

Assessment of Corrective Measures Report

Georgia Power Company – Plant Arkwright

Ash Pond 3 Landfill and Monofill Project No.: 6122201429

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CERTIFICATION STATEMENT

Assessment of Corrective Measures Report

Plant Arkwright
Ash Pond 3 Landfill and Monofill

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wood.

LIST OF ACROYMNS

ACM Assessment of Corrective Measures

AP Ash Pond

ASD Alternate Source Demonstration
CCR Coal Combustion Residuals
CFR Code of Federal Regulations
EPD Environmental Protection Division

ft feet

ft bgs feet below ground surface

ft/ft feet per foot

GA EPD Georgia Environmental Protection Division

GCL Geosynthetic Clay Liner GPC Georgia Power Company

GWPS Groundwater Protection Standard ISS In-Situ Solidification/Stabilization

ISCO In-Situ Chemical Oxidation ISCR In-Situ Chemical Reduction

mg/L milligrams per liter

MNA Monitored Natural Attenuation O&M Operations and Maintenance

P&T Pump and Treat
PE Professional Engineer
PRB Permeable Reactive Barrier
PWR Partially Weathered Rock
SSL Statistically Significant Level

US EPA United States Environmental Protection Agency

ZVI Zero Valent Iron



1.0 INTRODUCTION

In accordance with the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, Wood Environment and Infrastructure Solutions, Inc. (Wood) has prepared this *Assessment of Corrective Measures (ACM)* Report for Georgia Power Company (GPC) Plant Arkwright (the Site) Ash Pond 3 (AP-3) Landfill and Monofill.

Pursuant to GA EPD Rule 391-3-4.10(6)(a), this ACM evaluates potential corrective measures to address the statistically significant levels (SSLs) of molybdenum and cobalt identified in the 2020 Annual Groundwater Monitoring and Corrective Action Report (Wood, 2020a).

A Notice of ACM was submitted to the GA EPD July 9, 2020 following the exceedance of molybdenum and cobalt identified during the April 2020 sampling event. GPC submitted a 60-day extension until December 4, 2020 for completion of this ACM Report as documented on October 7, 2020.

Three delineation groundwater piezometers were installed to assess the extent of cobalt and molybdenum in groundwater at the Site. Molybdenum is horizontally and vertically delineated to below the groundwater protection standards (GWPS) near well ARGWC-8 that shows SSLs for molybdenum. The SSL of cobalt in well ARGWC-17 is horizontally delineated at downgradient monitoring well ARGWC-18. Vertical delineation of cobalt at ARAMW-4 shows a minor exceedance (0.0046 mg/L in September 2020) above the GWPS of 0.0025 mg/L at delineation piezometer ARAMW-4. Additional sampling to establish a data set for statistical analysis and, if required, well installation will be performed as necessary to meet compliance with GA EPD Rule 391-3-4.10 and reported in the next semi-annual report. A timeline for the reporting is provided in Section 5 of this report.

Georgia Power conducted a human health and ecological risk evaluation to evaluate constituents that exhibit SSLs in groundwater, cobalt and molybdenum, at the AP-3 Landfill and Monofill. The risk evaluation used a conservative, health-protective approach that is consistent with United States Environmental Protection Agency (USEPA) risk assessment guidance, Georgia EPD regulations and guidance, and standard practice for risk assessment in the State of Georgia. As part of the risk evaluation, a well survey of potential groundwater wells within a three-mile radius of AP-3 Landfill and Monofill was conducted and consisted of reviewing federal, state, and county records and online sources, in addition to conducting a windshield survey of the area. The risk evaluation relied on groundwater data collected by Georgia Power from September 2016 to April 2020 in compliance with state CCR rules. Based upon this risk evaluation, which included multiple conservative assumptions, concentrations of cobalt and

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molybdenum detected in groundwater at AP-3 Landfill and Monofill are not expected to pose a risk to human health or the environment. The Risk Evaluation Report (Wood, 2020b) and associated well survey are provided as **Appendix A**.

This ACM is the first step in identifying viable corrective measures to address SSLs in groundwater at the AP-3 Landfill and Monofill site. Based on results of the ACM, further evaluation may be performed, site-specific studies completed, and a corrective action plan developed and implemented pursuant to GA EPD Rule 391-3-4-.10(6)(a).

1.1 Purpose

The purpose of this ACM is to begin the process of selecting corrective measure(s) for groundwater at AP-3 Landfill and Monofill. This process is typically iterative and may be composed of multiple steps to analyze the effectiveness of corrective measures to address the potential migration of CCR constituents in groundwater at the AP-3 Landfill and Monofill.

Once potential corrective measures are identified in this ACM, they are further evaluated using the criteria outlined in GA EPD Rule 391-4-.10(6)(a), which states that corrective measures assessment include an analysis of the effectiveness of potential corrective measures that considers the following:

- Performance.
- Reliability,
- Ease of implementation,
- Potential impacts (including safety, cross-media, and exposure)
- Time required to begin and complete the remedy, and
- Any institutional requirements (e.g., permitting or environmental and public health requirements) that could affect implementation of the remedy.

These evaluation criteria are considered for each potential corrective measure. Further evaluation of the technologies, which may include additional field studies, bench testing, and field pilot testing, will be required to select the appropriate corrective measure(s).

1.2 Site Location and Description

Plant Arkwright is located in Bibb County, Georgia approximately 6 miles northwest of the city of Macon (**Figure 1**). The physical address of the plant is 5241 Plant Arkwright Rd, Macon, GA

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31210. The AP-3 Landfill was initially constructed as a surface impoundment prior to 1958 but did not receive CCR material from the Plant Arkwright facility until the 1970s. Plant Arkwright was retired in 2002 and decommissioned in 2003. The 46-acre AP-3 Landfill and Monofill is located between Arkwright Road to the east and an industrial area to the west.

Directly to the north of the Site (upgradient) lies a wooded and residential area, and to the south is Beaverdam Creek which flows through a heavily wooded area. The AP-3 Landfill's long axis is approximately half a mile long oriented mostly north south with the short axis being approximately one-tenth of a mile wide. The Ash Monofill lies directly to the east of the AP-3 Landfill with a drainage ditch separating the two units.

1.3 Pond Closure

GPC officially closed the AP-3 Landfill and Monofill in 2010 with EPD's approval and in accordance with the solid waste landfill regulations specified by GA EPD Rule 391-3-4, in effect at the time of its closure. The AP-3 Landfill and Monofill is subject to the requirements of relevant portions of GA EPD Rule 391-3-4-.10. The CCR unit referred to as the AP-3 Landfill and Monofill is defined as an inactive CCR Landfill per GA EPD Rule 391-3-4-.10(2)(a)(3).

Closure construction of the AP-3 Landfill and Monofill utilized a geosynthetic clay liner (GCL) overlain by 18 inches of cover soil. A closure certificate was issued by GA EPD for the AP-3 Landfill and Monofill on August 19, 2010. Corrective measures discussed in this ACM are being evaluated to address SSLs in groundwater at the compliance boundary.

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2.0 GEOLOGY AND GROUNDWATER FLOW

The following section summarizes the geologic and hydrogeologic conditions at the Plant Arkwright AP-3 Landfill and Monofill as described in the *2020 Annual Groundwater Monitoring and Corrective Action Report* submitted to the GA EPD as part of Georgia's reporting requirements under GA EPD Rule 391-3-4-.10(6)(a).

2.1 Geology

The Plant Arkwright Site is located along the southern edge of the Washington Slope physiographic district within the Piedmont Physiographic Province (Clark and Zisa, 1976). The Washington Slope 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. Streams follow the structure of underlying crystalline rocks eastward toward the Ocmulgee River.

Bedrock in the region is composed of moderate- to high-grade metamorphic rocks, such as biotite-granite gneiss, schist, and amphibolite, and igneous rocks like granite. In the southernmost Piedmont, in the area of the Site, bedrock is predominantly composed of biotite gneiss. The top of bedrock surface is highly weathered, and where exposed, is generally soft and friable (LeGrand, 1962). The Site is generally composed of fine to medium sandy silt to silty sand underlain by silty sand saprolite. Borings performed in the earlier Site investigations indicated extremely weathered quartz-feldspathic gneiss, hornblende gneiss, and schist.

The general geology beneath AP-3 Landfill and Monofill consists of clays, silty and sandy clays, silty sands, sandy silts, and minor gravel at depth, underlain by silty sand saprolite and bedrock. Historic borings indicate bedrock occurs at depths ranging from approximately 14 feet to 63 feet below ground surface and consists of weathered quartzofeldspathic gneiss, hornblende gneiss, and schist. Boring logs also indicate a relatively thin zone of partially weathered rock (PWR) above bedrock which ranges in thickness from 1 to 4 feet in the southern and eastern portions of the Site and up to 14 feet in the northeastern portion of the Site.

2.2 Hydrogeology and Groundwater Flow

The uppermost aquifer at the Site consists of two hydrostratigraphic units: the water table hydrostratigraphic unit and the underlying shallow fractured bedrock hydrostratigraphic unit. The water table unit is composed of the unconsolidated silty sands and sandy silts with clays and variable thicknesses of PWR mantling the bedrock surface. The water table unit is hydraulically connected to the underlying bedrock through fractures in the partially weathered

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and fractured bedrock. The monitoring well network for the AP-3 Landfill and Monofill (**Figure 2: Monitoring Network Well Location Map**) monitors the water table zone and the shallow weathered and fractured bedrock.

Slug testing data from the uppermost aquifer at the Site reflect a range of horizontal hydraulic conductivities from 1 x 10⁻³ to 1 x 10⁻⁴ centimeters per second. Groundwater level monitoring data from the Site show stable water level trends and the potentiometric maps reflect groundwater generally flowing to the south and southeast across the AP-3 Landfill and Monofill. Potentiometric surface maps are presented in **Figure 3**: **Potentiometric Surface April 2020**, **Figure 4**: **Potentiometric Surface August 2020**, and **Figure 5**: **Potentiometric Surface September 2020** clearly displaying the relatively stable water table at the AP-3 Landfill and Monofill between April 2020 and September 2020.

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3.0 NATURE AND EXTENT DELINEATION

The following sections describe monitoring-related field and assessment activities performed at the AP-3 Landfill and Monofill to date to delineate the nature and extent of SSLs in groundwater and evaluation of potential corrective measures to address them.

3.1 Groundwater Monitoring & SSL Constituents

In accordance with GA EPD Rule 391-3-4-.10, a groundwater monitoring system was installed at the AP-3 Landfill and Monofill which (1) consists of a sufficient number of wells, (2) is installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer, and (3) represents the groundwater quality both upgradient of the unit (i.e., background conditions) and passing the waste boundary of the unit. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions. The monitoring well network was certified by a professional engineer (PE). The certified compliance monitoring well network for AP-3 Landfill and Monofill consists of a total of 13 monitoring wells: 5 upgradient wells and 8 downgradient wells. The locations of the wells for the certified monitoring well network along with the locations of the 3 assessment piezometers are shown on Figure 2 and well construction details are listed in Table 1: Summary of Monitoring Network Well Construction Details. These assessment piezometers are intended to characterize the nature and extent of constituents showing SSLs in the detection monitoring wells. Groundwater is currently monitored in the AP-3 Landfill and Monofill wells under the assessment monitoring program pursuant to GA EPD Rule 391-3-4.10. Additional groundwater monitoring details are provided in the 2020 Annual Groundwater Monitoring and Corrective Action Report (Wood, 2020a).

3.1.1 SSLs for Appendix IV Constituents

Groundwater monitoring data collected during the semi-annual monitoring event in April 2020 were statistically analyzed pursuant to GA EPD Rule 391-3-4.10(6) and in general accordance with the *US EPA document Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (US EPA, 2009). Following Georgia CCR Rule requirements, separate GWPS were established for statistical comparisons of Appendix IV assessment monitoring parameters. Appendix IV GWPS are provided in **Table 2: Summary of Groundwater Protection Standards**. Appendix IV parameters detected during the semi-annual monitoring event were compared to GWPS to assess if concentrations in compliance wells statistically exceeded the GWPS. Details regarding the statistical analyses are provided in the *2020 Annual Groundwater and Corrective Action Monitoring Report* (Wood, 2020a). Statistical analyses of the April 2020 analytical data identified SSLs of molybdenum and cobalt the following wells during both sampling events:

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Molybdenum: ARGWC-8

• Cobalt: ARGWC-17

Pursuant to GA EPD Rule 391-3-4.10(6)(a), an ACM was initiated for cobalt and molybdenum for the AP-3 Landfill and Monofill on July 9, 2020. Additionally, a sixty-day extension was submitted to GA EPD on October 7, 2020.

3.2 Field Investigation Activities

Subsurface investigations have been conducted at the Site. The results of these subsurface investigations are discussed in the 2019 Semiannual and 2020 Annual Groundwater Monitoring & Corrective Action Reports, which included: soil and rock borings, rock coring, piezometer and monitoring well installation, slug testing, and groundwater sampling. Three piezometers (ARAMW-3, ARAMW-4, and ARAMW-6) were installed in November 2019 to assess the extent of groundwater conditions near monitoring wells ARGWC-8 and ARGWC-17. These piezometers were converted to delineation wells and are currently sampled as part of the assessment monitoring program. Detailed boring and well construction logs for these two new wells are provided in Appendix B: Boring and Well Construction Logs. The locations of these three delineation wells are shown on Figure 2 and well construction details are also provided in Table 1. Geologic and hydrogeologic cross-sections are presented Figure 6: Cross Section A-A' and B-B', Figure 7: Cross Section C-C', and Figure 8: Cross Section D-D' and E-E'

Pursuant to GA EPD Rule 391-3-4.10(6)(a), groundwater in the vicinity of the AP-3 Landfill and Monofill will continue to be monitored during the ACM phase in accordance with the assessment monitoring program established for the CCR unit in November 2019. Groundwater samples were collected from the thirteen monitoring wells in August 2019 and analyzed for the full suite of the Appendix IV parameters per GA EPD Rule 391-3-4.10(6). The thirteen AP-3 Landfill and Monofill groundwater monitoring network wells and the three piezometers were sampled for the full Appendix IV constituent list in August 2020 for assessment monitoring constituent screening. The second 2020 semi-annual sampling event was conducted in September 2020 and the thirteen wells and three piezometers were sampled for Appendix III and detected Appendix IV constituents. This was the first semiannual sampling event for delineation wells ARAMW-3, ARAMW-4, and ARAMW-6. These three delineation piezometers will continue to be sampled to establish a data set for statistical analysis.

To assist in evaluating an alternate source demonstration, the upgradient and downgradient wells and piezometers were sampled in June 2020 and analyzed for boron, fluoride, cobalt, lithium, molybdenum, and geochemical characterization constituents.

