	X	X	X						pH: 5.47
AP1PZ-6	09/07/22	1845	N	N	WG			5	X	X	X	X	X						pH: 5.56

Comments: Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	9/8/22	0810	[signature]	9/8/22	810
2	[signature]	9/8/22	1243	[signature]	9/8/22	1243
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.)*

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

E.T

Client: GDCC	**SDG/AR/COC/Work Order:** 592388
Received By: Shanequa Patterson	**Date Received:** 9/8/22 SP
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS ~~Field Services~~ Courier Other

Suspected Hazard Information	Yes	No	
			*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	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): 0 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?	✓			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: 1.9
4	Daily check performed and passed on IR temperature gun?	✓			**Temperature Device Serial #:** IR2-22 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?	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?	✓			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?	✓			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?	X			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

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

List of current GEL Certifications as of 22 September 2022

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122023−3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2022−137
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−22−20
Utah NELAP	SC000122021−36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
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gel.com

December 08, 2022

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

Re: Arkwright CCR Groundwater Compliance AP1
Work Orders: 592396 and 592534

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 08, 2022 and September 09, 2022. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. The data package has been revised to report new MDC values for the Ra-226+228 Sum results.

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

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

Sincerely,

Edith Kent for
Erin Trent
Project Manager

Purchase Order: GPC82177-0002
Enclosures

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

Certificate of Analysis Report
for

GPCC001 Georgia Power Company

Client SDG: 592396 GEL Work Order: 592396

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a Tracer compound

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

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

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

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

Reviewed by _____

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

Certificate of Analysis Report
for

GPCC001 Georgia Power Company

Client SDG: 592534 GEL Work Order: 592534

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a Tracer compound

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

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

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

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

Reviewed by 

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

Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.11	+/-1.14	1.89	+/-1.18	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.35	+/-1.19	1.89	+/-1.22		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.238	+/-0.336	0.585	+/-0.338	1.00	pCi/L			LXP1	10/07/22	0935	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	82.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1GWA-1
Sample ID: 592396002
Matrix: WG
Collect Date: 07-SEP-22
Receive Date: 08-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.673	+/-0.911	1.56	+/-0.926	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		1.77	+/-1.02	1.56	+/-1.05		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		1.09	+/-0.451	0.402	+/-0.492	1.00	pCi/L			LXP1	10/07/22	0935	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	82.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1GWA-2
Sample ID: 592396003
Matrix: WG
Collect Date: 07-SEP-22
Receive Date: 08-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.919	+/-1.14	1.93	+/-1.16	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.49	+/-1.20	1.93	+/-1.22		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.571	+/-0.373	0.456	+/-0.383	1.00	pCi/L			LXP1	10/07/22	0935	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	80.2	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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

Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.0557	+/-0.855	1.65	+/-0.855	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	0.348	+/-0.897	1.65	+/-0.898		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.292	+/-0.271	0.400	+/-0.276	1.00	pCi/L			LXP1	10/07/22	0935	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	69.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.24	+/-1.30	2.16	+/-1.34	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.33	+/-1.34	2.16	+/-1.38		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.0893	+/-0.327	0.643	+/-0.328	1.00	pCi/L			LXP1	10/07/22	0935	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	78.6	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	-0.267	+/-1.08	2.11	+/-1.08	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	0.479	+/-1.15	2.11	+/-1.16		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.479	+/-0.409	0.626	+/-0.418	1.00	pCi/L			LXP1	10/07/22	0935	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	70.9	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-10
Sample ID: 592396007
Matrix: WG
Collect Date: 07-SEP-22
Receive Date: 08-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.05	+/-1.16	1.94	+/-1.19	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.34	+/-1.21	1.94	+/-1.24		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.298	+/-0.358	0.602	+/-0.363	1.00	pCi/L			LXP1	10/07/22	0935	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	76.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

DF: Dilution Factor
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: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.647	+/-1.31	2.30	+/-1.32	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.02	+/-1.35	2.30	+/-1.36		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.378	+/-0.321	0.452	+/-0.325	1.00	pCi/L			LXP1	10/07/22	1013	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	78.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.73	+/-1.43	2.32	+/-1.49	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.32	+/-1.48	2.32	+/-1.54		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.590	+/-0.386	0.527	+/-0.397	1.00	pCi/L			LXP1	10/07/22	1013	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	77.4	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	-0.991	+/-1.43	2.80	+/-1.43	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	0.374	+/-1.48	2.80	+/-1.48		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.374	+/-0.389	0.627	+/-0.393	1.00	pCi/L			LXP1	10/07/22	1013	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	70.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	-0.536	+/-0.860	1.83	+/-0.860	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	0.482	+/-0.923	1.83	+/-0.928		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.482	+/-0.334	0.444	+/-0.347	1.00	pCi/L			LXP1	10/07/22	1013	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	67.2	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.419	+/-1.15	2.08	+/-1.16	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	0.958	+/-1.21	2.08	+/-1.22		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.539	+/-0.372	0.510	+/-0.382	1.00	pCi/L			LXP1	10/07/22	1013	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	65.8	(15%-125%)

Notes:

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

Column headers are defined as follows:

DF: Dilution Factor
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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Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	-0.0465	+/-1.37	2.51	+/-1.37	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	0.868	+/-1.43	2.51	+/-1.44		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.868	+/-0.410	0.350	+/-0.443	1.00	pCi/L			LXP1	10/07/22	1013	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	83.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

DF: Dilution Factor
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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Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.61	+/-1.16	1.83	+/-1.23	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.43	+/-1.25	1.83	+/-1.32		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.825	+/-0.458	0.582	+/-0.480	1.00	pCi/L			LXP1	10/07/22	1013	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	80.3	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

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

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.312	+/-1.10	2.00	+/-1.10	3.00	pCi/L			JE1	10/05/22	0917	2315719	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	0.959	+/-1.17	2.00	+/-1.18		pCi/L		1	NXL1	10/07/22	1325	2315718	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.647	+/-0.405	0.511	+/-0.417	1.00	pCi/L			LXP1	10/07/22	1048	2315712	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2315719	71.8	(15%-125%)

Notes:

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

Column headers are defined as follows:

DF: Dilution Factor
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: December 7, 2022

Contact: Joju Abraham
Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-11
Sample ID: 592534001
Matrix: WG
Collect Date: 08-SEP-22
Receive Date: 09-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.891	+/-1.41	2.42	+/-1.43	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.06	+/-1.42	2.42	+/-1.44		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.166	+/-0.200	0.319	+/-0.202	1.00	pCi/L			LXP1	10/06/22	0745	2317044	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	90.3	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: DUP-02
Sample ID: 592534002
Matrix: WQ
Collect Date: 08-SEP-22
Receive Date: 09-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	-0.177	+/-0.924	1.78	+/-0.924	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	0.613	+/-0.993	1.78	+/-1.00		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.613	+/-0.364	0.419	+/-0.381	1.00	pCi/L			LXP1	10/06/22	0745	2317044	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	87.2	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-2
Sample ID: 592534003
Matrix: WG
Collect Date: 08-SEP-22
Receive Date: 09-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.669	+/-1.44	2.52	+/-1.45	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.76	+/-1.52	2.52	+/-1.55		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		1.09	+/-0.484	0.563	+/-0.552	1.00	pCi/L			LXP1	10/06/22	0745	2317044	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	80.2	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Arkwright CCR Groundwater ComplianceAP1

Client Sample ID: AP1PZ-5
Sample ID: 592534004
Matrix: WG
Collect Date: 08-SEP-22
Receive Date: 09-SEP-22
Collector: Client

Project: GPCC00100
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.560	+/-1.48	2.63	+/-1.49	3.00	pCi/L			JE1	10/04/22	0957	2317042	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.41	+/-1.57	2.63	+/-1.58		pCi/L		1	NXL1	10/06/22	1016	2317952	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.850	+/-0.507	0.680	+/-0.522	1.00	pCi/L			LXP1	10/06/22	0817	2317044	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2317042	72	(15%-125%)

Notes:

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

Column headers are defined as follows:

DF: Dilution Factor
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: **592396**

Report Date: December 7, 2022

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

Notes:

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

The Qualifiers in this report are defined as follows:

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

QC Summary

Workorder: **592396**

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

J	See case narrative for an explanation
J	Value is estimated
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
M	M if above MDC and less than LLD
M	REMP Result > MDC/CL and < RDL
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
UI	Gamma Spectroscopy--Uncertain identification
UJ	Gamma Spectroscopy--Uncertain identification
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
** Indicates analyte is a surrogate/tracer compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the 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.