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Wells ARAMW-3 and ARAMW-6 were initially sampled in January 2020 for molybdenum and boron and ARAMW-4 was sampled for cobalt and boron. ARAMW-4 was resampled in February 2020 to verify cobalt concentrations. The 2020 analytical results reported for the vertical and horizontal delineation wells (ARAMW-3 and ARAMW-6) for well ARGWC-8 show that molybdenum is vertically delineated; as the molybdenum concentrations are below the site-specific molybdenum GWPS. The vertical assessment well (ARAMW-4) for ARGWC-17 shows cobalt concentrations that are slightly above (0.0046 mg/L in September 2020) the site-specific GWPS (0.0025 mg/L) for cobalt. However, additional evaluation of cobalt concentrations over time will be conducted before installing additional vertical delineation wells. Horizontal and vertical delineation of constituents at the AP-3 Landfill and Monofill is depicted in April and September/October 2020 isoconcentration maps presented in Figure 9: Isoconcentration Map for Cobalt Ash Pond 3 – April 2020, Figure 10: Isoconcentration Map for Molybdenum Ash Pond 3 – April 2020, Figure 11: Isoconcentration Map for Molybdenum Ash Pond 3 – September/October 2020, and Figure 12: Isoconcentration Map for Molybdenum Ash Pond 3 – September/October 2020.

The groundwater analytical results from 2020 are summarized in **Table 3: Summary of Analytical Results**. Laboratory reports associated with the 2020 results are provided in **Appendix C**.

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4.0 GROUNDWATER CORRECTIVE MEASURES

4.1 Objectives of the Corrective Measures

In evaluating the effectiveness of potential corrective measures using the criteria listed in GA EPD Rule 391-3-4.10, including performance, reliability, ease of implementation, potential impacts, remedy duration, and institutional and public health requirements, the following criteria listed in GA EPD Rule 391-3-4.10 must be met by the corrective measure when selected:

- Protect human health and the environment;
- Attain applicable GWPS as specified pursuant to GA EPD Rule 391-3-4.10;
- Control the sources of releases to reduce or eliminate, to the maximum extent feasible, further releases of Appendix IV constituents to the environment;
- Remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible, considering factors such as avoiding inappropriate disturbance of sensitive ecosystems; and
- Comply with standards for management of wastes as specified in GA EPD Rule 391-3-4.10.

Corrective measures selected for evaluation for potential use at the AP-3 Landfill and Monofill are anticipated to satisfy the above criteria.

4.2 Summary of Corrective Measures

The capping of the AP-3 Landfill and Monofill in 2010 is a source control measure that has reduced the potential for migration of CCR constituents to groundwater. Corrective measures discussed in this ACM are being evaluated to address SSLs in groundwater at and downgradient of the compliance boundary of the unit.

This section presents potential corrective measures capable of remediating the Appendix IV groundwater constituents (i.e., cobalt and molybdenum) at the AP-3 Landfill and Monofill. Each corrective measure is evaluated relative to criteria specified in GA EPD Rule 391-3-4.10(6). **Table 4: Evaluation of Remedial Technologies** provides a comparative screening of the corrective measures discussed in Section 4.

The following potential corrective measures are considered in this ACM:

Geochemical Approaches (In-Situ Injection)

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- Hydraulic Containment and Dewatering (Pump and Treat)
- Monitored Natural Attenuation (MNA)
- Permeable Reactive Barrier (PRB)
- Phytoremediation
 Subsurface Vertical Barrier Walls

In-situ solidification/stabilization (ISS) is generally considered a viable option for either small source areas or targeted zones within a larger footprint. The AP-3 Landfill and Monofill covers approximately 46 acres and groundwater flow through bedrock fractures would make ISS not a viable corrective measure for the AP-3 Landfill and Monofill, and no detailed evaluation is provided in Table 4.

4.2.1 Geochemical Approaches (In-Situ Injection)

In-situ injections of reagents are a remediation technology for inorganic constituents such as molybdenum and cobalt. In-situ injections for inorganic constituents may be applied in three modes that influence solubility, mobility, and/or toxicity of inorganic constituents: (i) oxidation-reduction potential (redox) manipulation; (ii) adsorption to iron and other metal oxyhydroxides or various sulfate compounds under oxidizing groundwater conditions; and (iii) adsorption to, or coprecipitation with, iron or other metal sulfides under reducing conditions. This technology requires understanding of the subsurface transport and (geo)chemical characteristics and a thorough understanding of the reaction kinetics to ensure appropriate reagent dosing is applied to the subsurface. Often this technology is field evaluated in a relatively small area (i.e., a pilot test) to bolster the understanding of these factors prior to remedial selection, design, and/or implementation.

Cobalt and molybdenum can be precipitated and/or immobilized under different combinations of pH and redox conditions. A variety of pH and/or redox-altering technologies is available which can incorporate biological processes, chemical oxidants, and/or mechanical processes such as air sparging. These processes can be used to decrease the mobility of these constituents. Once precipitated, these minerals are often stable even if geochemical conditions revert to a different redox environment. However, if not properly designed and implemented, manipulating redox conditions without forming the desired compounds may increase the mobility of naturally occurring constituents such as iron, manganese, and arsenic.

Air sparging can be used to provide oxygen to the subsurface in an attempt to precipitate (or make more "sorptive") compounds that are generally more soluble and mobile under reducing conditions. This can also promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of constituents onto these mineral phases such as cobalt and molybdenum.

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If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption.

Furthermore, in-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility and/or bioavailability of certain inorganic compounds.

The key process limiting in-situ remedial implementation and effectiveness is the delivery of amendments within the area of interest. Mixing and contact with the target constituents are necessary and can be difficult to achieve in heterogeneous materials and/or fine-grained materials.

While the effectiveness of molybdenum attenuation using in-situ redox manipulations may be limited to some extent, due to slow reaction kinetics, the attenuation of cobalt is expected to occur under both aerobic (via sorption to iron or manganese oxides) and anaerobic conditions (via formation of sulfide minerals). Therefore, in-situ injection is a potentially viable corrective measure for molybdenum and cobalt in groundwater at the AP-3 Landfill and Monofill and will be retained for further evaluation.

4.2.2 Hydraulic Containment and Dewatering (Pump and Treat)

Generally, hydraulic containment (or control) refers to the use of groundwater extraction to artificially induce a hydraulic gradient and capture or control the migration of impacted groundwater. Groundwater pump and treat (P&T), is often considered to be a viable remedial technology at many sites (US EPA, 1996). This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water body or sewer system, reinjection into the aquifer, or reuse at the Site. Groundwater P&T is often relatively slow as a means to restore groundwater quality over a long-term period. However, P&T can be effective as a stand-alone remedy, a temporary (interim) measure, or in combination with another measure to provide hydraulic containment to limit constituent migration toward a potential receptor.

Groundwater extraction for hydraulic control can often effectively address the variety of inorganic constituents encountered at CCR sites, including molybdenum and cobalt. Extraction technologies also have the ability to overcome the limitations of in-situ injection-based technologies (i.e., subsurface mixing and contact with affected materials, access to impacted groundwater in lower permeability geologic formations). Space constraints are mainly limited to the above-ground conveyance and treatment component of a P&T system since extraction wells

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can generally be installed into relatively tight spaces at the edge of waste or other points of compliance.

Extracted groundwater may need to be treated prior to discharge (depending on discharge permit requirements), but does have the potential to be used for irrigation (e.g., of a cover system or other vegetated areas at Plant Arkwright). Therefore, P&T is a potentially viable corrective measure for molybdenum and cobalt in groundwater at the AP-3 Landfill and Monofill and will be retained for further evaluation.

4.2.3 Monitored Natural Attenuation

US EPA defines MNA as the reliance on natural attenuation processes (within the context of a carefully controlled and monitored site cleanup approach) to achieve site-specific remediation objectives within a time frame that is reasonable compared to that offered by other more active methods. The natural attenuation processes that are at work in such a remediation approach include a variety of physical, chemical, and/or biological processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of constituents in soil or groundwater. These in-situ processes include the following: dispersion; dilution; sorption; volatilization; radioactive decay; and chemical or biological stabilization, precipitation, transformation, or destruction of inorganic constituents (US EPA, 2015).

Attenuation mechanisms for inorganic constituents, such as molybdenum and cobalt are either physical (e.g., dilution, dispersion, flushing, and related processes) or chemical (e.g., sorption or oxidation reduction reactions). Both molybdenum and cobalt undergo sorption to iron and manganese oxides and depending on specific redox conditions, cobalt may also form sparingly soluble sulfide minerals via abiotic or biotic process.

The US EPA uses four phases to establish whether MNA can be successfully implemented for inorganics at a given site. The phases (or steps) include:

- 1. Demonstration that SSLs in groundwater are delineated and stable or decreasing.
- 2. Evaluation of the mechanisms and rates of attenuation.
- 3. Assessment if the capacity of the aquifer is sufficient to attenuate the mass of constituents in groundwater and that the immobilized constituents are stable and will not remobilize.

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4. Design of a performance monitoring program based on the mechanisms of attenuation and including a decision framework for consideration of a contingent remedy tailored to site-specific conditions should MNA not perform adequately.

A successful MNA approach requires a good understanding of hydrogeologic conditions and may require additional information and monitoring over an extended period of time. MNA may be a relatively slow remedy to obtain site closure when used in isolation; as such, MNA is frequently used in combination with other remedies, including source control.

MNA is a potentially viable corrective measure for molybdenum and cobalt in groundwater at the AP-3 Landfill and Monofill and will be retained for further evaluation.

4.2.4 Permeable Reactive Barriers

PRBs typically involve the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. PRBs can be installed in downgradient locations using conventional excavation methods or one-pass trenching method. Excavated trenches are backfilled with reactive media to create a barrier that treats dissolved constituents as they passively flow through the PRB with the groundwater (e.g., ITRC, 2011). These systems can either be constructed as continuous "walls" or as "funnel-and-gate" systems where (impermeable) slurry walls create a "funnel" that directs groundwater to permeable "treatment gates" filled with reactive materials. PRBs are typically keyed into an underlying low-permeability unit such as a clay layer.

PRBs can present a viable alternative for in-situ treatment of cobalt and molybdenum. The technology typically includes reactive media such as ZVI, biologically active media (to induce oxidizing or reducing conditions), or clays, apatite, zeolites, and/or peat moss (to promote ionic exchange and/or sorption). PRBs have proven to be effective in passively treating several inorganic constituents found at CCR sites, including cobalt and molybdenum (Ludwig et al. 2002). The use of PRBs for molybdenum has been tested, but additional site-specific testing is needed to confirm the applicability of this technology to remove molybdenum from groundwater since it has shown early breakthrough with ZVI-type media (Morrison et al., 2006). Careful testing is required to select the appropriate treatment media.

The installation depths of a PRB are generally limited to about 90 ft below ground surface (bgs). The installation of a PRB generally requires more space than extraction wells for a P&T system, but a PRB does not require above-ground treatment components. Therefore, the overall treatment footprint is likely to be smaller compared to a P&T system.

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Additional subsurface investigations, reactive media testing, and compatibility testing of groundwater with the components of a PRB are needed to evaluate the feasibility of installing a PRB at the former CCR Unit. Pending these evaluations, the technology is currently considered to be a potentially viable corrective measure to address molybdenum and cobalt in groundwater at the AP-3 Landfill and Monofill and will be retained for further evaluation.

4.2.5 Phytoremediation

Phytoremediation is the use of plants to degrade, immobilize, and/or contain constituents in soil, groundwater, surface water, and sediments. Phytoremediation has emerged as a viable alternative to more active environmental cleanup technologies, especially for large areas with relatively low levels of constituents in shallow soils or groundwater.

In general, the main mechanisms involved in the application of phytoremediation for inorganic constituents include:

- Phytosequestration, which is the ability of plants to sequester constituents in the rhizosphere (an area a few millimeters away from a root surface). This is a containment mechanism.
- Phytohydraulics is the ability of plants to capture and evaporate water. This is hydraulic
 control of a groundwater plume through plant root uptake and is considered a
 containment mechanism.
- Phytoextraction is the process of constituent uptake into the plant. This is remediation by removal.

Typically, a combination of these mechanisms acts in concert to achieve successful applications of phytoremediation for inorganic constituents.

The effectiveness of groundwater remediation using traditional phytoremediation approaches may be limited by compacted soil conditions that impede root penetration or target groundwater that is too deep for root access. Given that groundwater wells at the AP-3 Landfill and Monofill that exhibited SSLs for molybdenum and cobalt are screened at depths up to 30 ft bgs, traditional plantings for phytoremediation are not expected to be successful. However, more recently, an engineered approach to phytoremediation, the *TreeWell®* system (a proprietary system developed by Applied Natural Sciences) has been shown to overcome these constraints by utilizing a specialized lined planting unit constructed with optimum planting media designed to promote downward root growth, encourage constituent treatment, and focus groundwater extraction from a targeted depth interval (Gatliff et al., 2016).

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By installing a cased "well" for tree planting using large diameter auger technology, extraction of deeper groundwater zones (i.e., in excess of 50 ft bgs) can be achieved since the surface of the "well" is sealed and only groundwater from a targeted zone is allowed into the cased-off borehole. This type of system mirrors a traditional mechanical extraction system using the trees as pumps. The *TreeWell*® system can be used for both hydraulic control of groundwater and for treatment of constituents via degradation (for organic constituents) or immobilization/containment mechanisms (for organic and inorganic constituents). With respect to the specific conditions at the AP-3 Landfill and Monofill, the system would be applied for hydraulic control, but molybdenum and cobalt are expected to be either immobilized within the root zone or incidentally taken up into the tree biomass.

The advantage of an engineered phytoremediation system includes no above-ground water management needs and limited long-term operation and maintenance (O&M) requirements following the establishment of the system. Such systems have been observed to meet design hydraulic control parameters typically within three years of installation. The layout for a phytoremediation remediation system is generally based on groundwater flow modeling.

Based on the site-specific hydrogeology (i.e. relatively slow groundwater velocities observed in the uppermost aquifer) and low levels of cobalt and molybdenum as well as the availability of potential planting area downgradient of ARGWC-8, an engineered phytoremediation approach is a potentially viable corrective measure for SSLs observed in the vicinity of ARGWC-8. However, the limited physical space for installation of a phytoremediation system between the Ash Monofill and the AP-3 Landfill in the area of ARGWC-17 would limit the effectiveness of the *TreeWell*® system. Thus, a phytoremediation approach will be retained for further evaluation.

4.2.6 Subsurface Vertical Barrier Walls

Subsurface vertical barrier walls have been used for seep control and groundwater cutoff at impoundments and waste disposal units for more than three decades. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective.

This approach involves placing a barrier to groundwater flow in the subsurface, frequently around the source area or the downgradient limits of the source area to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. Barrier walls are typically keyed into a lower confining unit. Barrier walls can also be used in downgradient applications to limit discharge to a surface water or to reduce aquifer recharge

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from adjacent surface water features when groundwater extraction wells are placed near a surface water feature. A variety of barrier materials can be used, including cement and/or bentonite slurries or various mixtures of soil with cement or bentonite, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile.

The installation of these low-permeability walls is similar to the methods described for PRBs above. In general, the applicability of slurry walls is limited by the depth installation, which is approximately 90 feet below ground surface. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations.

Groundwater extraction is typically required upgradient of the barrier wall to maintain an inward hydraulic gradient and avoid groundwater mounding behind the barrier. The extracted groundwater would likely require treatment in an above-ground treatment system.