QC Summary

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

Atlanta, Georgia

Contact: **Joju Abraham**

Workorder: **592534**

Report Date: December 7, 2022

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

Notes:

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

The Qualifiers in this report are defined as follows:

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

QC Summary

Workorder: **592534**

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

J	See case narrative for an explanation
J	Value is estimated
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
M	M if above MDC and less than LLD
M	REMP Result > MDC/CL and < RDL
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
UI	Gamma Spectroscopy--Uncertain identification
UJ	Gamma Spectroscopy--Uncertain identification
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
** Indicates analyte is a surrogate/tracer compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the 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 #: 592396

Product: **Radium-226+Radium-228 Calculation**
Analytical Method: Calculation
Analytical Procedure: GL-RAD-D-003 REV# 45
Analytical Batch: 2315718

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

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

Data Summary:

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

Product: **GFPC Ra228, Liquid**
Analytical Method: EPA 904.0/SW846 9320 Modified
Analytical Procedure: GL-RAD-A-063 REV# 5
Analytical Batch: 2315719

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

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

592396006	AP1PZ-7
592396007	AP1PZ-10
592396008	FB-02
592396009	AP1PZ-4
592396010	DUP-01
592396011	AP1PZ-9
592396012	AP1PZ-8
592396013	EB-02
592396014	AP1PZ-3
592396015	AP1PZ-6
1205189620	Method Blank (MB)
1205189621	592396002(AP1GWA-1) Sample Duplicate (DUP)
1205189622	Laboratory Control Sample (LCS)

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

Data Summary:

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

Product: **Lucas Cell, Ra226, Liquid**
Analytical Method: EPA 903.1 Modified
Analytical Procedure: GL-RAD-A-008 REV# 15
Analytical Batch: 2315712

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

GEL Sample ID#	Client Sample Identification
592396001	EB-01
592396002	AP1GWA-1
592396003	AP1GWA-2
592396004	FB-01
592396005	AP1PZ-1
592396006	AP1PZ-7
592396007	AP1PZ-10
592396008	FB-02
592396009	AP1PZ-4
592396010	DUP-01
592396011	AP1PZ-9
592396012	AP1PZ-8
592396013	EB-02
592396014	AP1PZ-3
592396015	AP1PZ-6
1205189607	Method Blank (MB)
1205189608	592396002(AP1GWA-1) Sample Duplicate (DUP)
1205189609	592396002(AP1GWA-1) Matrix Spike (MS)
1205189610	Laboratory Control Sample (LCS)

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

Data Summary:

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

Certification Statement

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

Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 592534

Product: **Radium-226+Radium-228 Calculation**
Analytical Method: Calculation
Analytical Procedure: GL-RAD-D-003 REV# 45
Analytical Batch: 2317952

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

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

Data Summary:

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

Product: **GFPC Ra228, Liquid**
Analytical Method: EPA 904.0/SW846 9320 Modified
Analytical Procedure: GL-RAD-A-063 REV# 5
Analytical Batch: 2317042

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

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

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

Data Summary:

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

Product: **Lucas Cell, Ra226, Liquid**
Analytical Method: EPA 903.1 Modified
Analytical Procedure: GL-RAD-A-008 REV# 15
Analytical Batch: 2317044

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

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

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

Data Summary:

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

Miscellaneous Information

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

Certification Statement

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

Page: 1 of 2
Project # 175569434
GEL Quote #:
QC Number (1): 4 Coolers
PO Number:

592396

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

Chain of Custody and Analytical Request

GEL Work Order Number: 592388 *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 AP-1 — Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
Collected By: John Myer, Emily Scheiben, Jackson Bankston
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	Metals App. III, IV (6020B) NI	TDS (SM Method 2540C)	RAD 226-228 Cmbd NI	Mercury (7470B) NI	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B) (Co only) NI	Ag (App. I) (6020B) NI	Alkalinity (300.0 R2.1)	Metals Al, K, Mg, Na, Fe, Mn (6020B) NI		<-- Preservative Type (6) Comments Note: extra sample is required for sample specific QC
EB-01	09/07/22	0905	EB	N	WQ			5	X	X	X	X	X						NA
AP1GWA-1	09/07/22	1020	N	N	WG			5	X	X	X	X	X						pH: 5.42
AP1GWA-2	09/07/22	1155	N	N	WG			5	X	X	X	X	X						pH: 6.00
FB-01	09/07/22	1210	FB	N	WQ			5	X	X	X	X	X						NA
AP1PZ-1	09/07/22	1350	N	N	WG			5	X	X	X	X	X						pH: 6.41
AP1PZ-7	09/07/22	1400	N	N	WG			5	X	X	X	X	X						pH: 6.21
AP1PZ-10	09/07/22	1430	N	N	WG			5	X	X	X	X	X						pH: 6.55
FB-02	09/07/22	1445	FB	N	WQ			5	X	X	X	X	X						NA
AP1PZ-4	09/07/22	1545	N	N	WG			5	X	X	X	X	X						pH: 6.37
DUP-01	09/07/22	NA	FD	N	WQ			5	X	X	X	X	X						NA

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		9/8/22	910		9/8/22	910
2		9/8/22	1243		9/8/22	1243
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: 2 of 2
Project # 175569434
GEL Quote #:
QC Number [1]: 4 Coolers
PO Number:

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

Chain of Custody and Analytical Request

GEL Work Order Number: 592388 *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 AP-1 — Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
Collected By: John Myer, Emily Scheiben, Jackson Bankston
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	Metals App. III, IV (6020B) NI	TDS (SM Method 2540C)	RAD 226-228 Cmbd NI	Mercury (7470B) NI	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993)	Metals App. IV (6020B) (Co only) NI	Ag (App. I) (6020B) NI	Alkalinity (300.0 R2.1)	Metals Al, K, Mg, Na, Fe, Mn (6020B) NI		<-- Preservative Type (6)
AP1PZ-9	09/07/22	1615	N	N	WG			5	X	X	X	X	X						pH: 4.84
AP1PZ-8	09/07/22	1627	N	N	WG			5	X	X	X	X	X						pH: 6.52
EB-02	09/07/22	1705	EB	N	WQ			5	X	X	X	X	X						NA
AP1PZ-3	09/07/22	1830	N	N	WG			5	X	X	X	X	X						pH: 5.47
AP1PZ-6	09/07/22	1845	N	N	WG			5	X	X	X	X	X						pH: 5.56

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	9/8/22	0810	[signature]	9/8/22	810
2	[signature]	9/8/22	1243	[signature]	9/8/22	1243
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.)*

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

E.T

Client: GDCC	**SDG/AR/COC/Work Order:** 592388 / 592396
Received By: Shanequa Patterson	**Date Received:** 9/8/22 SP
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS ~~Field Services~~ Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		√	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		√	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr **Classified as: Rad 1 Rad 2 Rad 3**
D) Did the client designate samples are hazardous?		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?	√			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: 1.9
4	Daily check performed and passed on IR temperature gun?	√			**Temperature Device Serial #:** IR2-22 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?	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?	√			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?	X			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

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

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

S92528
S92534

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 AP-1 Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta, GA 30308
Collected By: John Myer, Emily Scheiben, Jackson Bankston
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	NI Metals App. III, IV (6020B)	TDS (SM Method 2540C)	NI RAD 226-228 Cmbd	NI Mercury (7470B)	Anions (Cl, Fl, Sulfate) (300.0 Rev. 2.1 1993	NI Metals App. IV (6020B) (Co only)	NI Ag (App. I) (6020B)	Alkalinity (300.0 R2.1)	NI Metals Al, K, Mg, Na, Fe, Mn (6020B)	<-- Preservative Type (6)
AP1PZ-11	09/08/22	1015	N	N	WG			5	X	X	X	X	X					pH: 6.77
DUP-02	09/08/22	NA	FD	N	WQ			5	X	X	X	X	X					NA
AP1PZ-2	09/08/22	1025	N	N	WG			5	X	X	X	X	X					pH: 6.11
AP1PZ-5	09/08/22	1225	N	N	WG			5	X	X	X	X	X					pH: 6.12

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	John Myer	9/8/22	1435	1 FedEx	9/8/22	1700
2				2	9/9/22	9:28
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:*** ____°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**).

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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

ENV

Client: GPCC	**SDG/AR/COC/Work Order:** 592528 | 592534
Received By: Shanequa Patterson	**Date Received:** 9/9/22
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		X	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 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: 3.2
4	Daily check performed and passed on IR temperature gun?	X			**Temperature Device Serial #:** IR2-22 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 AM Date 9/13/22 Page 1 of 1

List of current GEL Certifications as of 07 December 2022

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122023−3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2022−160
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−22−20
Utah NELAP	SC000122022−37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

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

August 29, 2022

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

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

Dear Kelley Sharpe:

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

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

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

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

Sincerely,

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

Enclosures

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

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

CERTIFICATIONS

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

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners
110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

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

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

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

SAMPLE ANALYTE COUNT

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

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

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

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

ANALYTICAL RESULTS

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

Sample: OR-0.8 **Lab ID: 92621107001** Collected: 08/16/22 10:15 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
	Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	1	08/22/22 09:00	08/22/22 15:11	7439-97-6	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A							
	Pace Analytical Services - Peachtree Corners, GA							
Potassium	**3.1**	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:15	7440-09-7	
Sodium	**8.0**	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:15	7440-23-5	
Calcium	**7.6**	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:15	7440-70-2	
Magnesium	**2.2**	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:15	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
	Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 15:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 15:55	7440-38-2	
Barium	**0.021**	mg/L	0.0050	1	08/22/22 15:10	08/23/22 15:55	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 15:55	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 15:55	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 15:55	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 15:55	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 15:55	7440-48-4	
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 15:55	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 15:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 15:55	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 15:55	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 15:55	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015							
	Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**56.9**	mg/L	25.0	1		08/19/22 08:46		
2320B Alkalinity	Analytical Method: SM 2320B							
	Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**30.2**	mg/L	10.0	1		08/25/22 20:46		
Alkalinity,Bicarbonate (CaCO3)	**30.2**	mg/L	10.0	1		08/25/22 20:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993							
	Pace Analytical Services - Asheville							
Chloride	**7.8**	mg/L	1.0	1		08/19/22 19:21	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	1		08/19/22 19:21	16984-48-8	
Sulfate	**5.1**	mg/L	1.0	1		08/19/22 19:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

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

Sample: OR-0.3 **Lab ID: 92621107002** Collected: 08/16/22 11:00 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
	Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	1	08/22/22 09:00	08/22/22 15:22	7439-97-6	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A							
	Pace Analytical Services - Peachtree Corners, GA							
Potassium	**3.1**	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:20	7440-09-7	
Sodium	**8.2**	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:20	7440-23-5	
Calcium	**7.7**	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:20	7440-70-2	
Magnesium	**2.2**	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:20	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
	Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 16:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:01	7440-38-2	
Barium	**0.022**	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:01	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:01	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 16:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:01	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:01	7440-48-4	
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:01	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 16:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 16:01	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:01	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:01	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015							
	Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**103**	mg/L	25.0	1		08/19/22 08:46		
2320B Alkalinity	Analytical Method: SM 2320B							
	Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**30.5**	mg/L	10.0	1		08/25/22 21:06		
Alkalinity,Bicarbonate (CaCO3)	**30.5**	mg/L	10.0	1		08/25/22 21:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993							
	Pace Analytical Services - Asheville							
Chloride	**7.9**	mg/L	1.0	1		08/19/22 20:34	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	1		08/19/22 20:34	16984-48-8	
Sulfate	**5.2**	mg/L	1.0	1		08/19/22 20:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

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

Sample: OR-0.1 **Lab ID: 92621107003** Collected: 08/16/22 11:25 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
	Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	1	08/22/22 09:00	08/22/22 15:29	7439-97-6	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A							
	Pace Analytical Services - Peachtree Corners, GA							
Potassium	**3.1**	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:25	7440-09-7	
Sodium	**8.0**	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:25	7440-23-5	
Calcium	**7.6**	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:25	7440-70-2	
Magnesium	**2.2**	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:25	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
	Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 16:46	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:46	7440-38-2	
Barium	**0.022**	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:46	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:46	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 16:46	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:46	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:46	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:46	7440-48-4	
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:46	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 16:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 16:46	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:46	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:46	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015							
	Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**45.9**	mg/L	25.0	1		08/19/22 08:46		
2320B Alkalinity	Analytical Method: SM 2320B							
	Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**30.3**	mg/L	10.0	1		08/25/22 21:12		
Alkalinity,Bicarbonate (CaCO3)	**30.3**	mg/L	10.0	1		08/25/22 21:12		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993							
	Pace Analytical Services - Asheville							
Chloride	**6.9**	mg/L	1.0	1		08/19/22 20:48	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	1		08/19/22 20:48	16984-48-8	
Sulfate	**7.1**	mg/L	1.0	1		08/19/22 20:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

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

Sample: OR+0.25 **Lab ID: 92621107004** Collected: 08/16/22 12:30 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
	Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	1	08/22/22 09:00	08/22/22 15:32	7439-97-6	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A							
	Pace Analytical Services - Peachtree Corners, GA							
Potassium	**3.1**	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:30	7440-09-7	
Sodium	**8.0**	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:30	7440-23-5	
Calcium	**7.5**	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:30	7440-70-2	
Magnesium	**2.1**	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:30	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
	Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 16:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:52	7440-38-2	
Barium	**0.021**	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:52	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:52	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 16:52	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:52	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:52	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:52	7440-48-4	
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:52	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 16:52	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 16:52	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:52	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:52	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015							
	Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**43.9**	mg/L	25.0	1		08/19/22 08:46		
2320B Alkalinity	Analytical Method: SM 2320B							
	Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**29.7**	mg/L	10.0	1		08/25/22 21:17		
Alkalinity,Bicarbonate (CaCO3)	**29.7**	mg/L	10.0	1		08/25/22 21:17		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993							
	Pace Analytical Services - Asheville							
Chloride	**7.9**	mg/L	1.0	1		08/19/22 21:02	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	1		08/19/22 21:02	16984-48-8	
Sulfate	**5.2**	mg/L	1.0	1		08/19/22 21:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

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

Sample: BC-0.1 **Lab ID: 92621107005** Collected: 08/16/22 12:20 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
	Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	1	08/22/22 09:00	08/22/22 15:35	7439-97-6	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A							
	Pace Analytical Services - Peachtree Corners, GA							
Potassium	**2.4**	mg/L	0.20	1	08/19/22 15:44	08/19/22 23:44	7440-09-7	
Sodium	**7.5**	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:44	7440-23-5	
Calcium	**10.3**	mg/L	1.0	1	08/19/22 15:44	08/19/22 23:44	7440-70-2	
Magnesium	**4.3**	mg/L	0.050	1	08/19/22 15:44	08/19/22 23:44	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
	Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 16:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:58	7440-38-2	
Barium	**0.070**	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:58	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:58	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 16:58	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 16:58	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:58	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:58	7440-48-4	
Lead	**0.0012**	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:58	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 16:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 16:58	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 16:58	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 16:58	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015							
	Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**85.9**	mg/L	25.0	1		08/19/22 08:47		
2320B Alkalinity	Analytical Method: SM 2320B							
	Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**44.8**	mg/L	10.0	1		08/25/22 21:23		
Alkalinity,Bicarbonate (CaCO3)	**44.8**	mg/L	10.0	1		08/25/22 21:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993							
	Pace Analytical Services - Asheville							
Chloride	**7.0**	mg/L	1.0	1		08/19/22 21:17	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	1		08/19/22 21:17	16984-48-8	
Sulfate	**7.1**	mg/L	1.0	1		08/19/22 21:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

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

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

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

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

LABORATORY CONTROL SAMPLE: 3746037

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746038 3746039

Parameter	Units	92621107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0020	0.0021	81	84	70-130	4	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
Pace Project No.: 92621107

QC Batch: 718462
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

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

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

LABORATORY CONTROL SAMPLE: 3745240

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745241 3745242

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

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

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

QC Batch: 718742
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

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

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

LABORATORY CONTROL SAMPLE: 3746439

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746747 3746748

Parameter	Units	92620540002 Result	MS 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	0.11	113	113	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	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
Pace Project No.: 92621107

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746747 3746748

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

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
Pace Project No.: 92621107

QC Batch: 718207
QC Batch Method: SM 2540C-2015
Analysis Method: SM 2540C-2015
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

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

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

LABORATORY CONTROL SAMPLE: 3744035

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

SAMPLE DUPLICATE: 3744037

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

SAMPLE DUPLICATE: 3744488

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

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
Pace Project No.: 92621107

QC Batch: 424462 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

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

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

LABORATORY CONTROL SAMPLE: 2444374

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2444375 2444376

Parameter	Units	92621107001 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	30.2	200	200	237	238	104	104	80-120	0	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

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

QC Batch: 718269
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92621107001, 92621107002, 92621107003, 92621107004, 92621107005

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

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

LABORATORY CONTROL SAMPLE: 3744376

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744377 3744378

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744379 3744380

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

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.: 92621107

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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
Pace Project No.: 92621107

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A — Required Client Information:

Company:	ARCADIS - Atlanta
Address:	2839 Paces Ferry Rd
	Atlanta, GA 30339
Email:	warren.johnson@arcadis.com
Phone:	678.485.5298 Fax:
Requested Due Date:	5 day TAT

Section B — Required Project Information:

Report To:	Joju Abraham, Ben Hodges
Copy To:	Warren Johnson
Purchase Order #:	
Project Name:	Arkwright - AP1
Project #:	

Section C — Invoice Information:

Attention:	Joju Abraham
Company Name:	GPC
Address:	
Pace Quote:	
Pace Project Manager:	Mayia.Parks@pacelabs.com,
Pace Profile #:	2239

Regulatory Agency

State / Location

WO# : 92621107

92621107

Requested Analyses

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	CCR Appendix III[1]	Major Ions[2]	CCR Appendix IV[3]	Residual Chlorine (Y/
1	OR-0.8	WS	G	8/16/2022	1015														X	X	X	
2	OR-0.3	WS	G	8/16/2022	1100														X	X	X	
3	OR-0.1	WS	G	8/16/2022	1175														X	X	X	
4	OR+0.25	WS		8/16/2022	1230														X	X	X	
5	~~OR+1.0~~ NOT SAMPLED	WS		8/16/2022															X	X	X	
6	BC-0.1	WS		8/16/2022	1220														X	X	X	
7	BC-0.3	WS		8/16/2022	1155														X	X	X	
8																						
9																						
10																						
11																						