Additional subsurface investigations may be needed to further evaluate the feasibility as well as the placement of an additional barrier wall at the AP-3 Landfill and Monofill. This technology is considered a potentially viable corrective measure to address molybdenum and cobalt at the AP-3 Landfill and Monofill and will be retained for further evaluation. However, it is more likely to be a component of another application rather than a stand-alone corrective measure.

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5.0 REMEDY SELECTION PROCESS

The purpose of this ACM is to begin the process of selecting corrective measure(s) for groundwater based on further evaluation using the criteria outlined in GA EPD Rule 391-3-4-.10(6)(a). The following sections present the source control and site management strategy, additional data gathering, schedule, reporting, and next steps. The following describes these components of the remedy process and a conceptual schedule for implementation.

5.1 Pond Closure and Site Management Strategy

GPC completed closure of the AP-3 Landfill and Monofill in 2010 in accordance with the solid waste landfill regulations specified by GA EPD Rule 391-3-4, in effect at the time of its closure. In 2010, EPD issued closure certificate 011-025D(LI) for the AP-3 Landfill and Monofill.

The Site conceptual model may need to be refined and/or updated from the current understanding as more data is collected. Georgia Power plans to proactively utilize adaptive site management to support the remedial strategy and address potential changes in site conditions as appropriate. Under an adaptive site management strategy, a remedial approach will be selected whereby: (1) a corrective measure will be installed or implemented to address current conditions, (2) the performance of the corrective measure will be monitored, evaluated, and reported semi-annually, (3) the site conceptual model will be updated as more data are collected, and (4) adjustments and augmentations will be made to the corrective measure(s), as needed to assure that performance criteria and site remedial goals are met.

5.2 Additional Data Collection

Additional data collection, analysis, and site-specific evaluation are necessary to refine the conceptual site model and to further evaluate the feasibility of each corrective measure presented herein such that an appropriate groundwater corrective measure may be selected. Some of the data needed to refine the conceptual site model may be collected concurrent with routine groundwater monitoring events under the assessment monitoring program, or during supplementary sampling, if required. However, additional data collection may include aquifer testing, groundwater modeling, material compatibility testing, bench scale studies, and pilot tests may require an estimated one to two additional years to complete. Once sufficient data are available to arrive at a focused number of corrective measures or a combination of corrective measures that would provide an effective groundwater remedy, necessary steps will be taken to implement a remedy at the Site in accordance with GA EPD Rule 391-3-4.10.

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5.3 Schedule, Reporting, and Next Steps

Additional data collection is anticipated to be initiated in progress and will continue through early 2021 and beyond. A summary of next steps is as follows:

- Statistical evaluation of analytical data at vertical delineation well ARAMW-4 will be performed in late 2020 to early 2021.
- Installation and sampling of additional well to vertically characterize the nature and extent of ARGWC-17 will be performed in early 2021 if required.
- Other field studies and data collection (e.g. slug testing, rock chemistry) will be performed in early 2021.
- Data evaluation for groundwater and/or geochemical modeling will continue through mid-2021.
- Bench testing and/or pilot-scale testing will be evaluated and performed as needed for the remedy selection currently targeted for mid-2022.

Semiannual reporting will document AP-3 Landfill and Monofill groundwater conditions, results associated with additional data collection and the progress in selecting and designing the remedy in accordance with GA EPD Rule 391-3-4.10(6). To align ACM progress reporting with semi-annual reporting, an addendum to this report will be submitted along with the *2021 Semi-Annual Groundwater Monitoring and Corrective Action Report* in February 2021.

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Assessment of Corrective Measures Report Georgia Power Company – Plant Arkwright Ash Pond 3 Landfill and Monofill 12/4/2020

TABLES

TABLE 1
SUMMARY OF MONITORING NETWORK WELL AND PIEZOMETER CONSTRUCTION

Well	Northing (1)	Easting ⁽¹⁾	Top of Casing Elevation (feet above MSL) ⁽²⁾ (Prior to June 2020 Resurvey)	Top of Casing Elevation (feet above MSL) ⁽²⁾ (June 2020 Resurvey)	Ground Surface Elevation (feet above MSL)	Top of Screen Elevation (feet above MSL)	Screen Bottom Elevation (feet above MSL)	Screen Length (feet)	Total Well Depth on Construction Log (ft below land surface)	Measured June 22.	Water Bearing Zone Screened	Location
ARGWA-3	1066899.39	2437431.05	388.61	388.33	386.53	356.2	346.2	10.0	40.5	42.3	Overburden	Upgradient
ARGWA-5	1066885.12	2437209.22	376.45	376.15	373.51	353.8	343.8	10.0	30.0	33.1	Overburden	Upgradient
ARGWA-12	1067003.79	2436788.45	372.56	372.72	369.27	349.2	337.2	12.0	32.3	32.4	Bedrock	Upgradient
ARGWA-13	1065951.25	2438129.93	371.81	371.57	368.10	337.7	327.7	10.0	40.7	43.3	Bedrock	Upgradient
ARGWA-14	1066023.70	2438384.80	388.16	388.25	384.94	339.3	329.3	10.0	56.0	58.2	Bedrock	Upgradient
ARGWC-7	1064410.59	2438355.19	352.25	352.42	348.97	314.2	304.2	10.0	46.5	48.3	Overburden	Downgradient
ARGWC-8	1064521.98	2437572.92	355.70	355.53	352.19	322.6	312.6	10.0	40.5	43.2	Overburden	Downgradient
ARGWC-9	1065139.64	2437297.96	367.38	367.07	363.44	338.6	328.6	10.0	36.5	38.1	Overburden	Downgradient
ARGWC-10	1065419.44	2437192.51	370.87	370.67	367.56	342.6	332.6	10.0	41.5	38.4	Overburden	Downgradient
ARGWC-15	1065475.43	2438360.90	375.90	375.64	371.76	342.1	332.1	10.0	40.0	42.4	Bedrock	Downgradient
ARGWC-16	1065263.69	2438174.15	365.21	364.90	361.52	340.2	330.2	10.0	31.6	34.5	Bedrock	Downgradient
ARGWC-17	1065458.82	2438009.52	368.52	368.24	365.04	344.5	334.5	10.0	30.9	33.9	Overburden	Downgradient
ARGWC-18	1064482.45	2437961.15	354.99	355.20	351.92	314.1	304.1	10.0	48.1	50.7	Overburden	Downgradient
ARAMW-3	1064530.73	2437569.81	355.35	355.39	352.20	298.2	288.2	10.0	64.0	68.90	Overburden	Downgradient
ARAMW-4	1065463.83	2438004.43	367.61	367.86	364.56	320.6	310.6	10.0	54.0	57.70	Overburden	Downgradient
ARAMW-6	1064439.35	2437606.99	337.34	337.46	334.23	314.2	304.2	10.0	30.0	32.37	Bedrock	Downgradient

^{1.} Horizontal locations referenced to Georgia State Plane West, North American Datum of 1983 surveyed in June 2020.

^{2.} MSL indicates feet above mean sea level and referenced to North American Vertical Datum of 1988

TABLE 2
SUMMARY OF GROUNDWATER PROTECTION STANDARDS

			Federal CCR	Site-Specific	State Derived
Constituent	Units	MCL	Rules Specified	Background	Site GWPS ⁽²⁾
			Limit	April 2020	April 2020
Antimony	mg/L	0.006		0.0020	0.006
Arsenic	mg/L	0.01		0.0050	0.01
Barium	mg/L	2.0		0.24	2.0
Beryllium	mg/L	0.004		0.0025	0.004
Cadmium	mg/L	0.005		0.0043	0.005
Chromium	mg/L	0.1		0.01	0.1
Cobalt ⁽¹⁾	mg/L		0.006	0.0025	0.0025
Fluoride	mg/L	4.0		0.53	4.0
Lead ⁽¹⁾	mg/L		0.015	0.013	0.013
Lithium ⁽¹⁾	mg/L		0.04	0.0099	0.0099
Mercury	mg/L	0.002		0.0002	0.002
Molybdenum ⁽¹⁾	mg/L		0.1	0.015	0.015
Combined Radium	piC/L	5.0		1.10	5.0
Selenium	mg/L	0.05		0.034	0.05
Silver	mg/L			0.0051	0.0051
Thallium	mg/L	0.002		0.001	0.002

Notes:

mg/L - milligrams per liter

piC/L - picoCuries per liter

MCL - Maximum Contaminant Level: The MCL is the GWPS under the Federal CCR Rule unless background is greater.

Federal CCR Rules Specified Limit - Groundwater protection standard specified in the Federal CCR Rule 40 CFR § 257.95 (h) Amendment July 30, GWPS - Groundwater Protection Standard

- (1) Constituent without an established MCL. The background limits were used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia Environmental Protection Division (EPD) Rule 391-3-4-.10(6)
- (2) Under the existing Georgia EPD Rules, the GWPS is: (i) the MCL, (ii) where the MCL is not established, the background concentration, or (iii) background concentrations for constituents where the background level is higher than the MCL.

					Well ID				
	Substance	ARGWA-3	ARGWA-3	ARGWA-3	ARGWA-3	ARGWA-5	ARGWA-5	ARGWA-5	ARGWA-5
		4/7/2020	6/25/2020	8/18/2020	9/29/2020	4/7/2020	6/25/2020	8/18/2020	9/29/2020
	Boron	<0.039	< 0.039	NA	< 0.039	< 0.039	< 0.039	NA	<0.039
ХIII	Calcium	5.5	5.7	NA	5.9	4.0	6.1	NA	6.6
DI	Chloride	2.9	2.8	NA	2.7	3.7	4.2	NA	4.6
APPENDIX	Fluoride	0.098 J	0.06	<0.026	0.065 J	0.072 J	0.042	<0.026	0.051 J
APF	Sulfate	0.67 J	1.6	NA	<0.38	<0.38	<0.38	NA	<0.38
,	TDS	64	NA	NA	62	65	NA	NA	61
	рН	5.90	5.75	6.47	6.02	5.86	5.87	6.18	6.00
	Antimony	<0.00038	NA	<0.00038	NA	<0.00038	NA	<0.00038	NA
	Arsenic	<0.00031	NA	<0.00031	<0.00031	<0.00031	NA	<0.00031	<0.00031
	Barium	0.018	NA	0.021	0.019	0.020	NA	0.031	0.030
	Beryllium	<0.00018	NA	<0.00018	<0.00018	<0.00018	NA	<0.00018	<0.00018
	Cadmium	<0.00022	NA	<0.00022	NA	<0.00022	NA	<0.00022	NA
ζ IV	Chromium	0.0023	NA	0.0027	0.0030	< 0.0015	NA	< 0.0015	<0.0015
Ω	Cobalt	< 0.00013	<0.00013	0.00022 J	< 0.00013	0.00014 J	< 0.00013	< 0.00013	<0.00013
APPENDIX	Lead	< 0.00013	NA	0.00019 J	< 0.00013	< 0.00013	NA	0.00013 J	<0.00013
ΑPF	Lithium	<0.0034	<0.0034	<0.0034	< 0.0034	< 0.0034	<0.0034	< 0.0034	<0.0034
'	Mercury	0.00016 J	NA	<0.00013	NA	< 0.00010	NA	<0.00013	NA
	Molybdenum	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061
	Radium	0.0354 U	NA	0.132 U	-0.0479 U	0.198 U	NA	1.12	-0.146 U
	Selenium	<0.0015	NA	<0.0015	<0.0015	<0.0015	NA	<0.0015	<0.0015
	Thallium	<0.00015	NA	0.00036 J	<0.00015	0.00015 J	NA	0.00021 J	0.00019 J
*	Silver	<0.00018	NA	NA	<0.00018	<0.00018	NA	NA	<0.00018

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

					Well ID				
	Substance	ARGWA-12	ARGWA-12	ARGWA-12	ARGWA-12	ARGWA-13	ARGWA-13	ARGWA-13	ARGWA-13
		4/7/2020	6/26/2020	8/18/2020	9/29/2020	4/7/2020	6/25/2020	8/18/2020	9/29/2020
	Boron	< 0.039	< 0.039	NA	< 0.039	0.23	0.32	NA	0.35
	Calcium	12	15	NA	14	61	100	NA	120
	Chloride	11	12	NA	12	3.8	5.8	NA	5.7
APPENDIX III	Fluoride	0.082 J	0.051	0.041 J	0.060 J	0.086 J	0.03	<0.026	0.032 J
APF	Sulfate	8.0	9.0	NA	8.3	270	410	NA	540
_	TDS	120	NA	NA	130	480	NA	NA	880
	рН	5.91	5.94	6.48	5.88	5.84	5.8	6.15	5.75
	Antimony	<0.00038	NA	<0.00038	NA	<0.00038	NA	<0.00038	NA
	Arsenic	<0.00031	NA	<0.00031	<0.00031	<0.00031	NA	<0.00031	<0.00031
	Barium	0.066	NA	0.079	0.079	0.021	NA	0.025	0.024
	Beryllium	<0.00018	NA	<0.00018	<0.00018	<0.00018	NA	<0.00018	<0.00018
	Cadmium	<0.00022	NA	<0.00022	NA	<0.00022	NA	<0.00022	NA
≥	Chromium	0.0015 J	NA	< 0.0015	< 0.0015	< 0.0015	NA	< 0.0015	< 0.0015
î	Cobalt	0.00029 J	0.00013	0.00019 J	0.00016 J	<0.00013	<0.00013	<0.00013	< 0.00013
APPENDIX	Lead	< 0.00013	NA	<0.00013	< 0.00013	< 0.00013	NA	< 0.00013	< 0.00013
ΑPF	Lithium	0.0036 J	0.0061	0.0039 J	0.0048 J	0.0036 J	0.0067	0.0042 J	0.0052
	Mercury	<0.00010	NA	<0.00013	NA	<0.00010	NA	<0.00013	NA
	Molybdenum	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061
	Radium	0.622	NA	0.587	0.765	-0.0414 U	NA	0.380 U	0.403 U
	Selenium	<0.0015	NA	<0.0015	< 0.0015	0.0094	NA	0.019	0.021
	Thallium	< 0.00015	NA	<0.00015	<0.00015	< 0.00015	NA	<0.00015	< 0.00015
*	Silver	<0.00018	NA	NA	<0.00018	<0.00018	NA	NA	<0.00018

- 1. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
- 2. < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
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- 6. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
- 7. * Georgia Appendix I constituent that is not also included in Appendix IV.
- 8. NA indicates constituent was not analyzed.

					Well ID				
	Substance	ARGWA-14	ARGWA-14	ARGWA-14	ARGWA-14	ARGWC-7	ARGWC-7	ARGWC-7	ARGWC-7
		4/6/2020	6/25/2020	8/19/2020	9/29/2020	4/8/2020	6/25/2020	8/18/2020	9/29/2020
	Boron	0.041 J	< 0.039	NA	0.039 J	0.086	0.091	NA	0.078 J
ш>	Calcium	43	27	NA	29	11	11	NA	11
DI	Chloride	4.2	4	NA	4.1	4.4	4.6	NA	4.1
APPENDIX	Fluoride	0.28	0.17	0.12	0.13	0.062 J	<0.026	<0.026	0.027 J
ΑPF	Sulfate	10	3.3	NA	4.1	39	42	NA	38
•	TDS	280	NA	NA	210	130	NA	NA	140
	рН	6.65	6.38	6.62	6.80	5.75	5.75	6.70	5.92
	Antimony	<0.00038	NA	<0.00038	NA	<0.00038	NA	<0.00038	NA
	Arsenic	<0.00031	NA	<0.00031	0.00038 J	<0.00031	NA	<0.00031	<0.00031
	Barium	0.051	NA	0.041	0.062	0.039	NA	0.044	0.042
	Beryllium	<0.00018	NA	<0.00018	<0.00018	<0.00018	NA	<0.00018	<0.00018
	Cadmium	<0.00022	NA	<0.00022	NA	<0.00022	NA	<0.00022	NA
APPENDIX IV	Chromium	<0.0015	NA	< 0.0015	< 0.0015	0.0027	NA	0.0031	0.0031
(1 <u>0</u>	Cobalt	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	<0.00013	< 0.00013	< 0.00013
Ē	Lead	< 0.00013	NA	< 0.00013	< 0.00013	< 0.00013	NA	< 0.00013	< 0.00013
ΑPF	Lithium	<0.0034	0.0071	< 0.0034	0.0044 J	< 0.0034	0.0046	< 0.0034	<0.0034
	Mercury	<0.00010	NA	<0.00013	NA	<0.00010	NA	<0.00013	NA
	Molybdenum	0.00084 J	<0.00061	0.00065 J	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061
	Radium	0.286 U	NA	-0.0549 U	0.134 U	0.366 U	NA	0.376 U	0.334 U
	Selenium	<0.0015	NA	<0.0015	< 0.0015	<0.0015	NA	<0.0015	<0.0015
	Thallium	< 0.00015	NA	< 0.00015	0.00019 J	< 0.00015	NA	<0.00015	<0.00015
*	Silver	<0.00018	NA	NA	<0.00018	<0.00018	NA	NA	<0.00018

- 1. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
- 2. < indicates the substance was not detected above the relevant laboratory method detection limit (MDL).
- 3. J indicates the substance was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated value.
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- 6. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
- 7. * Georgia Appendix I constituent that is not also included in Appendix IV.
- 8. NA indicates constituent was not analyzed.

					Well ID				
	Substance	ARGWC-8	ARGWC-8	ARGWC-8	ARGWC-8	ARGWC-9	ARGWC-9	ARGWC-9	ARGWC-9
		4/9/2020	6/23/2020	8/20/2020	10/1/2020	4/9/2020	6/26/2020	8/19/2020	10/1/2020
	Boron	1.1	1.1	NA	1.2	< 0.039	<0.039	NA	0.041 J
	Calcium	47	52	NA	52	5.3	5.6	NA	5.7
DI	Chloride	7.7	7	NA	6.0	5.6	5.4	NA	5.5
ΣEΝ	Fluoride	0.16	0.12	0.054 J	0.14	0.066 J	0.027	<0.026	0.041 J
APPENDIX III	Sulfate	59	62	NA	57	1.1	0.94	NA	0.82 J
,	TDS	270	NA	NA	270	70	NA	NA	55
	pН	6.42	6.37	6.34	6.44	5.90	5.85	7.21	5.78
	Antimony	<0.00038	NA	<0.00038	NA	<0.00038	NA	<0.00038	NA
	Arsenic	<0.00031	NA	<0.00031	<0.00031	<0.00031	NA	<0.00031	<0.00031
	Barium	0.045	NA	0.053	0.052	0.044	NA	0.046	0.045
	Beryllium	<0.00018	NA	<0.00018	<0.00018	<0.00018	NA	<0.00018	<0.00018
	Cadmium	<0.00022	NA	<0.00022	NA	<0.00022	NA	<0.00022	NA
\ VI	Chromium	< 0.0015	NA	< 0.0015	< 0.0015	0.0069	NA	0.0080	0.0075
DI	Cobalt	0.00013 J	0.00017 J	0.00023 J	0.00021 J	0.00015 J	<0.00013	0.00013 J	<0.00013
APPENDIX	Lead	<0.00013	NA	<0.00013	< 0.00013	<0.00013	NA	< 0.00013	<0.00013
ΑPF	Lithium	< 0.0034	0.0042 J	<0.0034	0.0035 J	<0.0034	<0.0034	<0.0034	<0.0034
	Mercury	<0.00010	NA	<0.00013	NA	<0.00010	NA	<0.00013	NA
	Molybdenum	0.039	0.043	0.042	0.043	<0.00061	<0.00061	<0.00061	<0.00061
	Radium	0.255 U	NA	0.140 U	0.512 U	0.334 U	NA	0.124 U	0.501
	Selenium	<0.0015	NA	<0.0015	< 0.0015	<0.0015	NA	<0.0015	<0.0015
	Thallium	<0.00015	NA	<0.00015	<0.00015	<0.00015	NA	<0.00015	<0.00015
*	Silver	<0.00018	NA	NA	<0.00018	<0.00018	NA	NA	<0.00018

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- 3. J indicates the substance was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated value.
- 4. TDS indicates total dissolved solids.
- 5. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
- 6. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
- 7. * Georgia Appendix I constituent that is not also included in Appendix IV.
- 8. NA indicates constituent was not analyzed.

					We	II ID				
	Substance	ARGWC-10	ARGWC-10	ARGWC-10	ARGWC-10	ARGWC-10	ARGWC-15	ARGWC-15	ARGWC-15	ARGWC-15
		4/8/2020	5/27/2020	6/23/2020	8/19/2020	10/1/2020	4/8/2020	6/25/2020	8/19/2020	9/29/2020
	Boron	< 0.039	NA	0.053 J	NA	0.082	< 0.039	< 0.039	NA	< 0.039
H >	Calcium	7.5	NA	7.7	NA	8.1	21	23	NA	25
DI	Chloride	3.9	NA	4.2	NA	3.9	1.9	1.9	NA	2.5
APPENDIX	Fluoride	0.071 J	NA	0.04 J	<0.026	0.048 J	0.12	0.067	0.081 J	0.089 J
APF	Sulfate	<0.38	NA	<0.38	NA	<0.38	5.9	5.6	NA	7.7
	TDS	82	NA	NA	NA	93	130	NA	NA	130
	рН	5.95	5.98	5.95	7.06	5.83	6.26	6.32	6.47	7.11
	Antimony	0.00094 J	NA	NA	<0.00038	NA	<0.00038	NA	<0.00038	NA
	Arsenic	<0.00031	NA	NA	<0.00031	<0.00031	<0.00031	NA	<0.00031	<0.00031
	Barium	0.031	NA	NA	0.034	0.032	0.030	NA	0.028	0.030
	Beryllium	<0.00018	NA	NA	<0.00018	<0.00018	<0.00018	NA	<0.00018	<0.00018
	Cadmium	<0.00022	NA	NA	<0.00022	NA	<0.00022	NA	<0.00022	NA
\ VI	Chromium	0.0046	NA	NA	0.0049	0.0047	<0.0015	NA	< 0.0015	<0.0015
APPENDIX	Cobalt	<0.00013	NA	0.00013 J	0.00015 J	< 0.00013	0.00026 J	0.00022	0.00040 J	0.00030 J
EN	Lead	0.031	0.00014 J	NA	0.00013 J	<0.00013	<0.00013	NA	< 0.00013	<0.00013
ΑPF	Lithium	<0.0034	NA	<0.0034	< 0.0034	< 0.0034	<0.0034	0.004	< 0.0034	<0.0034
	Mercury	<0.00010	NA	NA	<0.00013	NA	<0.00010	NA	< 0.00013	NA
	Molybdenum	<0.00061	NA	<0.00061	<0.00061	<0.00061	0.00075 J	0.00086	0.0016 J	0.0019 J
	Radium	-0.0401 U	NA	NA	-0.0271 U	0.172 U	0.309 U	NA	0.538	0.394 U
	Selenium	<0.0015	NA	NA	<0.0015	< 0.0015	< 0.0015	NA	< 0.0015	<0.0015
	Thallium	< 0.00015	NA	NA	< 0.00015	< 0.00015	< 0.00015	NA	< 0.00015	<0.00015
*	Silver	<0.00018	NA	NA	NA	<0.00018	<0.00018	NA	NA	<0.00018

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					Well ID				
	Substance	ARGWC-16	ARGWC-16	ARGWC-16	ARGWC-16	ARGWC-17	ARGWC-17	ARGWC-17	ARGWC-17
		4/8/2020	6/24/2020	8/19/2020	9/29/2020	4/8/2020	6/24/2020	8/18/2020	9/29/2020
	Boron	0.059 J	0.11	NA	0.081	< 0.039	0.059	NA	0.045 J
H >	Calcium	40	47	NA	39	8.3	11	NA	12
DI	Chloride	5.1	5.9	NA	5.2	3.7	4	NA	3.4
ŽΕΝ	Fluoride	0.051 J	0.038	<0.026	0.026 J	0.053 J	<0.026	<0.026	0.029 J
APPENDIX	Sulfate	200	310	NA	200	47	67	NA	66
'	TDS	350	NA	NA	340	91	NA	NA	140
	рН	5.07	5.2	5.24	5.50	5.0	5.1	5.07	5.75
	Antimony	<0.00038	NA	<0.00038	NA	<0.00038	NA	<0.00038	NA
	Arsenic	<0.00031	NA	<0.00031	<0.00031	<0.00031	NA	<0.00031	<0.00031
	Barium	0.042	NA	0.045	0.042	0.045	NA	0.062	0.056
	Beryllium	<0.00018	NA	<0.00018	<0.00018	0.00025 J	NA	0.00039 J	0.00040 J
	Cadmium	<0.00022	NA	<0.00022	NA	<0.00022	NA	<0.00022	NA
ΛI	Chromium	0.0021	NA	0.0021	0.0020	< 0.0015	NA	< 0.0015	< 0.0015
Ω	Cobalt	< 0.00013	0.00013	< 0.00013	< 0.00013	0.016	0.024	0.030	0.027
APPENDIX	Lead	< 0.00013	NA	< 0.00013	< 0.00013	< 0.00013	NA	< 0.00013	< 0.00013
ΑPF	Lithium	<0.0034	<0.0034	< 0.0034	< 0.0034	<0.0034	< 0.0034	< 0.0034	< 0.0034
	Mercury	<0.00010	NA	<0.00013	NA	<0.00010	NA	<0.00013	NA
	Molybdenum	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061
	Radium	0.280 U	NA	0.306 U	-0.0246 U	0.402 U	NA	0.423	0.175 U
	Selenium	0.0022 J	NA	0.0029 J	0.0025 J	<0.0015	NA	<0.0015	<0.0015
	Thallium	<0.00015	NA	0.00027 J	0.00025 J	< 0.00015	NA	< 0.00015	<0.00015
*	Silver	<0.00018	NA	NA	<0.00018	<0.00018	NA	NA	<0.00018

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- 5. U indicates the substance 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.
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						We	ell ID				
	Substance	ARGWC-18	ARGWC-18	ARGWC-18	ARGWC-18 Dissolved	ARGWC-18	ARGWC-18 Dissolved	ARAMW-3	ARAMW-3	ARAMW-3	ARAMW-3
		4/9/2020	6/24/2020	8/20/2020	8/20/2020	9/30/2020	9/30/2020	1/15/2020	6/24/2020	8/20/2020	9/30/2020
	Boron	2.3	2.2	NA	NA	2.6	2.7	1.0	1.0	NA	1.1
H	Calcium	46	44	NA	NA	52	53	NA	33	NA	37
APPENDIX	Chloride	7.3	7.2	NA	NA	6.9	NA	NA	5.9	NA	5.5
) EN	Fluoride	0.11	0.094	<0.026	NA	0.082 J	NA	NA	0.18	<0.026	0.064 J
APF	Sulfate	190	190	NA	NA	170	NA	NA	45	NA	49
	TDS	440	NA	NA	NA	390	NA	NA	NA	NA	240
	рН	5.98	5.91	6.43	6.43	5.98	5.98	6.8	6.38	6.24	6.41
	Antimony	<0.00038	NA	<0.00038	<0.00038	NA	NA	NA	NA	<0.00038	NA
	Arsenic	<0.00031	NA	<0.00031	<0.00031	<0.00031	<0.00031	NA	NA	<0.00031	<0.00031
	Barium	0.041	NA	0.041	0.037	0.041	0.037	NA	NA	0.093	0.094
	Beryllium	<0.00018	NA	<0.00018	<0.00018	<0.00018	<0.00018	NA	NA	<0.00018	<0.00018
	Cadmium	<0.00022	NA	<0.00022	<0.00022	NA	NA	NA	NA	<0.00022	NA
\ \	Chromium	<0.0015	NA	< 0.0015	< 0.0015	< 0.0015	<0.0015	NA	NA	<0.0015	< 0.0015
APPENDIX	Cobalt	0.00091 J	0.0012	0.0015 J	0.0013 J	0.0013 J	0.0012 J	NA	0.00053	0.00056 J	0.0011 J
) EN	Lead	<0.00013	NA	0.00028 J	<0.00013	0.00020 J	<0.00013	NA	NA	<0.00013	<0.00013
APF	Lithium	<0.0034	0.0047	< 0.0034	<0.0034	0.0048 J	0.0046 J	NA	0.0046	<0.0034	0.0055
	Mercury	<0.00010	NA	<0.00013	<0.00013	NA	NA	NA	NA	<0.00013	NA
	Molybdenum	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	0.0053	0.0077	0.0029 J	0.0061 J
	Radium	0.419 U	NA	0.191 U	NA	0.0811 U	NA	NA	NA	-0.137 U	0.539 U
	Selenium	<0.0015	NA	< 0.0015	<0.0015	<0.0015	<0.0015	NA	NA	<0.0015	<0.0015
	Thallium	<0.00015	NA	<0.00015	<0.00015	<0.00015	<0.00015	NA	NA	<0.00015	<0.00015
*	Silver	<0.00018	NA	NA	NA	<0.00018	<0.00018	NA	NA	NA	<0.00018

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- 8. NA indicates constituent was not analyzed.