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
CCR Appendix III[1] - B, Ca, Cl, F, Sulfate, Total Dissolved Solids (TDS)	Arcadis	8/17/22	0600	Ryan Williams / Pace	8/17/22	0933	
Major Ions[2] - Mg, Na, K, total alkalinity, bicarbonate alkalinity	Ryan Williams / Pace	8/17/22	1300	Chandler Hanks	8/17/22	1300	
CCR Appendix IV[3] - Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium, Thallium, Radium 226, Radium, 228							

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Garrett Gebowski

SIGNATURE of SAMPLER:

DATE Signed: 8-17-22

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt
	Effective Date: 05/12/2022

Laboratory receiving samples:

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

Sample Condition Upon Receipt

Client Name: Arcadis

Project #: WO#: 92621107

PM: MP Due Date: 08/24/22

CLIENT: GA-ArcadAtl

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

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 8/17/22 cap

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

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

Thermometer: ☑ IR Gun ID: 214

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 4.8 **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 4.8

Temp should be above freezing to 6°C

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

USDA Regulated Soil (☐ N/A, water sample)

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

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

				Comments/Discrepancy:
Chain of Custody Present?	☑ 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? -Includes Date/Time/ID/Analysis Matrix: W	☐ Yes	☑ No	☐ N/A	9. Sample BC -0.3 Not present
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	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt
	Effective Date: 05/12/2022

*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#: 92621107

PM: MP Due Date: 08/24/22

CLIENT: GA-ArcadAtl

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	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			1																			2				
2		2	1			1																			2				
3		2	1			1																			2				
4		2	1			1																			2				
5		1	1			1																			2				
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

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

December 12, 2022

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

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

Dear Kelley Sharpe:

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

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

- Pace Analytical Services - Greensburg

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

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

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

Sincerely,

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

Enclosures

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

REPORT OF LABORATORY ANALYSIS

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.: 92621114

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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.: 92621114

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

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.: 92621114

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

PASI-PA = Pace Analytical Services - Greensburg

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

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

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

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

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

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

REPORT OF LABORATORY ANALYSIS

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(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

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

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

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

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

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

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

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

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

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

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

QC Batch:	528128	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
		Laboratory:	Pace Analytical Services - Greensburg

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

METHOD BLANK: 2562215 Matrix: Water

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

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

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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QUALITY CONTROL - RADIOCHEMISTRY

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

QC Batch: 528130 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92621114001, 92621114002, 92621114003, 92621114004, 92621114005

METHOD BLANK: 2562222 Matrix: Water
Associated Lab Samples: 92621114001, 92621114002, 92621114003, 92621114004, 92621114005

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

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

REPORT OF LABORATORY ANALYSIS

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.: 92621114

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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.: 92621114

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A
Required Client Information:

Company:	ARCADIS - Atlanta
Address:	2839 Paces Ferry Rd
	Atlanta, GA 30339
Email:	warren.johnson@arcadis.com
Phone:	678.485.5298 Fax:
Requested Due Date:	5 day TAT

Section B
Required Project Information:

Report To:	Joju Abraham, Ben Hodges
Copy To:	Warren Johnson
Purchase Order #:	
Project Name:	Arkwright - AP1
Project #:	

Section C
Invoice Information:

Attention:	Joju Abraham
Company Name:	GPC
Address:	
Pace Quote:	
Pace Project Manager:	Mayia Parks@pacelabs.com,
Pace Profile #:	2239

Regulatory Agency:

State / Location: GA

Requested Analysis Filtered (Y/N)

WO# : 92621114

92621114

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	CCR Appendix III[1]	Major Ions[2]	CCR Appendix IV[3]	Residual Chlo
1	OR-0.8	WS	G	8/16/2022	1015														X	X	X	
2	OR-0.3	WS	G	8/16/2022	1100														X	X	X	
3	OR-0.1	WS	G	8/16/2022	1175														X	X	X	
4	OR+0.25	WS		8/16/2022	1230														X	X	X	
5	~~OR+1.0~~ NOT SAMPLED	WS		8/16/2022															X	X	X	
6	BC-0.1	WS		8/16/2022	1270														X	X	X	
7	BC-0.3	WS		8/16/2022	1155														X	X	X	
8																						
9																						
10																						
11																						

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
[1] - B, Ca, Cl, F, Sulfate, Total Dissolved Solids (TDS)	Arcadis	8/17/22	0600	Ryan Williams / Pace	8/17/22	0933	
[2] - Mg, Na, K, total alkalinity, bicarbonate alkalinity	Ryan Williams / Pace	8/17/22	1300	Charles Hunter	8/17/22	1300	
[3] - Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium, Thallium, Radium 226, Radium 228							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Garrett Gilbowski

SIGNATURE of SAMPLER:

DATE Signed: 8-17-22

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 v01_Sample Condition Upon Receipt
	Effective Date: 05/12/2022

Laboratory receiving samples:

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

Sample Condition Upon Receipt

Client Name: Arcadis

Project # WO#: 92621114

PM: MP Due Date: 09/08/22

CLIENT: GA-ArcadAtl

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

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 8/17/22 cay

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

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

Thermometer: ☑ ~~IR~~ Gun ID: 214

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 4.8 **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 4.8

Temp should be above freezing to 6°C

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

USDA Regulated Soil (☐ N/A, water sample)

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

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

				Comments/Discrepancy:
Chain of Custody Present?	☑ 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? -Includes Date/Time/ID/Analysis Matrix: W	☐ ~~Yes~~	☐ No	☐ N/A	9. BR -0.3 not present
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	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

WO#: 92621114

PM: MP Due Date: 09/08/22

CLIENT: GA-AreadAtl

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

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

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

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	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			1																			2				
2		2	1			1																			2				
3		1	1			1																			2				
4		2	1			1																			2				
5		1	1			1																			2				
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

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

February 02, 2023

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

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

Dear Kelley Sharpe:

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

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

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

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

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

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

Sincerely,

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

Enclosures

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

REPORT OF LABORATORY ANALYSIS

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

cc: Tina Sullivan, ERM

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.: 92621120

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-21-8
Virginia VELAP Certification ID: 11873
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-21-00008
Federal Fish & Wildlife Permit #: 51774A

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners
110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001

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.: 92621120

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

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.: 92621120

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92621120001	**BC-0.8a**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120002	**BC-0.3**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	13	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120003	**BC-0.5.5**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120004	**BC-0.5.6**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120005	**BC-0.5.7**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92621120006	**BC-BR**	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS

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

Sample: BC-0.8a **Lab ID: 92621120001** Collected: 08/16/22 15:55 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**2.3**	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:17	7440-09-7	
Sodium	**8.7**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:17	7440-23-5	
Calcium	**9.7**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:17	7440-70-2	
Magnesium	**4.3**	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:17	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 17:40	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 17:40	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 17:40	7439-93-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**89.9**	mg/L	25.0	1		08/19/22 08:47		
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**46.5**	mg/L	10.0	1		08/25/22 22:18		
Alkalinity,Bicarbonate (CaCO3)	**46.5**	mg/L	10.0	1		08/25/22 22:18		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**7.7**	mg/L	1.0	1		08/20/22 10:29	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	1		08/20/22 10:29	16984-48-8	
Sulfate	**4.1**	mg/L	1.0	1		08/20/22 10:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

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

Sample: BC-0.3 **Lab ID: 92621120002** Collected: 08/16/22 11:55 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**2.3**	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:22	7440-09-7	
Sodium	**7.5**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:22	7440-23-5	
Calcium	**9.6**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:22	7440-70-2	
Magnesium	**4.1**	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:22	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	1	08/22/22 15:10	08/23/22 18:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-38-2	
Barium	**0.028**	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 18:02	7440-41-7	
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:02	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	08/22/22 15:10	08/23/22 18:02	7440-43-9	
Chromium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7440-48-4	
Lead	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 18:02	7439-92-1	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	08/22/22 15:10	08/23/22 18:02	7439-98-7	
Selenium	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:02	7782-49-2	
Thallium	ND	mg/L	0.0010	1	08/22/22 15:10	08/23/22 18:02	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**90.9**	mg/L	25.0	1		08/19/22 08:47		
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**44.6**	mg/L	10.0	1		08/25/22 22:24		
Alkalinity,Bicarbonate (CaCO3)	**44.6**	mg/L	10.0	1		08/25/22 22:24		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**7.0**	mg/L	1.0	1		08/20/22 10:44	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	1		08/20/22 10:44	16984-48-8	
Sulfate	**5.4**	mg/L	1.0	1		08/20/22 10:44	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

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

Sample: BC-0.5.5 **Lab ID: 92621120003** Collected: 08/16/22 16:15 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**2.4**	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:27	7440-09-7	
Sodium	**8.6**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:27	7440-23-5	
Calcium	**10.3**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:27	7440-70-2	
Magnesium	**4.5**	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:27	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:08	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:08	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:08	7439-93-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**85.9**	mg/L	25.0	1		08/19/22 08:47		
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**48.5**	mg/L	10.0	1		08/25/22 22:30		
Alkalinity,Bicarbonate (CaCO3)	**48.5**	mg/L	10.0	1		08/25/22 22:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**7.7**	mg/L	1.0	1		08/20/22 10:58	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	1		08/20/22 10:58	16984-48-8	
Sulfate	**5.6**	mg/L	1.0	1		08/20/22 10:58	14808-79-8	

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ANALYTICAL RESULTS

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

Sample: BC-0.5.6 **Lab ID: 92621120004** Collected: 08/16/22 16:05 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**2.4**	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:41	7440-09-7	
Sodium	**8.7**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:41	7440-23-5	
Calcium	**10.5**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:41	7440-70-2	
Magnesium	**4.6**	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:41	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:14	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:14	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:14	7439-93-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**83.9**	mg/L	25.0	1		08/19/22 08:48		
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**47.3**	mg/L	10.0	1		08/25/22 22:35		
Alkalinity,Bicarbonate (CaCO3)	**47.3**	mg/L	10.0	1		08/25/22 22:35		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**7.9**	mg/L	1.0	1		08/20/22 11:13	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	1		08/20/22 11:13	16984-48-8	
Sulfate	**6.2**	mg/L	1.0	1		08/20/22 11:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

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

Sample: BC-0.5.7 **Lab ID: 92621120005** Collected: 08/16/22 16:25 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**2.4**	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:46	7440-09-7	
Sodium	**8.5**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:46	7440-23-5	
Calcium	**10.1**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:46	7440-70-2	
Magnesium	**4.4**	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:46	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:20	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:20	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:20	7439-93-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**90.9**	mg/L	25.0	1		08/19/22 08:49		
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**47.6**	mg/L	10.0	1		08/25/22 22:55		
Alkalinity,Bicarbonate (CaCO3)	**47.6**	mg/L	10.0	1		08/25/22 22:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**7.7**	mg/L	1.0	1		08/20/22 11:27	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	1		08/20/22 11:27	16984-48-8	
Sulfate	**4.3**	mg/L	1.0	1		08/20/22 11:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

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

Sample: BC-BR **Lab ID: 92621120006** Collected: 08/16/22 17:00 Received: 08/17/22 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Potassium	**2.4**	mg/L	0.20	1	08/19/22 15:44	08/20/22 00:50	7440-09-7	
Sodium	**8.2**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:50	7440-23-5	
Calcium	**10.2**	mg/L	1.0	1	08/19/22 15:44	08/20/22 00:50	7440-70-2	
Magnesium	**4.5**	mg/L	0.050	1	08/19/22 15:44	08/20/22 00:50	7439-95-4	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	1	08/22/22 15:10	08/23/22 18:26	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	08/22/22 15:10	08/23/22 18:26	7440-48-4	
Lithium	ND	mg/L	0.030	1	08/22/22 15:10	08/23/22 18:26	7439-93-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	**84.9**	mg/L	25.0	1		08/19/22 08:49		
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Green Bay							
Alkalinity, Total as CaCO3	**49.8**	mg/L	10.0	1		08/25/22 23:00		
Alkalinity,Bicarbonate (CaCO3)	**49.8**	mg/L	10.0	1		08/25/22 23:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	**7.7**	mg/L	1.0	1		08/20/22 11:42	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	1		08/20/22 11:42	16984-48-8	
Sulfate	**5.8**	mg/L	1.0	1		08/20/22 11:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

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

QC Batch: 718462
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3745239 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

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

LABORATORY CONTROL SAMPLE: 3745240

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745241 3745242

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

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

QC Batch: 718742
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3746438 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

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

LABORATORY CONTROL SAMPLE: 3746439

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746747 3746748

Parameter	Units	92620540002 Result	MS 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	0.11	113	113	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20	

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

REPORT OF LABORATORY ANALYSIS

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.: 92621120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746747 3746748

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

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REPORT OF LABORATORY ANALYSIS

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.: 92621120

QC Batch: 718207 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3744034 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

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

LABORATORY CONTROL SAMPLE: 3744035

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

SAMPLE DUPLICATE: 3744037

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

SAMPLE DUPLICATE: 3744488

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

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REPORT OF LABORATORY ANALYSIS

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.: 92621120

QC Batch: 424462 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 2444373 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

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

LABORATORY CONTROL SAMPLE: 2444374

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2444375 2444376

Parameter	Units	92621107001 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	30.2	200	200	237	238	104	104	80-120	0	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.: 92621120

QC Batch: 718269
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

METHOD BLANK: 3744375 Matrix: Water
Associated Lab Samples: 92621120001, 92621120002, 92621120003, 92621120004, 92621120005, 92621120006

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

LABORATORY CONTROL SAMPLE: 3744376

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744377 3744378

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744379 3744380

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

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REPORT OF LABORATORY ANALYSIS

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.: 92621120

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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.: 92621120

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92621120001	**BC-0.8a**	EPA 3010A	718462	EPA 6010D	718518
92621120002	**BC-0.3**	EPA 3010A	718462	EPA 6010D	718518
92621120003	**BC-0.5.5**	EPA 3010A	718462	EPA 6010D	718518
92621120004	**BC-0.5.6**	EPA 3010A	718462	EPA 6010D	718518
92621120005	**BC-0.5.7**	EPA 3010A	718462	EPA 6010D	718518
92621120006	**BC-BR**	EPA 3010A	718462	EPA 6010D	718518
92621120001	**BC-0.8a**	EPA 3005A	718742	EPA 6020B	718842
92621120002	**BC-0.3**	EPA 3005A	718742	EPA 6020B	718842
92621120003	**BC-0.5.5**	EPA 3005A	718742	EPA 6020B	718842
92621120004	**BC-0.5.6**	EPA 3005A	718742	EPA 6020B	718842
92621120005	**BC-0.5.7**	EPA 3005A	718742	EPA 6020B	718842
92621120006	**BC-BR**	EPA 3005A	718742	EPA 6020B	718842
92621120001	**BC-0.8a**	SM 2540C-2015	718207		
92621120002	**BC-0.3**	SM 2540C-2015	718207		
92621120003	**BC-0.5.5**	SM 2540C-2015	718207		
92621120004	**BC-0.5.6**	SM 2540C-2015	718207		
92621120005	**BC-0.5.7**	SM 2540C-2015	718207		
92621120006	**BC-BR**	SM 2540C-2015	718207		
92621120001	**BC-0.8a**	SM 2320B	424462		
92621120002	**BC-0.3**	SM 2320B	424462		
92621120003	**BC-0.5.5**	SM 2320B	424462		
92621120004	**BC-0.5.6**	SM 2320B	424462		
92621120005	**BC-0.5.7**	SM 2320B	424462		
92621120006	**BC-BR**	SM 2320B	424462		
92621120001	**BC-0.8a**	EPA 300.0 Rev 2.1 1993	718269		
92621120002	**BC-0.3**	EPA 300.0 Rev 2.1 1993	718269		
92621120003	**BC-0.5.5**	EPA 300.0 Rev 2.1 1993	718269		
92621120004	**BC-0.5.6**	EPA 300.0 Rev 2.1 1993	718269		
92621120005	**BC-0.5.7**	EPA 300.0 Rev 2.1 1993	718269		
92621120006	**BC-BR**	EPA 300.0 Rev 2.1 1993	718269		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A — Required Client Information:

Company:	ARCADIS - Atlanta
Address:	2839 Paces Ferry Rd
	Atlanta, GA 30339
Email:	warren.johnson@arcadis.com
Phone:	678.485.5298 Fax:
Requested Due Date:	5 day TAT

Section B — Required Project Information:

Report To:	Joju Abraham, Ben Hodges
Copy To:	Warren Johnson
Purchase Order #:	
Project Name:	Plant Arkwright - AP2
Project #:	

Section C — Invoice Information:

Attention:	Joju Abraham
Company Name:	GPC
Address:	
Pace Quote:	
Pace Project Manager:	Mayia.Parks@pacelabs.com,
Pace Profile #:	2239

Regulatory Agency

WO# : 92621120

92621120

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

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	CCR Appendix III[1]	Major Ions[2]	CCR Appendix IV[3]	Lithium	Residual Chlorine (Y/N)	
1	BC-0.8a	WS	G	8/16/2022	1555														X	X		X			
2	BC-0.3	WS	G	8/16/2022	1155														X	X		X			Dup Entry
3	BC-0.5.5	WS	G	8/16/2022	1615														X	X		X			
4	BC-0.5.6	WS	G	8/16/2022	1605														X	X		X			
5	BC-0.5.7	WS	G	8/16/2022	1625														X	X		X			
6	BC-BR	WS	G	8/16/2022	1700														X	X		X			
7																									
8																									
9																									
10																									
11																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
CCR Appendix III[1] - B, Ca, Cl, F, Sulfate, Total Dissolved Solids (TDS)	Arcadis	8/17/22	0600	Ryan Williams / Pace	8/17/22	0933 1500
Major Ions[2] - Mg, Na, K, total alkalinity, bicarbonate alkalinity	Ryan Williams / Pace	8/17/22	1300		8/17/22	1300
CCR Appendix IV[3] - Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium, Thallium, Radium 226, Radium 228						