						Well ID				
	Substance	ARAMW-4	ARAMW-4	ARAMW-4	ARAMW-4	ARAMW-4	ARAMW-6	ARAMW-6	ARAMW-6	ARAMW-6
		1/15/2020	2/11/2020	6/24/2020	8/20/2020	9/30/2020	1/15/2020	6/24/2020	8/21/2020	10/1/2020
	Boron	0.32	NA	0.4	NA	0.36	0.96	1	NA	1.1
A	Calcium	NA	NA	170	NA	210	NA	33	NA	38
	Chloride	NA	NA	6.4	NA	5.0	NA	5.4	NA	5.0
APPENDIX	Fluoride	NA	NA	0.041	<0.026	0.028 J	NA	0.082	0.051 J	0.071 J
APF	Sulfate	NA	NA	860	NA	790	NA	58	NA	58
`	TDS	NA	NA	NA	NA	1300	NA	NA	NA	220
	рН	6.1	6.0	5.8	5.77	5.94	6.36	6.33	6.32	6.37
	Antimony	NA	NA	NA	<0.00038	NA	NA	NA	<0.00038	NA
	Arsenic	NA	NA	NA	0.00034 J	0.00039 J	NA	NA	<0.00031	<0.00031
	Barium	NA	NA	NA	0.053	0.053	NA	NA	0.049	0.044
	Beryllium	NA	NA	NA	<0.00018	<0.00018	NA	NA	<0.00018	<0.00018
	Cadmium	NA	NA	NA	<0.00022	NA	NA	NA	<0.00022	NA
≥	Chromium	NA	NA	NA	< 0.0015	< 0.0015	NA	NA	< 0.0015	< 0.0015
APPENDIX	Cobalt	0.0064	0.0042	0.0049	0.0050	0.0046	NA	0.0049	0.0018 J	0.0018 J
🖺	Lead	NA	NA	NA	< 0.00013	<0.00013	NA	NA	<0.00013	< 0.00013
ΑPF	Lithium	NA	NA	0.013	0.012	0.012	NA	<0.0034	<0.0034	< 0.0034
`	Mercury	NA	NA	NA	<0.00013	NA	NA	NA	<0.00013	NA
	Molybdenum	NA	NA	0.00079	<0.00061	0.00073 J	0.00065 J	<0.00061	<0.00061	<0.00061
	Radium	NA	NA	NA	0.624 U	0.532	NA	NA	0.285 U	0.0114 U
	Selenium	NA	NA	NA	<0.0015	<0.0015	NA	NA	<0.0015	<0.0015
	Thallium	NA	NA	NA	0.00022 J	<0.00015	NA	NA	0.00018 J	< 0.00015
*	Silver	NA	NA	NA	NA	<0.00018	NA	NA	NA	<0.00018

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- Monitoring.
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Table 4 Evaluation of Remedial Technologies Plant Arkwright, AP-3 Landfill and Monofill, Bibb County, Georgia

	Regulatory Citation for Criteria: GA EPD Rule 391-3-4.10(6)		
Corrective Measure	Description	Performance Performance	Reliability
Geochemical Approaches (In-Situ Injection)	Use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of Co and Mo. Under anaerobic conditions, Co would be attenuated within sparingly soluble sulfide minerals; this approach might also increase the attenuation of Mo. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Co (and potentially, Mo) onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including Co. However, the main attenuation mechanism for Co and Mo is sorption, which is more dependent on pH than redox.	The effective immobilization of Co has been shown under aerobic and anaerobic conditions; however, the anaerobic approach (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. While aerobic approaches are somewhat less complex, additional aquifer characterization is needed to further evaluate these options. It is currently not well understood whether molybdenum can be efficiently attenuated using in- situ redox manipulations due to slow reaction kinetics. Mo attenuation under both aerobic and anaerobic conditions needs to be further evaluated but is expected to occur. Mo is more strongly sorbed to aluminum oxides than other metal oxides, and it is generally less sorptive and more mobile compared to Co.	Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach). Reliable technology if injected materials can be distributed throughout the impacted aquifer. Benchand/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of Co and Mo in groundwater.
Pump and Treat (Hydraulic Containment)	Pump and Treat (P&T) refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse (e.g., land application, CCR conditioning, etc.). It is applicable to a variable mix of inorganic constituents, including dissolved Co and Mo.	P&T is effective at providing hydraulic control, but it is unclear whether full groundwater remediation can be achieved without further understanding attenuation mechanisms at the Site. At the AP-3 Landfill and Monofill, implementation of the corrective measure is contingent on completing additional assessment activities (i.e. high-resolution site characterization, additional pump tests, flow modeling, and capture zone analysis). This is needed to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/ effectiveness and to further evaluate the potential remedy performance.	Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame without further understanding attenuation mechanisms.
Monitored Natural Attenuation (MNA)	MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including cobalt (Co) and molybdenum (Mo) at AP-3 Landfill and Monofill, are either physical (e.g. dilution, dispersion, flushing, and related processes) or chemical (e.g., sorption or oxidation reduction reactions). The chemical attenuation processes include precipitation and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Co and Mo, the main attenuation processes include sorption to iron and manganese oxides (Co and Mo), aluminum oxides (Mo), and formation of sparingly soluble sulfide minerals (Co).	Physical and chemical MNA mechanisms for Co and Mo, including dilution, dispersion, sorption, and oxidation reduction reactions can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame. Attenuation processes for Co and Mo are already occurring at the site as evidenced by data from the delineation wells. Source control will improve the mass balance such that the buffer capacity of the aquifer is unlikely to be exhausted, and the attenuation processes already at work for Co and Mo at AP-3 Landfill and Monofill will further enhance ongoing MNA.	Reliable as long as the aquifer conditions that result in Co and Mo attenuation remain favorable and/or are being enhanced and sufficient attenuation capacity is present. MNA is reliable and can either be used as a stand-alone corrective measure for groundwater impacted by dissolved Co and/or Mo, or in combination with a second technology.
Permeable Reactive Barrier	Permeable reactive barrier (PRB) technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. Either ZVI-Carbon matrix or solid carbon (bio-barrier) are currently proposed for the concurrent removal of Co and Mo. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB is contingent on finalization of the nature and extent characterization. PRB walls are typically keyed into the bedrock. While the relatively shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the higher permeability/conductivity of the PRB is not expected to impede groundwater flow. PRBs can also be constructed as "funnel and gate" systems, where a barrier wall directs groundwater to a smaller "treatment gate" filled with reactive media.	PRBs have been shown to effectively address Co and Mo in groundwater if the right mix of reactive materials (e.g., ZVI and carbon) is selected for concurrent removal/immobilization of these constituents. The approach is expected to achieve GWPS for both constituents as impacted groundwater passes through the reactive barrier. Molybdenum redox kinetics may be slow and hence a thicker wall might be needed relative to solely treating for Co. Furthermore, additional testing is required to select the appropriate sorptive media mix, especially related to Mo.	Reliable groundwater corrective measure, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.
Phytoremediation / TreeWell®	Phytoremediation uses trees and other plants to degrade or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of the AP-3 Landfill and Monofill, this corrective measure would likely use an engineered (proprietary) TreeWell® phytoremediation system along the point of compliance or downgradient edge of the impacted groundwater for hydraulic control. The system promotes root development to the targeted groundwater zone (depth), allowing for hydraulic control of impacted groundwater. In addition, immobilization of Co and Mo within the root zone as well as incidental uptake of dissolved Co and Mo with groundwater is expected to occur concurrent with hydraulic control.	Once established (typically at the end of the third growing season), a TreeWell® system is effective for providing hydraulic containment of groundwater, and potential reduction of Co and Mo concentrations through immobilization and/or uptake and sequestration in the tree biomass; however, the main purpose is to provide hydraulic control. Given the site-specific hydrogeology and reported Co and Mo groundwater concentrations surrounding the AP-3 Landfill and Monofill, the approach is currently considered to be applicable in this setting. However, additional aquifer testing and/or groundwater flow modeling may be needed to confirm suitability for the area downgradient of the AP-3 Landfill and Monofill.	Engineered phytoremediation is a proven technology where hydrogeologic factors are taken into account (e.g., hydraulic conductivity, flow velocity, depth to impacted groundwater zone, etc.). This is considered an active remedial approach through the use of trees as the "pumps" driving the system. Careful design will be needed to select the proper species, which will include consideration of groundwater chemistry, plant uptake of constituents, and groundwater flow modeling to evaluate the required number and placement of TreeWell® units.
Subsurface Vertical Barrier Walls	constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. Barrier walls can also be used in downgradient applications; to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite	Barrier walls are a proven technology for seepage control and/or groundwater cutoff at impoundments. Slurry walls are limited by the depth of installation, which is approximately 90 ft bgs. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations. Within the context of AP-3 Landfill and Monofill, a barrier wall might be used in conjunction with a "funnel and gate" system for a PRB rather than a stand-alone technology. As such, groundwater with Co and Mo above GWPS could either be directed to "treatment gates" for passive treatment (in a PRB) or migration of impacted groundwater could be minimized via barrier wall installation. Additional subsurface investigations, aquifer testing, and compatibility testing with site- specific groundwater will be needed.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.

of 3 October 2020

Table 4 Evaluation of Remedial Technologies Plant Arkwright, AP-3 Landfill and Monofill, Bibb County, Georgia

	GA EPD Rule 391-3-4.10(6) GA EPD Rule 391-3-4.10(6)		GA EPD Rule 391-3-4.10(6)
Corrective Measure	Ease of Implementation	Potential Impacts	Time Requirement to Begin/Complete
Geochemical Approaches (In-Situ Injection)	Moderate. Installation of injection well network or other injection infrastructure would be required. Alternative installation approaches may be considered, such as along the downgradient edge of impacted groundwater, which would function similar to a PRB application. Potential for clogging of aquifer matrix and/or injection well infrastructure. Chemical distribution during injections (i.e., radius of influence) needs to be evaluated.	Minimal impacts are expected if remedy works as designed, based on a thorough pre-design investigation, geochemical modeling, and bench/pilot study results. Redox-altering processes have the potential to mobilize naturally-occurring constituents as an unintended consequence if not properly studied and implemented.	Installation of the injection network can be accomplished relatively quickly (1 to 2 months). However, a thorough pre-design investigation, geochemical modeling, and/or bench- and/or pilot-testing will be required to obtain design parameters prior to design and construction of the corrective measure, which may take up to 24 months. Once installed, the time required to achieve GWPS within the treatment area may be relatively quick but depends on the attenuation process kinetics of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable.
Pump and Treat (Hydraulic Containment)	Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of Co and Mo. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Moderate. The main potential impacts are related to the presence and operation of an on-site above-ground water treatment facility and related infrastructure to convey and treat extracted groundwater. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone.	Installation of extraction wells and/or trenches can be accomplished relatively quickly (1 to 2 months). However, additional aquifer testing, system design and installation, and permit approval may be required, which may take up to 24 months. The initiation of the approach would be contingent on the start-up of the wastewater treatment infrastructure. Hydraulic containment can be achieved relatively quickly after startup of the extraction system, but uncertainty exists with respect to the time to achieve GWPS without additional data collection to better understand attenuation mechanisms for Co and Mo.
Monitored Natural Attenuation (MNA)	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.	None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.	The infrastructure to initiate MNA is already in place. Demonstrating attenuation mechanisms and capacity can be time-consuming and can take up to 24 months. MNA is expected to be successful within a reasonable time frame.
Permeable Reactive Barrier	Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Site-specific geology (i.e., partially weathered bedrock layer) poses a possible constructability challenge when attempting to key PRB material into competent bedrock. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary.	Minimal impacts are expected following the construction of the remedy. However, ZVI has the potential to create anaerobic conditions downgradient of the PRB wall that may mobilize redox-sensitive naturally-occurring constituents. These conditions need to be carefully monitored. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures.	Installation of a PRB can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, bench- and/or pilot- testing would be required to obtain design parameters prior to design and construction of the remedy, which may take up to 24 months. Once installed, the time to achieve GWPS downgradient of the PRB is anticipated to be relatively quick.
Phytoremediation / TreeWell®	Reasonably implementable to moderate. Engineered approach has been proven effective, and specific depth zones can be targeted. Trees are installed as "tree wells" in a large diameter boring to get the roots deep enough to intercept impacted groundwater flow paths. Area must be clear of above- and below- ground structures (i.e., power lines). The system, once established (approximately three growing seasons), is a self-maintaining, sustainable remedial system that has no external energy requirements and little maintenance (i.e., efforts normally associated with landscaping).	Minimal impacts are expected. In fact, there are several positive impacts expected, including enhanced aesthetics, wildlife habitat, and limited energy consumption.	The design phase will require some groundwater modeling for optimal placement of the TreeWell® units, which may take up to 6 months. Depending on the number of required units, the installation effort is expected to last several weeks. Hydraulic capture/control is expected approximately three years after planting and system performance is expected to further improve over time.
Subsurface Vertical Barrier Walls	Moderate to difficult. Trenching will be required to fill in the various slurry mixes; alternatively, sheet pile installations can be accomplished without excavation of trenches. The application of barrier walls is limited by the depth of installation, which similar to PRBs, should be keyed into a low permeability layer such as a thick clay layer or bedrock. Installation methods and materials are readily available. Once installed, above-ground infrastructure to pump and treat groundwater will be required. O&M requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Minimal impacts are expected following the construction of the remedy. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures. Changes to groundwater flow patterns due to installation of the barrier wall are expected, which can affect other aspects of groundwater corrective action. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone that may result in the mobilization of other constituents that may require treatment.	Installation of a barrier wall can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, some design phase and additional aquifer and compatibility testing will be required, which may take up to 24 months. Once installed, preventing migration of constituents dissolved in groundwater is anticipated to be relatively quick. Since this approach does not treat the downgradient area of impacted groundwater but prevents migration from a source area, it will likely have to be maintained long- term and coupled with other approaches.

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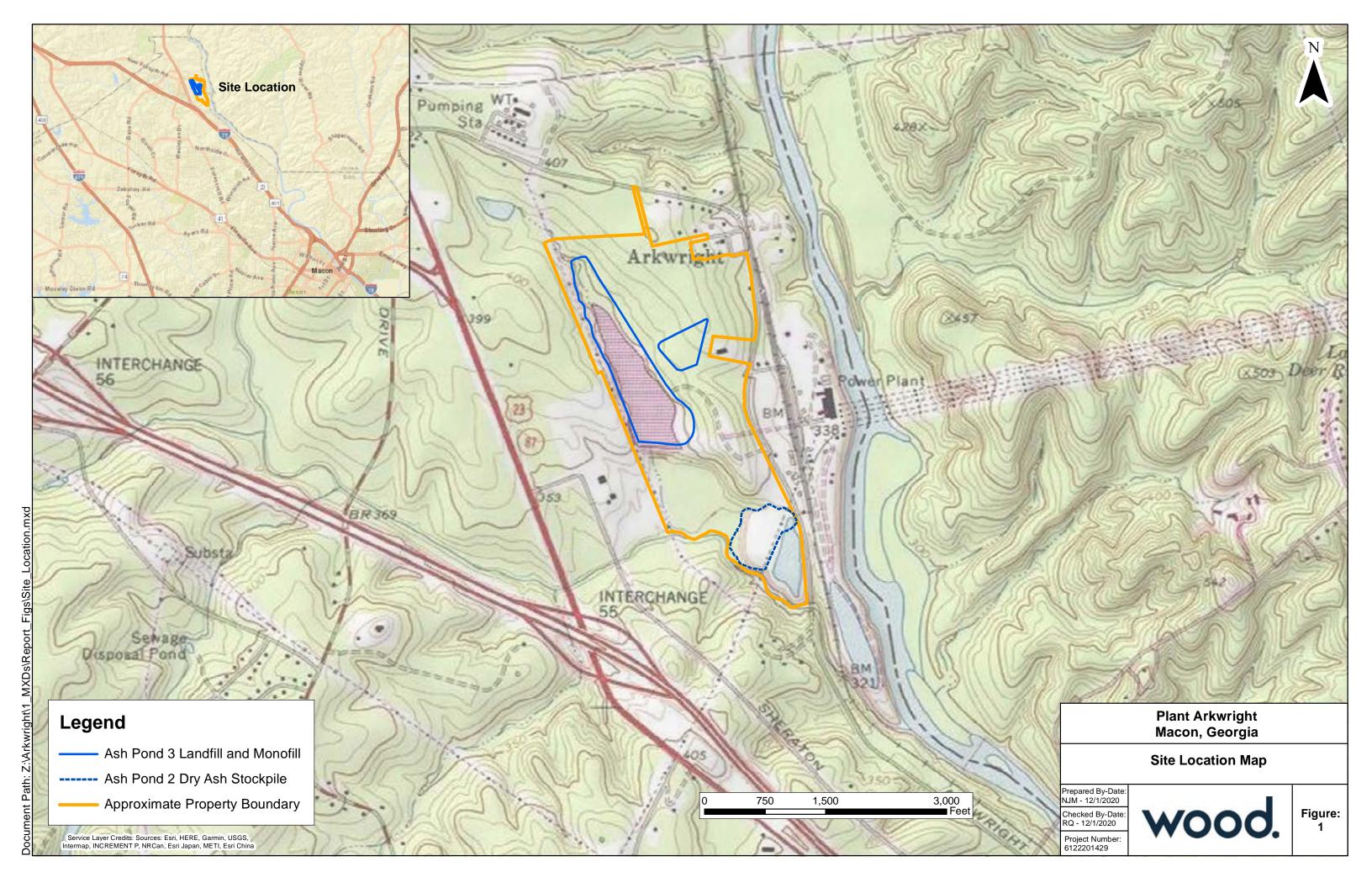
Table 4 Evaluation of Remedial Technologies Plant Arkwright, AP-3 Landfill and Monofill, Bibb County, Georgia