SAMPLE CONDITIONS

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Garrett Glinkowski

SIGNATURE of SAMPLER:

DATE Signed: 8-17-22

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt
	Effective Date: 05/12/2022

Laboratory receiving samples:

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

Sample Condition Upon Receipt

Client Name: Arcadis

Project #

WO#: 92621120

PM: MP Due Date: 08/24/22

CLIENT: GA-ArcadAtl

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other:

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 8/17/22 CM

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

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

Thermometer: ☑ IR Gun ID: 214

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 4.8 **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 4.8

Temp should be above freezing to 6°C

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

USDA Regulated Soil (☐ N/A, water sample)

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

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

				Comments/Discrepancy:
Chain of Custody Present?	☑ 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	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: **Date:**

Project Manager SRF Review: **Date:**

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

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

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

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

Project #

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		2	1			1																							
2		2	1			1																							
3		2	1			1																							
4		2	1			1																							
5		2	1			1																							
6		2	1			1																							
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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

B.4 Data Quality Evaluation

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed three data packages from GEL Laboratories (GEL) for the analysis of water samples collected from August 30 to September 7, 2022, at the Georgia Power Arkwright Plant site. Samples were collected according to the Field Sampling Plan – Plant Arkwright (Amec Foster Wheeler, 2016).

Intended Use of Data: To delineate concentrations of constituents of concern in site groundwater.

Analyses requested included:

- SW-846 6020B – Metals by inductively coupled plasma - mass spectrometry (ICP/MS)
- SW-846 7470A – Mercury by manual cold-vapor
- EPA 300 Rev 2.1 – Chloride, fluoride, and sulfate by ion chromatography
- SM 2540C - 2015 – Total dissolved solids (TDS)
- SM 2320B – Total Alkalinity, Bicarbonate, Carbonate

Data were reviewed and validated as described in the field sampling plan and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020). The results of the review/validation are discussed in this Data Usability Summary (DUS) and the associated Laboratory Data Review Checklists.

DATA REVIEW/VALIDATION RESULTS

Introduction

Forty (40) groundwater samples, ten (10) field blanks, and five (5) field duplicate samples were analyzed for one or more of the analyses listed above. Table 1 lists the field identifications cross-referenced to laboratory identifications. Table 2 is a summary of qualified data. Tables 3a through 3e summarize field duplicate results.

Analytical Results

The data packages contain a minimum of one quality control batch per analytical method analyzed. The quality control batch identifies the laboratory QC samples that correspond to the designated field samples. Not detected results are reported as less than the value of the method detection limit (MDL).

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers with the paperwork filled out properly. The laboratory sample condition upon receipt forms indicates all samples were received at temperatures ranging from 2°C to 4°C. All samples were analyzed within the technical holding time. No data were qualified.

Calibrations

Case narratives indicate Initial and continuing calibration verification data were within method acceptance criteria.

Blanks

Laboratory Method Blanks. No contamination was detected in any of the laboratory method blanks with the following exceptions:

SDG 591798 & 592011

- Magnesium was detected in the method blank in batch 2312499 at a concentration of 0.0107 mg/L. All associated sample results were reported as either not detected or detected at concentrations greater than 10 times the blank and therefore no qualification was necessary.

SDG 592013 & 592398

- Magnesium was detected in the method blank in batch 2312858 at a concentration of 0.0253 mg/L. All associated sample results were reported as either not detected or detected at concentrations greater than 10 times the blank and therefore no qualification was necessary.

Field Blanks. Field blanks were analyzed for the full suite of sample analyses and all analytes were not detected with the following exceptions:

SDG 591798 & 592011

- Molybdenum was detected in the equipment blank EB-02 (09/02/2022) at a concentration below the laboratory Reporting Limit (RL). No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Two samples (ARAMW-4 and DUP-02) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias ("J+").

- Chloride was detected in the equipment blank EB-01 at a concentration above the laboratory RL and in the field blank FB-02 (both collected 08/31/2022) at a concentration below the RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Two samples (ARGWA-3 and ARGWC-15) had reported values less than 10 times the blank concentration and have been qualified as estimated with a high bias ("J+").

- Boron was detected in the equipment blank EB-01 (08/31/2022) at concentrations below the RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Six samples (ARGWA-24, ARGWA-3, ARGWC-15, ARGWC9, ARGWA-14, and ARGWC-10) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias ("J+").

SDG 592013 & 592398

- Chloride was detected in the equipment blank EB-01 (09/02/2022) at a concentration above the RL. Associated sample results were reported as detected greater than 10 times the blank concentration and therefore no qualification was necessary.

SDG 592388 & 592528

- Chloride was detected in the blanks EB-01 and EB-02 at a concentration below the RL and FB-01 and FB-02 (all collected 09/07/2022) at a concentration above the RL. No qualification was required for associated sample results reported as greater than 10 times the blank concentration. Four samples (AP1GWA-1, AP1GWA-2, AP1PZ-1, and AP1PZ-1) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias ("J+").

- Molybdenum was detected in the equipment blank EB-01 (09/07/2022) at a concentration below the RL. No qualification was required for associated sample results reported as not detected or as greater than 10 times the blank concentration. Four samples (AP1PZ-1, AP1PZ-9, AP1PZ-3, and AP1PZ-6) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias ("J+").

- Sulfate and barium were detected in the equipment blank EB-02 (09/07/2022) at a concentration below the RL and calcium was detected at a concentration above the RL. No qualification was required for associated sample results for barium and calcium reported as greater than 10 times the blank concentration. One sample (AP1GWA-2) had a reported value less than 10 times the blank concentration and has been qualified as estimated with a high bias ("J+").

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met the laboratory acceptance criteria for all analyses.

Matrix Spike/Matrix Spike Duplicates

Site-specific MS/MSD precision and accuracy results were within the laboratory acceptance criteria with the following exceptions:

SDG 591798 & 592011

- Chloride had a high percent recovery in the post spike sample in ARGWC-9 while the MS/MSD was not reported. Chloride has been qualified as estimated ("J") in this sample.

- Calcium had a high RPD in the serial dilution sample in ARGWA-5 while the MS/MSD had a sample concentration greater than four times the spike concentration. Calcium has been qualified as estimated ("J") in this sample.

- Calcium, boron, magnesium, manganese, and sodium sample concentrations in sample ARGWC-18 were greater than four times the spike concentration and therefore not appropriate for evaluation.

SDG 592013 & 592398

- Barium and boron had MS/MSD percent recoveries of less than 30% in sample AP1GWA-1. Barium and boron have been qualified as rejected ("R") in this sample.

SDG 592388 & 592528

- The same QC batch from SDG 592013 & 592398 including the sample AP1GWA-1 MS/MSD results was reported in this SDG. The same qualifications apply for this sample.

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria.

Field Precision

Five sets of field duplicate samples were collected for this sampling event (see Tables 3a – 3e for sample/duplicate identification and precision calculations). The calculated RPDs between sample and duplicate were within the QAPP acceptance criteria of 25% for all analytes detected above five times the RL. For results reported less than five times the RL, with a difference between sample and duplicate less than two times the RL are also considered acceptable (qualified "A*"). All field duplicate precision was considered acceptable.

Summary

The groundwater analytical data are usable for the purpose of determining current concentrations of COCs in this medium at the affected property. A summary of qualified data is presented in Table 2 below.

References:

Amec Foster Wheeler, 2016. Arkwright Field Sampling Plan. October.

United State Environmental Protection Agency (USEPA), 2020. National Functional Guidelines for Superfund Inorganic Methods Data Review. November.