GA EPD Rule 391-3-4.10(6) Corrective Measure Other Env or Public Health Requirements **Institutional Requirements Relative Costs** Deed restrictions may be necessary until in-situ treatment has achieved GWPS. Ione expected at this point. Potential mobilization of redox- sensitive **Geochemical Approaches** An underground injection control (UIC) permit (for in-situ injections) would be Medium (depending on expanse of injection network required and injectate onstituents exists during implementation of an anerobic attenuation (In-Situ Injection) required to implement this corrective measure. No other institutional volume required per derived design parameters) pproach. Following installation, the remedy is passive. equirements are expected at this time. Depending on the effluent management strategy, an NPDES permit may be required, or obtaining an underground injection control (UIC) permit may be Above-ground treatment components may need to be present for an **Pump and Treat** Medium to high (depending on remedy duration, complexity of above-ground needed if groundwater reinjection is chosen. In addition, deed restrictions may xtended period of time, generating residuals requiring management and (Hydraulic Containment) treatment system, and volume of water processed) be required as long as groundwater conditions are above regulatory standards disposal. MNA may require the implementation of institutional controls, such as deed Monitored Natural Attenuation ittle to no physical disruption to remediation areas and no adverse restrictions, to preclude potential exposure to groundwater within the footprint Low to medium (MNA) onstruction- related impacts are expected on the surrounding community. of impacted groundwater until GWPS are achieved. Deed restrictions may be necessary for groundwater areas upgradient of the None expected at this point. Following installation, the remedy is passive. Medium to high (for installation) - minimal O&M requirements if replacement is **Permeable Reactive Barrier** PRB (if not installed along the waste boundary). No other institutional owever, certain treatment media (such as ZVI) have the potential to mobilize not necessary requirements are expected at this time. naturally-occurring constituents downgradient of the PRB. Deed restrictions may be necessary for groundwater areas upgradient of the Ione expected at this point. Innovative and green technology may be Phytoremediation / TreeWell® reeWell® system. No other institutional requirements are expected at this ositively received by various stakeholders. Following installation, the remedy is Medium (for installation) - minimal O&M requirements assive and does not require external energy. Deed restrictions may be necessary for groundwater areas downgradient of the Due to the need for groundwater extraction associated with barrier walls, Medium to high (depending on length and depth of wall, remedy duration and **Subsurface Vertical Barrier Walls** parrier wall until remedial goals are met. No other institutional requirements above-ground treatment components may need to be present for an extended complexity of above-ground treatment system) are expected at this time. eriod of time, generating residuals requiring management and disposal.

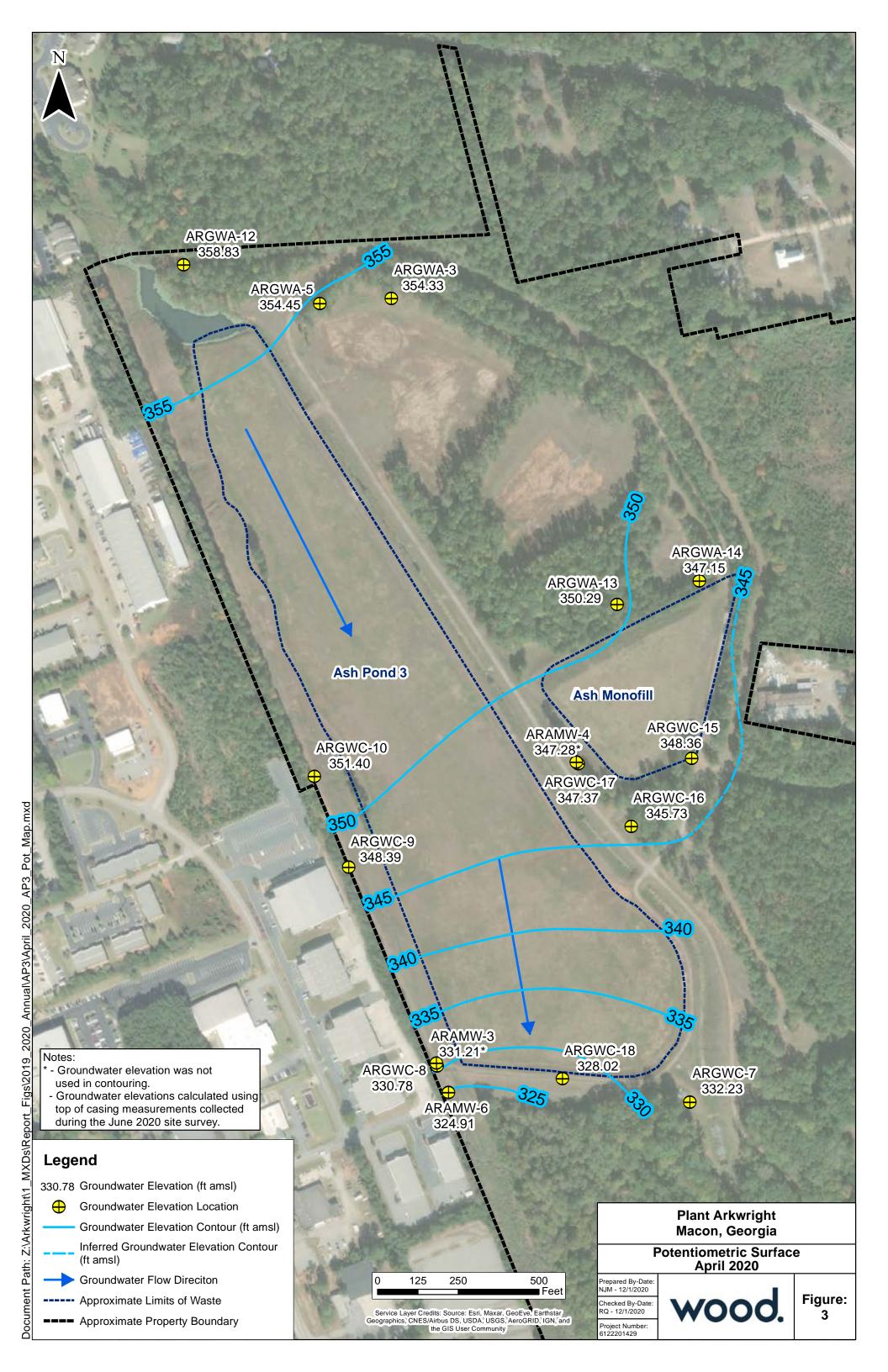
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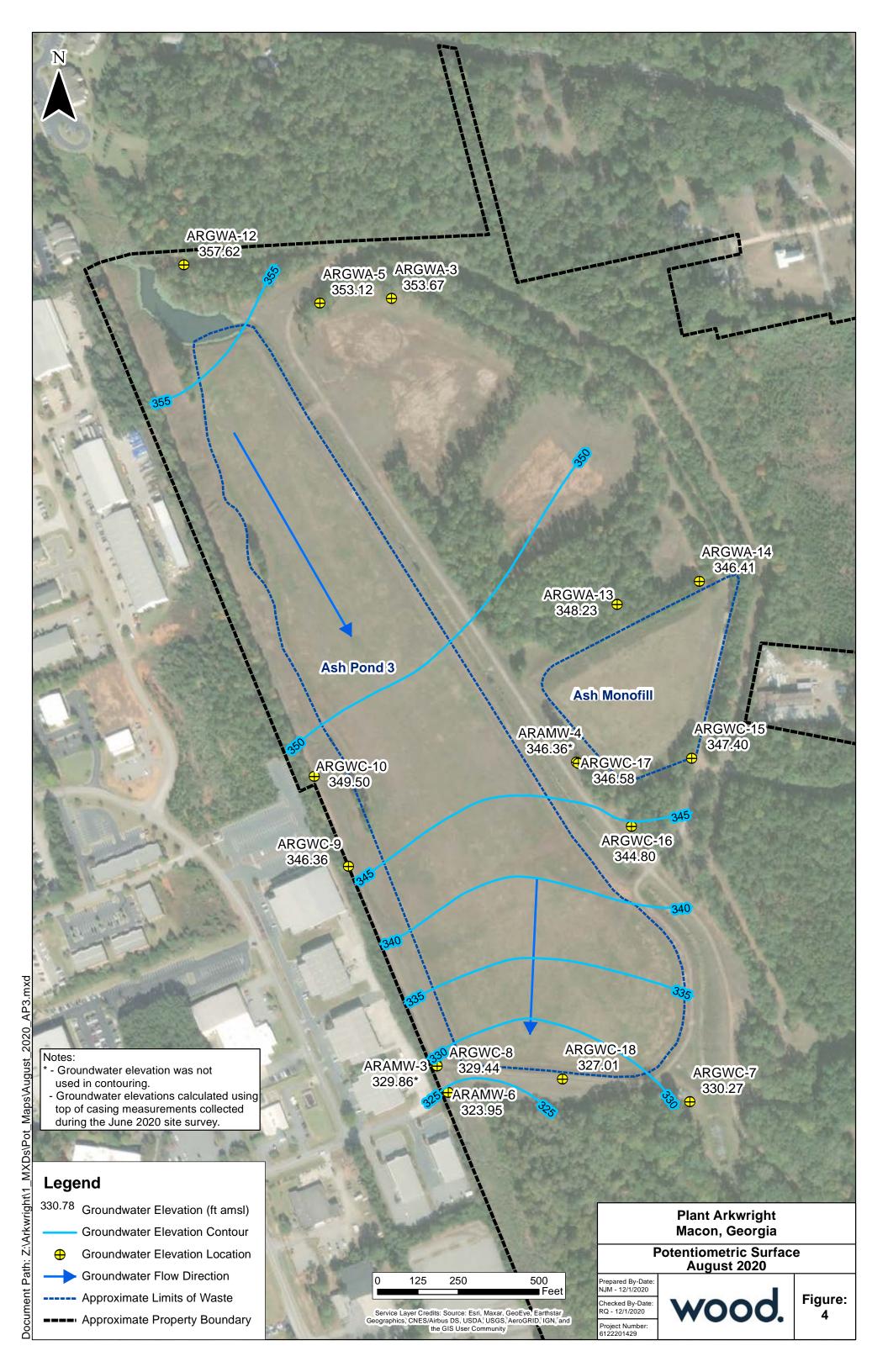
Assessment of Corrective Measures Report Georgia Power Company – Plant Arkwright Ash Pond 3 Landfill and Monofill 12/4/2020