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
EB-02	592011001	592011	09/02/2022
ARGWC-18	592011002	592011	09/02/2022
ARGWC-17	592011003	592011	09/02/2022
ARAMW-4	592011004	592011	09/02/2022
DUP-02	592011005	592011	09/02/2022
ARGWA-5	591798001	591798	08/30/2022
ARGWA-12	591798002	591798	08/30/2022
FB-01	591798003	591798	08/30/2022
ARGWA-24	591798004	591798	08/31/2022
ARGWA-3	591798005	591798	08/31/2022
ARGWA-13	591798006	591798	08/31/2022
ARGWC-7	591798007	591798	08/31/2022
ARAMW-6	591798008	591798	08/31/2022
ARGWC-15	591798009	591798	08/31/2022
ARGWC-9	591798010	591798	08/31/2022
ARGWA-14	591798011	591798	08/31/2022
ARGWC-8	591798012	591798	08/31/2022
ARGWC-10	591798013	591798	08/31/2022
FB-02	591798014	591798	08/31/2022
ARGWC-16	591798015	591798	08/31/2022
DUP-01	591798016	591798	08/31/2022
ARAMW-3	591798017	591798	08/31/2022
EB-01	591798018	591798	08/31/2022
ARGWC-22	592398001	592398	09/06/2022
ARGWC-23	592398002	592398	09/06/2022
DUP-01	592398003	592398	09/06/2022
ARAMW-7	592398004	592398	09/07/2022
ARGWA-19	592013001	592013	09/01/2022
ARGWC-21	592013002	592013	09/01/2022
ARAMW-1	592013003	592013	09/02/2022
FB-01	592013004	592013	09/02/2022
ARGWA-20	592013005	592013	09/02/2022
EB-01	592013006	592013	09/02/2022
ARAMW-8	592013007	592013	09/02/2022
ARAMW-2	592013008	592013	09/02/2022
ARGWA-20	592013009	592013	09/02/2022
AP1PZ-11	592528001	592528	09/08/2022
DUP-02	592528002	592528	09/08/2022
AP1PZ-2	592528003	592528	09/08/2022
AP1PZ-5	592528004	592528	09/08/2022
EB-01	592388001	592388	09/07/2022
AP1GWA-1	592388002	592388	09/07/2022

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
AP1GWA-2	592388003	592388	09/07/2022
FB-01	592388004	592388	09/07/2022
AP1PZ-1	592388005	592388	09/07/2022
AP1PZ-7	592388006	592388	09/07/2022
AP1PZ-10	592388007	592388	09/07/2022
FB-02	592388008	592388	09/07/2022
AP1PZ-4	592388009	592388	09/07/2022
DUP-01	592388010	592388	09/07/2022
AP1PZ-9	592388011	592388	09/07/2022
AP1PZ-8	592388012	592388	09/07/2022
EB-02	592388013	592388	09/07/2022
AP1PZ-3	592388014	592388	09/07/2022
AP1PZ-6	592388015	592388	09/07/2022

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
ARAMW-4	Molybdenum	J+	Field blank contamination
DUP-02	Molybdenum	J+	Field blank contamination
ARGWA-3	Chloride	J+	Field blank contamination
ARGWC-15	Chloride	J+	Field blank contamination
ARGWA-24	Boron	J+	Field blank contamination
ARGWA-3	Boron	J+	Field blank contamination
ARGWC-15	Boron	J+	Field blank contamination
ARGWC-9	Boron	J+	Field blank contamination
ARGWC-10	Boron	J+	Field blank contamination
AP1GWA-1	Chloride	J+	Field blank contamination
AP1GWA-2	Chloride	J+	Field blank contamination
AP1PZ-1	Chloride	J+	Field blank contamination
AP1PZ-8	Chloride	J+	Field blank contamination
AP1PZ-1	Molybdenum	J+	Field blank contamination
AP1PZ-9	Molybdenum	J+	Field blank contamination
AP1PZ-3	Molybdenum	J+	Field blank contamination
AP1PZ-6	Molybdenum	J+	Field blank contamination
AP1GWA-2	Sulfate	J+	Field blank contamination
ARGWC-9	Chloride	J	High PS recovery
ARGWA-5	Calcium	J	High SD RPD
AP1GWA-1	Barium	R	MS/MSD recoveries <30%
AP1GWA-1	Boron	R	MS/MSD recoveries <30%

J – Estimated data; the reported quantitation limit or sample concentration is approximated due to exceedance of one or more QC requirements.
J+ – The analyte was detected in an associated blank; estimated data with a high bias.
R – Rejected data due to one or more QC requirements.
UJ – The analyte was analyzed for but was detected at a level below the associated blank contamination. The associated value is an estimate and may be inaccurate or imprecise.

Table 3a – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
ARGWC-16 / DUP-01 (083122, 591798)	Barium	0.0383	0.0397	-3.59	A
	Potassium	3.71	NA	NC	NQ
	Selenium	0.00287 J	NA	NC	NQ
	Boron	0.101	0.11	-8.53	A
	Calcium	42.4	43.2	-1.87	A
	Magnesium	31.9	NA	NC	NQ
	Manganese	0.327	NA	NC	NQ
	Sodium	15	NA	NC	NQ
	Chloride	5.67	5.74	-1.23	A
	Sulfate	243	242	0.41	A
	TDS	375	373	0.53	A
	Alkalinity	19	NA	NC	NQ
	Bicarbonate	19	NA	NC	NQ

[a] RPD = ((SR - DR)*200)/(SR + DR)
A - Acceptable Data.
A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.
J – Estimated detected.
NA – Not analyzed
NC – Not calculated
NQ – Not qualified

Table 3b – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
ARAMW-4 / DUP-02 (090222, 592011)	Arsenic	0.00339 J	0.00307 J	NC	A*
	Barium	0.0374	0.0358	4.37	A
	Cobalt	0.00411	0.00392	NC	A*
	Lithium	0.0117	0.0117	NC	A*
	Molybdenum	0.000288 J	0.000263 J	NC	A*
	Boron	0.477	0.471	NC	A*
	Calcium	240	230	4.26	A
	Magnesium	128	NA	NC	NQ
	Chloride	4.58	4.64	-1.30	A
	Fluoride	0.0590 J	0.0555 J	NC	A*
	Sulfate	1080	1080	0.00	A

[a] RPD = ((SR - DR)*200)/(SR + DR)
A - Acceptable Data.
A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.
J – Estimated detected.
NA – Not analyzed
NC – Not calculated
NQ – Not qualified

Table 3c – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
ARGWC-23/ DUP-01 (090622, 592388)	Barium	0.0939	0.0899	4.35	A
	Cobalt	0.000588 J	0.000587 J	NC	A*
	Lithium	0.0578	0.0573	0.87	A
	Magnesium	11.6	NA	NC	NQ
	Manganese	0.417	NA	NC	NQ
	Molybdenum	0.067	0.0677	1.04	A
	Boron	0.458	0.426	7.24	A
	Calcium	65.2	68.4	4.79	A
	TDS	305	294	3.67	A
	Alkalinity	180	NA	NC	NQ
	Bicarbonate	180	NA	NC	NQ
	Chloride	3.73	3.66	1.89	A
	Fluoride	0.362	0.358	NC	A*
	Sulfate	65.3	66.9	2.42	A

[a] RPD = ((SR - DR)*200)/(SR + DR)
A - Acceptable Data.
A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.
J – Estimated detected.
NA – Not analyzed
NC – Not calculated
NQ – Not qualified

Table 3d – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
AP1PZ-4 / DUP-01 (090622, 592398)	Barium	0.0426	0.043	-0.93	A
	Cobalt	0.000335 J	0.000327 J	NC	A*
	Lithium	0.00652 J	0.00664 J	NC	A*
	Molybdenum	0.00233	0.0023	1.30	A
	Boron	3.72	3.68	1.08	A
	Calcium	370	381	-2.93	A
	TDS	2210	2230	-0.90	A
	Chloride	5.1	5.13	-0.59	A
	Fluoride	0.249	0.243	NC	A*
	Sulfate	1420	1430	-0.70	A

[a] RPD = ((SR - DR)*200)/(SR + DR)
A - Acceptable Data.
A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.
J – Estimated detected.
NA – Not analyzed
NC – Not calculated
NQ – Not qualified

Table 3e – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
AP1PZ-11/ DUP-02 (090822, 592528)	Barium	0.0221	0.0216	2.29	A
	Molybdenum	0.00136	0.00116	NC	A*
	Boron	0.163	0.158	3.12	A
	Calcium	27.3	26.7	2.22	A
	TDS	198	199	-0.50	A
	Chloride	1.45	1.41	2.80	A
	Fluoride	0.173	0.176	NC	A*
	Sulfate	52.3	52.9	-1.14	A

[a] RPD = ((SR - DR)*200)/(SR + DR)
A - Acceptable Data.
A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.
J – Estimated detected.
NA – Not analyzed
NC – Not calculated
NQ – Not qualified

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed three data packages from GEL Laboratories (GEL) for the analysis of water samples collected from August 30 to September 7, 2022, at the Georgia Power Arkwright Plant site. Samples were collected according to the Field Sampling Plan – Plant Arkwright (Amec Foster Wheeler, 2016).

Intended Use of Data: To delineate concentrations of constituents of concern in site groundwater.

Analyses requested included:

- EPA Method 904 – Radium 228 by Gas Flow Proportional Counting
- EPA Method 903.1 Mod – Radium 226

Data were reviewed and validated as described in the field sampling plan and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020). The results of the review/validation are discussed in this Data Usability Summary (DUS) and the associated Laboratory Data Review Checklists.

DATA REVIEW/VALIDATION RESULTS

Introduction

Forty (40) groundwater samples, ten (10) field blanks, and five (5) field duplicate samples were analyzed for one or more of the analyses listed above. Table 1 lists the field identifications cross-referenced to laboratory identifications. Table 2 is a summary of qualified data. Tables 3a through 3h summarize field duplicate results.

Analytical Results

The data packages contain a minimum of one quality control batch per analytical method analyzed. The quality control batch identifies the laboratory QC samples that correspond to the designated field samples. Not detected results are reported as less than the value of the method detection limit (MDL).

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers with the paperwork filled out properly. The laboratory sample condition upon receipt forms indicates all samples were received at temperatures ranging from 1.9°C to 3.2°C. All samples were analyzed within the technical holding time. No data were qualified.

Calibrations

Case narratives indicate Initial and continuing calibration verification data were within method acceptance criteria.

Blanks

Laboratory Method Blanks. No contamination was detected in any of the laboratory method blanks.

Field Blanks. Field blanks were analyzed for the full suite of sample analyses and all analytes were not detected with the following exceptions:

SDG 591802 & 592012

- Radium 226 was detected in the field blank FB-01 (08/30/2022) at a concentration above the laboratory Reporting Limit (RL). No qualification was required for associated sample results reported as not detected ("U").

SDG 592014 & 592399

- Radium 226 was detected in the equipment blank EB-01 and field blank FB-01 (09/02/2022) at concentrations below the RL. Associated sample results were reported as detected greater than 10 times the blank concentration and therefore no qualification was necessary. Four samples (ARAMW-1, ARGWA-20, ARAMW-8, and ARAMW-2) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias ("J+").

SDG 592396 & 592534

- Radium 226 was detected in the blanks EB-02 (09/07/2022) at a concentration below the RL. No qualification was required for associated sample results reported as not detected. Seven samples (AP1GWA-1, AP1GWA-2, AP1PZ-4, AP1PZ-9, AP1PZ-8, AP1PZ-3, and AP1PZ-6) had a reported value less than 10 times the blank concentration and have been qualified as estimated with a high bias ("J+").

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met the laboratory acceptance criteria for all analyses.

Matrix Spike/Matrix Spike Duplicates

Site-specific MS/MSD precision and accuracy results were within the laboratory acceptance criteria.

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria with the following exceptions.

SDG 592396 & 592534

- Radium 226 had a high laboratory duplicate RPD in sample AP1GWA-1 and has been qualified as estimated ("J").

Field Precision

Five sets of field duplicate samples were collected for this sampling event (see Tables 3a – 3e for sample/duplicate identification and precision calculations). The calculated RPDs between sample and duplicate were within the QAPP acceptance criteria of 25% for all analytes detected above five times the RL. For results reported less than five times the RL, with a difference between sample and duplicate less than two times the RL are also considered acceptable (qualified "A*"). All field duplicate precision was considered acceptable.

Summary

The groundwater analytical data are usable for the purpose of determining current concentrations of COCs in this medium at the affected property. A summary of qualified data is presented in Table 2 below.

References:

Amec Foster Wheeler, 2016. Arkwright Field Sampling Plan. October.

United State Environmental Protection Agency (USEPA), 2020. National Functional Guidelines for Superfund Inorganic Methods Data Review. November.

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
EB-02	592012001	592012	09/02/2022
ARGWC-18	592012002	592012	09/02/2022
ARGWC-17	592012003	592012	09/02/2022
ARAMW-4	592012004	592012	09/02/2022
DUP-02	592012005	592012	09/02/2022
ARGWA-5	591802001	591802	08/30/2022
ARGWA-12	591802002	591802	08/30/2022
FB-01	591802003	591802	08/30/2022
ARGWA-24	591802004	591802	08/31/2022
ARGWA-3	591802005	591802	08/31/2022
ARGWA-13	591802006	591802	08/31/2022
ARGWC-7	591802007	591802	08/31/2022
ARAMW-6	591802008	591802	08/31/2022
ARGWC-15	591802009	591802	08/31/2022
ARGWC-9	591802010	591802	08/31/2022
ARGWA-14	591802011	591802	08/31/2022
ARGWC-8	591802012	591802	08/31/2022
ARGWC-10	591802013	591802	08/31/2022
FB-02	591802014	591802	08/31/2022
ARGWC-16	591802015	591802	08/31/2022
DUP-01	591802016	591802	08/31/2022
ARAMW-3	591802017	591802	08/31/2022
EB-01	591802018	591802	08/31/2022
ARGWC-22	592399001	592399	09/06/2022
ARGWC-23	592399002	592399	09/06/2022
DUP-01	592399003	592399	09/06/2022
ARAMW-7	592399004	592399	09/07/2022
ARGWA-19	592014001	592014	09/01/2022
ARGWC-21	592014002	592014	09/01/2022
ARAMW-1	592014003	592014	09/02/2022
FB-01	592014004	592014	09/02/2022
ARGWA-20	592014005	592014	09/02/2022
EB-01	592014006	592014	09/02/2022
ARAMW-8	592014007	592014	09/02/2022
ARAMW-2	592014008	592014	09/02/2022
AP1PZ-11	592534001	592534	09/08/2022
DUP-02	592534002	592534	09/08/2022
AP1PZ-2	592534003	592534	09/08/2022
AP1PZ-5	592534004	592534	09/08/2022
EB-01	592396001	592396	09/07/2022
AP1GWA-1	592396002	592396	09/07/2022
AP1GWA-2	592396003	592396	09/07/2022

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
FB-01	592396004	592396	09/07/2022
AP1PZ-1	592396005	592396	09/07/2022
AP1PZ-7	592396006	592396	09/07/2022
AP1PZ-10	592396007	592396	09/07/2022
FB-02	592396008	592396	09/07/2022
AP1PZ-4	592396009	592396	09/07/2022
DUP-01	592396010	592396	09/07/2022
AP1PZ-9	592396011	592396	09/07/2022
AP1PZ-8	592396012	592396	09/07/2022
EB-02	592396013	592396	09/07/2022
AP1PZ-3	592396014	592396	09/07/2022
AP1PZ-6	592396015	592396	09/07/2022

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
ARAMW-1	Radium 226	J+	Field blank contamination
ARGWA-20	Radium 226	J+	Field blank contamination
ARAMW-8	Radium 226	J+	Field blank contamination
ARAMW-2	Radium 226	J+	Field blank contamination
AP1GWA-1	Radium 226	J+	Field blank contamination, Lab Duplicate RPD
AP1GWA-2	Radium 226	J+	Field blank contamination
AP1PZ-4	Radium 226	J+	Field blank contamination
AP1PZ-9	Radium 226	J+	Field blank contamination
AP1PZ-8	Radium 226	J+	Field blank contamination
AP1PZ-3	Radium 226	J+	Field blank contamination
AP1PZ-6	Radium 226	J+	Field blank contamination

Table 3a – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
ARGWC-16 / DUP-01 (083122, 591802)	Radium 228	-0.688 U	0.202 U	NC	A*
	Radium 226	0.493	1.8	NC	A*
	Radium 226+228	0.493	2	NC	A*

[a] RPD = ((SR - DR)*200)/(SR + DR)
A - Acceptable Data.
A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.
J – Estimated detected.
NA – Not analyzed
NC – Not calculated
NQ – Not qualified

Table 3b – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
ARAMW-4 / DUP-02 (090222, 592012)	Radium 228	0.493 U	1.25 U	NC	A*
	Radium 226	0.455	0.983	NC	A*
	Radium 226+228	0.947	2.23	NC	A*

[a] RPD = ((SR - DR)*200)/(SR + DR)
A - Acceptable Data.
A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.
J – Estimated detected.
NA – Not analyzed
NC – Not calculated
NQ – Not qualified

Table 3c – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
ARGWC-23/ DUP-01 (090622, 592399)	Radium 228	1.57 U	0.272 U	NC	A*
	Radium 226	0.79	0.363 U	NC	A*
	Radium 226+228	2.36	0.635	NC	A*

[a] RPD = ((SR - DR)*200)/(SR + DR)
A - Acceptable Data.
A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.
J – Estimated detected.
NA – Not analyzed
NC – Not calculated
NQ – Not qualified

Table 3d – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
AP1PZ-4 / DUP-01 (090622, 592396)	Radium 228	1.73 U	-0.991 U	NC	A*
	Radium 226	0.59	0.374 U	NC	A*
	Radium 226+228	2.32	0.374	NC	A*

[a] RPD = ((SR - DR)*200)/(SR + DR)
A - Acceptable Data.
A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.
J – Estimated detected.
NA – Not analyzed
NC – Not calculated
NQ – Not qualified

Table 3e – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD[a]	Qualified
AP1PZ-11/ DUP-02 (090822, 592534)	Radium 228	0.891 U	-0.177 U	NC	A*
	Radium 226	0.166 U	0.613	NC	A*
	Radium 226+228	1.06	0.613	NC	A*

[a] RPD = ((SR - DR)*200)/(SR + DR)
A - Acceptable Data.
A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.
J – Estimated detected.
NA – Not analyzed
NC – Not calculated
NQ – Not qualified