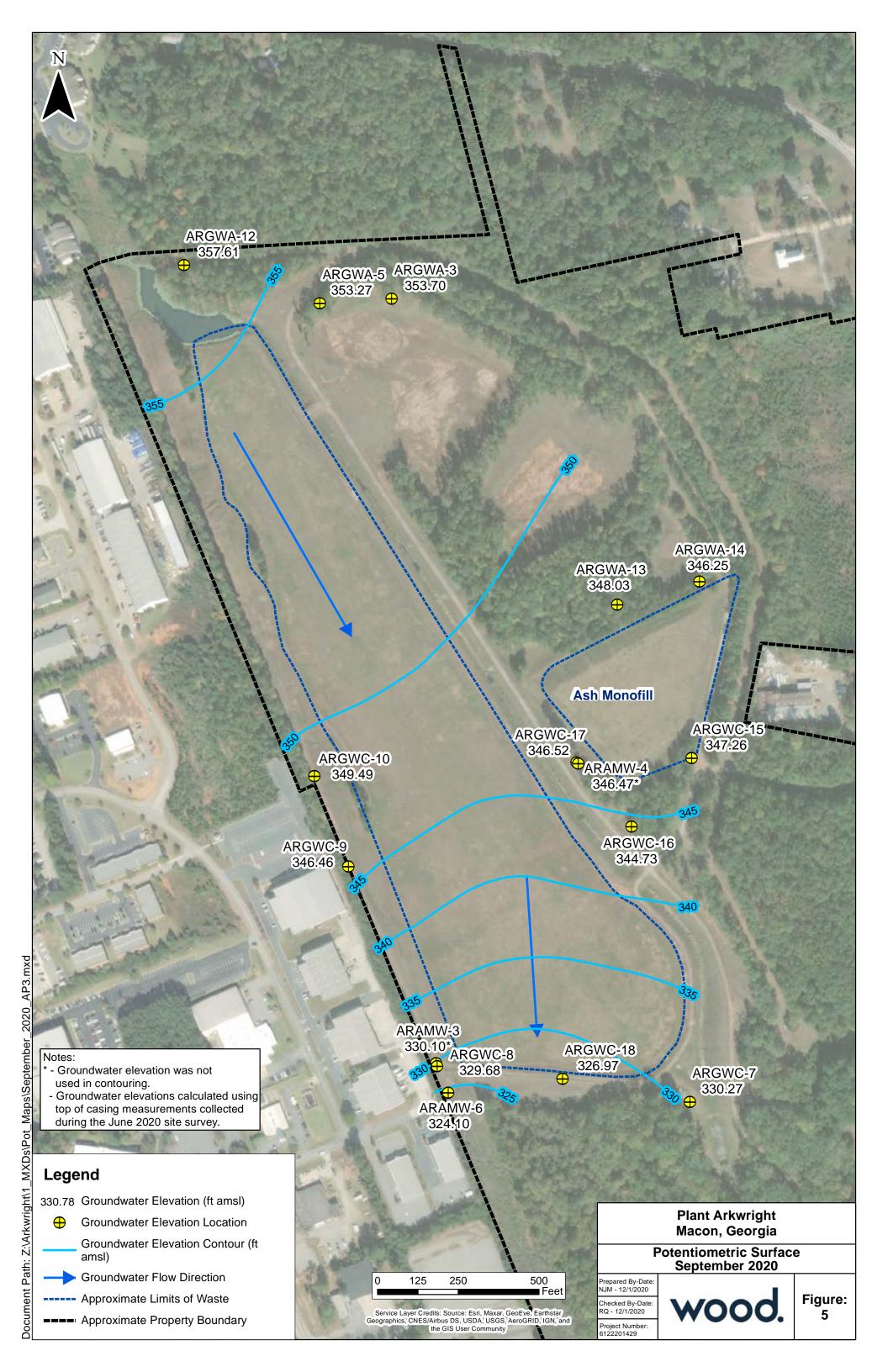
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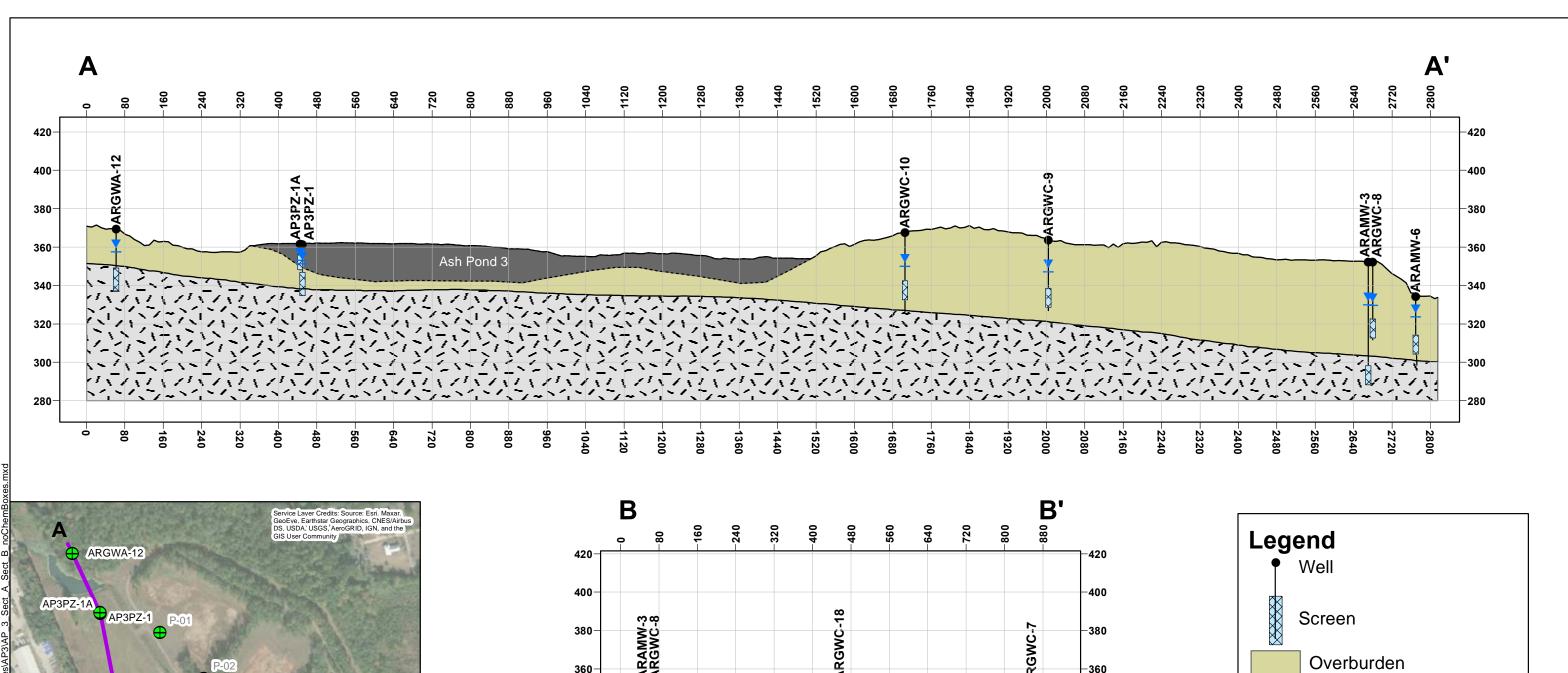




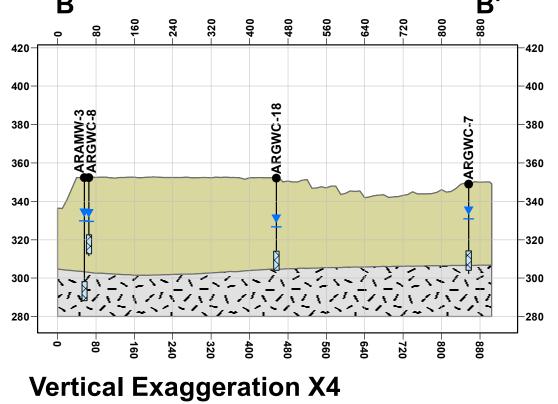


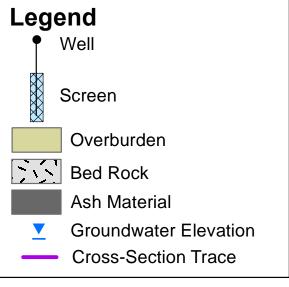












Plant Arkwright Macon, Georgia

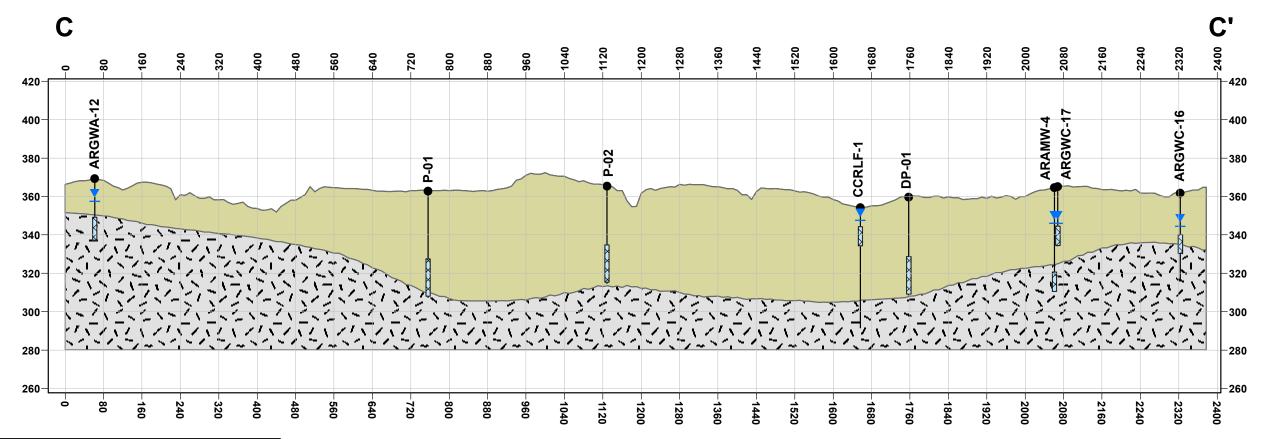
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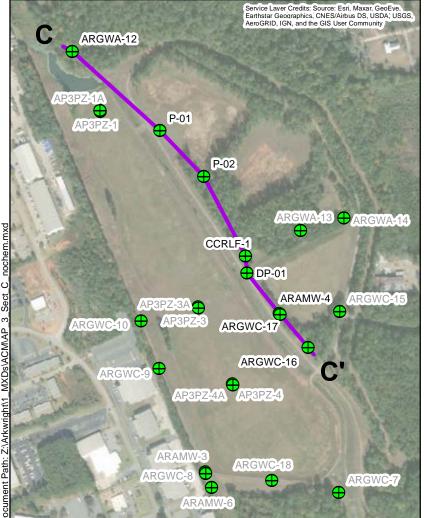
Prepared By-Date NJM - 11/9/2020

RQ - 11/9/2020 Project Number 6122201429 Figure:

Notes:

- Bottom of ash surface is approximate and is based on borings through ash materials and the 1959 1:24,000 USGS topographic map of Macon, GA.





Overburden Bed Rock Ash Material Groundwater Elevation Cross-Section Trace

Vertical Exaggeration X4

Notes

 Monitoring network well groundwater elevations presented based on April 2020 sampling event measurments. Plant Arkwright Macon, Georgia

Cross Section C-C'

Prepared By-Date: NJM - 11/9/2020 Checked By-Date:

Checked By-Date: RQ - 11/9/2020 Project Number: 6122201429

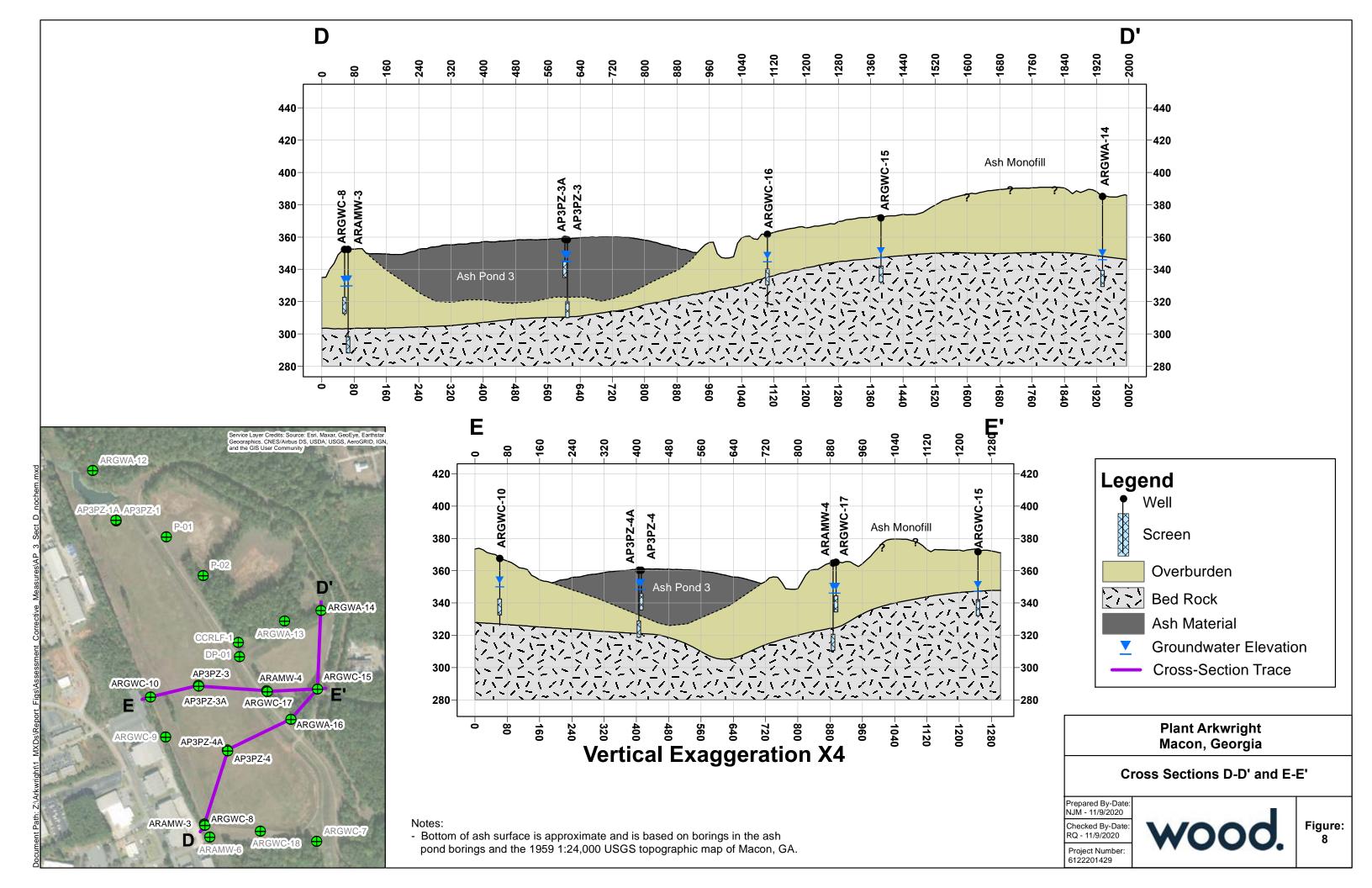
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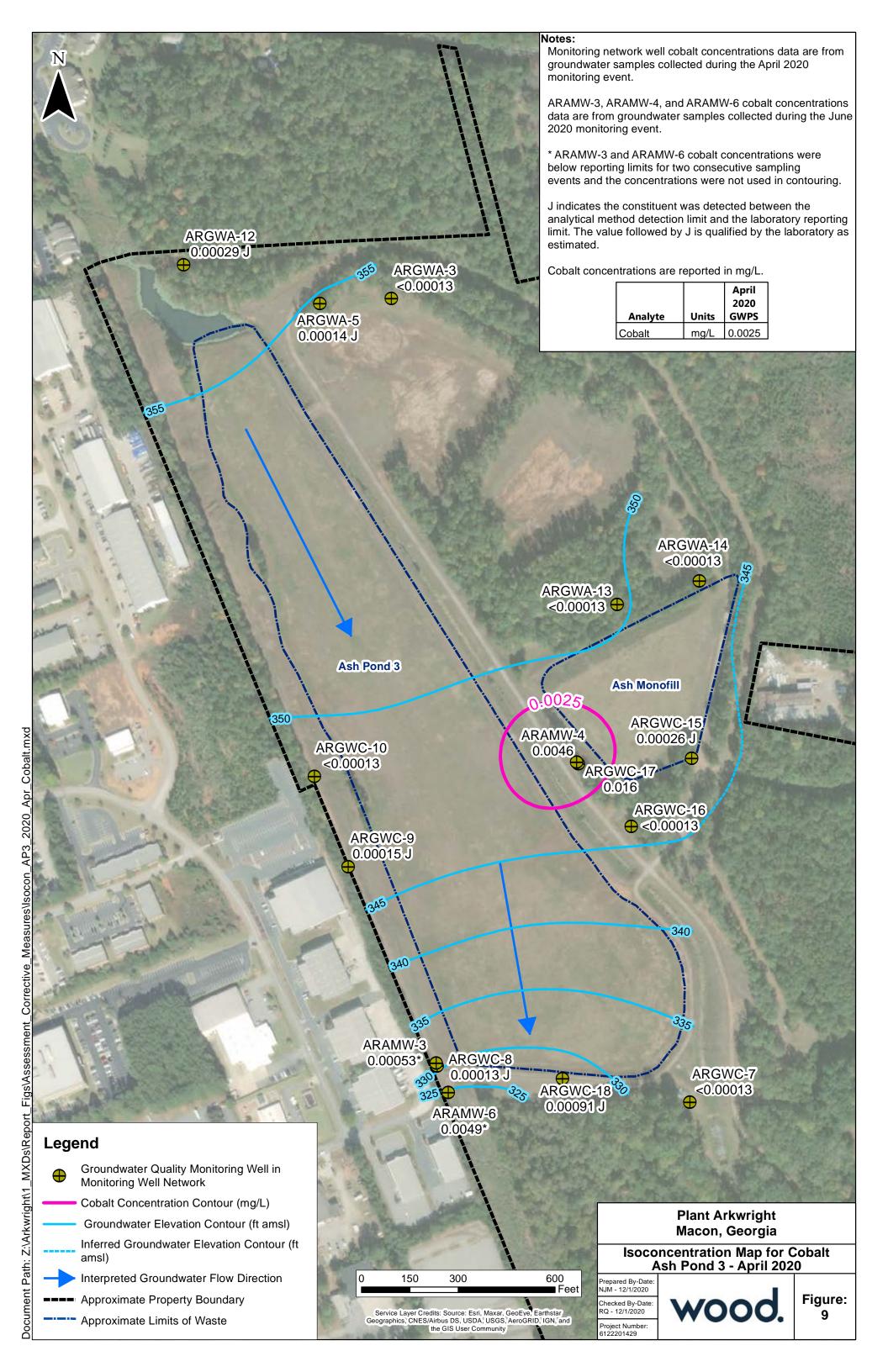
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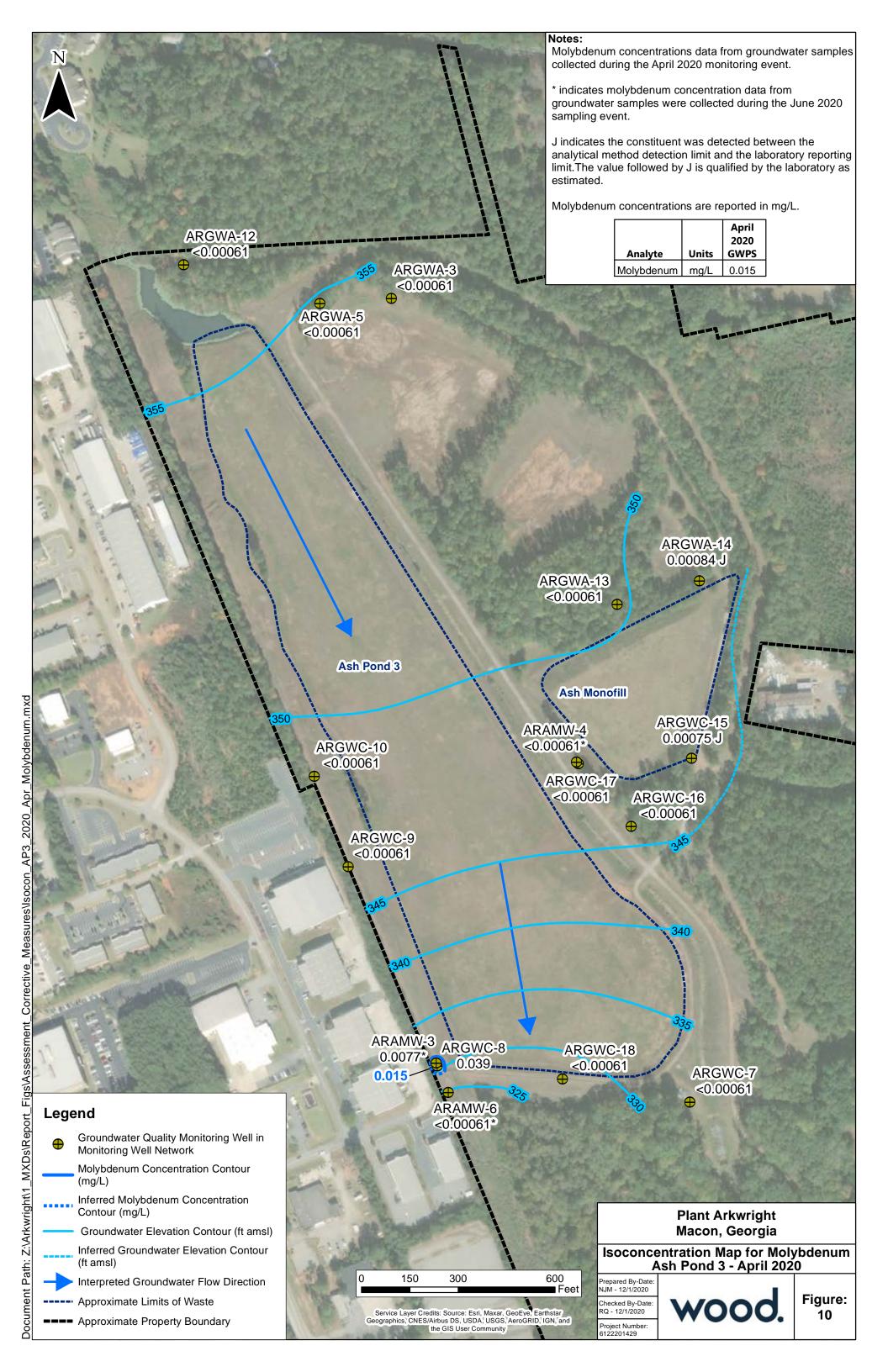
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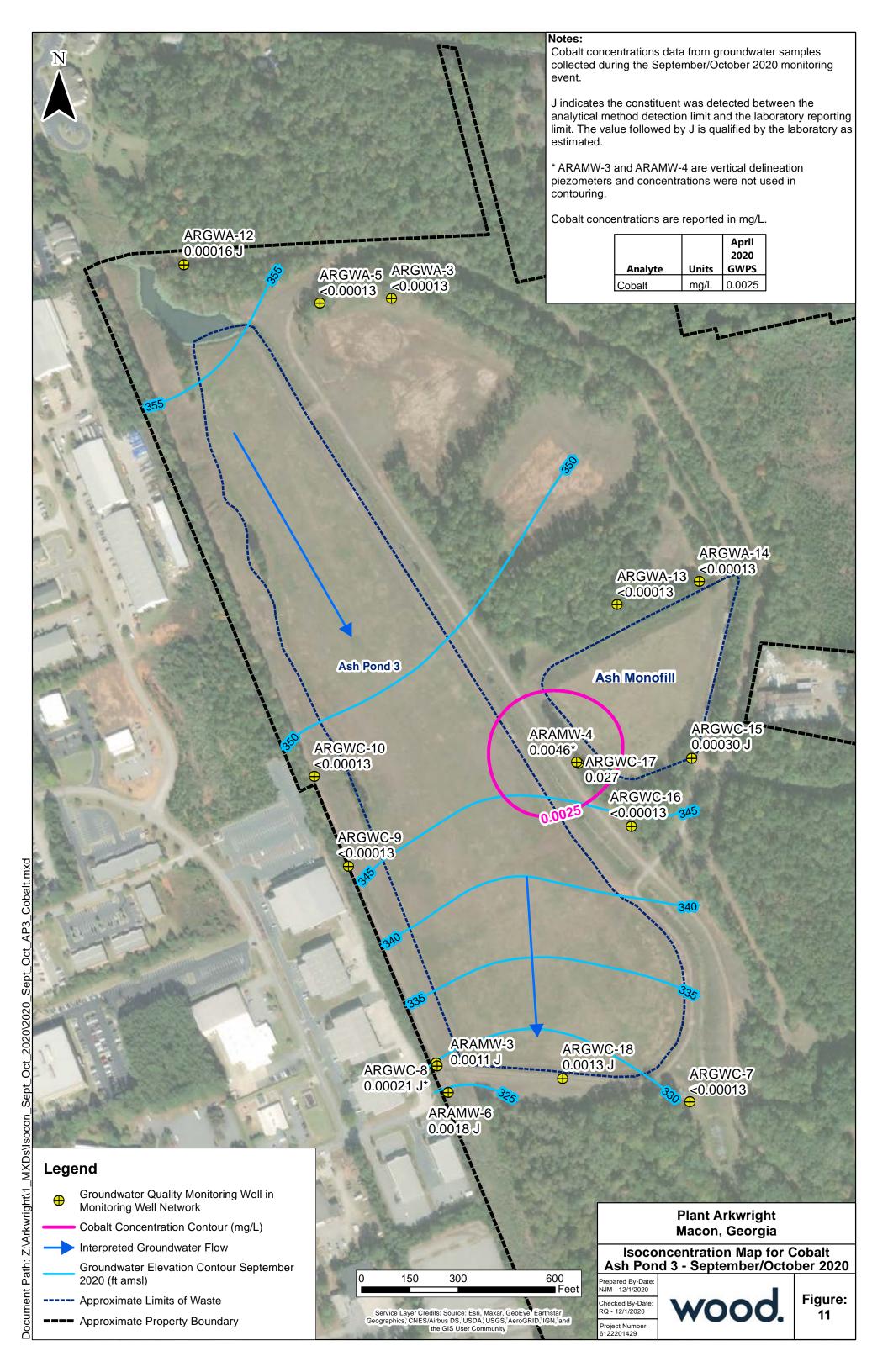


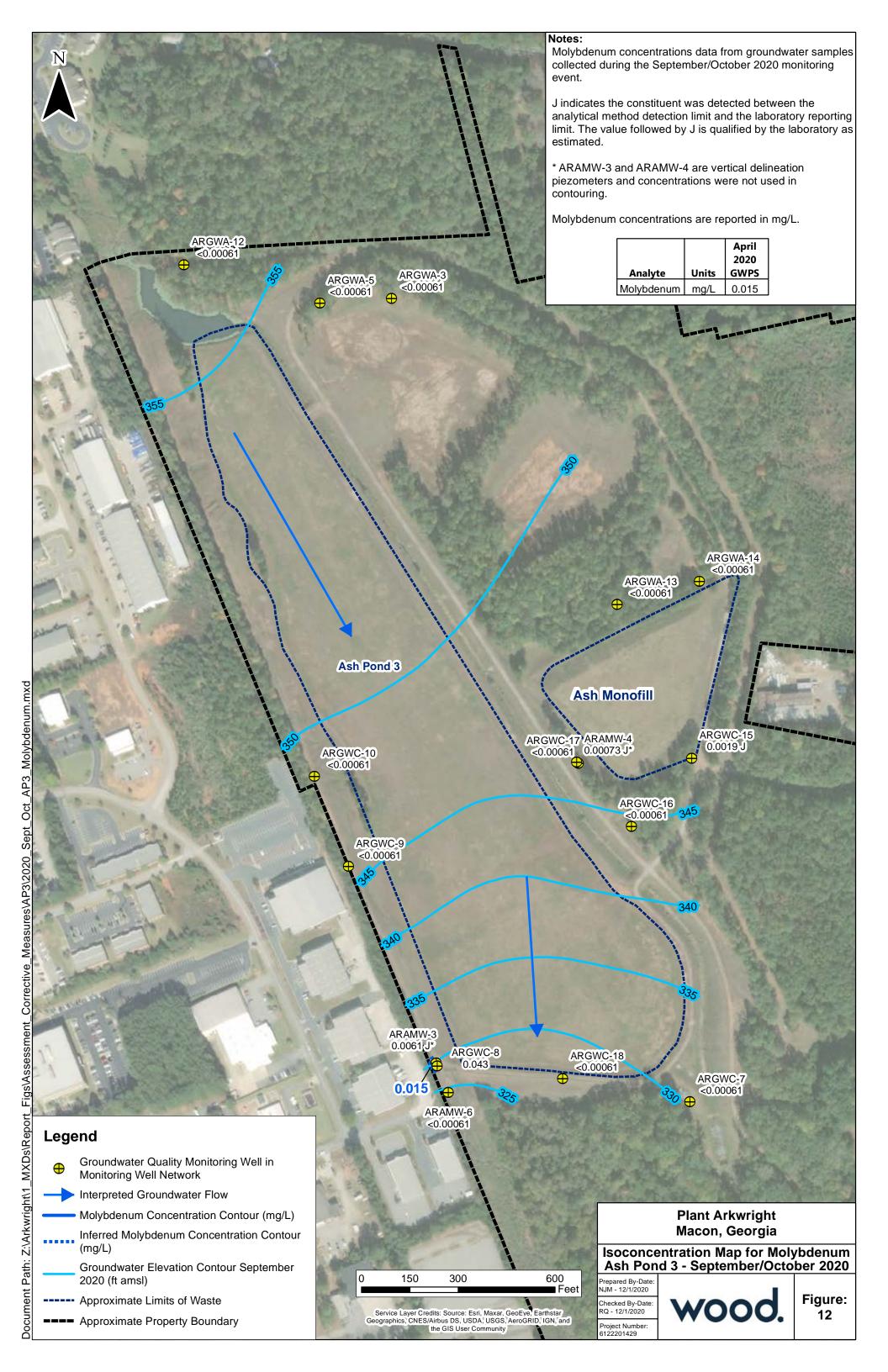
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Assessment of Corrective Measures Report Georgia Power Company – Plant Arkwright Ash Pond 3 Landfill and Monofill 12/4/2020

APPENDIX A

Risk Evaluation Report

wood.



RISK EVALUATION REPORT FORMER PLANT ARKWRIGHT ASH POND 3 LANDFILL AND MONOFILL BIBB COUNTY, GEORGIA

Prepared for

Georgia Power 241 Ralph McGill Boulevard Atlanta, Georgia 30308

Prepared by

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December 2020

Project Number 6123-20-1475

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LIST OF ACRONYMS AND ABBREVIATIONS

ACC Atlantic Coast Consulting, Inc.

AP Ash Pond

CCR Coal Combustion Residual
CEM Conceptual Exposure Model
CFR Code of Federal Regulations

COI Constituent of Interest

COPI Constituent of Potential Interest EPC Exposure Point Concentration

EPD [Georgia] Environmental Protection Division

GCL Geosynthetic Clay Liner

GWPS Groundwater Protection Standard HSRA Hazardous Site Response Act

mg/L Milligrams per liter

OCGA Official Code of Georgia Annotated

ProUCL ProUCL software version 5.1
PWR Partially Weathered Rock

RME Reasonable Maximum Exposure

RRS Risk Reduction Standards
RSL Regional Screening Level
SSL Statistically Significant Level

UCL 95 Percent Upper Confidence Limit of the Arithmetic Mean

USEPA United States Environmental Protection Agency

VRP Voluntary Remediation Program

EXECUTIVE SUMMARY

The former Georgia Power's Plant Arkwright (site) consisted of a four-unit coal-fired, electric-generating facility approximately 6 miles northwest of the city of Macon, Georgia in Bibb County, Georgia. In compliance with applicable regulations, coal combustion residual (CCR) material resulting from power generation has historically been transferred and stored at the Ash Pond 3 Landfill and Monofill (AP-3), which were commissioned and operated separately but were then combined into one CCR unit in 2008 prior to closure. The Monofill disposal area is located just east of the AP-3 Landfill and was approved by EPD in January 1994 under Solid Waste Handling Permit 011-025D(LI) as a private industrial landfill to accept only waste from Georgia Power. This report focuses on the AP-3 Landfill and Monofill and is hereafter referred to as AP-3.

Georgia Power is currently in the permitting process for AP-3, which was closed in accordance with solid waste landfill regulations specified in the Georgia Rules for Solid Waste Management, Chapter 391-3-4, in effect at the time of its closure in 2010. Closure construction of the AP-3 Landfill and Monofill was completed in 2009 utilizing a geosynthetic clay liner overlain by 18 inches of cover soil. The Closure Certificate issued by Georgia Environmental Protection Division (EPD) in August 19, 2010 for AP-3 initiated the post-closure care period for the CCR unit. AP-3 is exempt from the requirements in the Federal CCR Rule¹, in accordance with §257.50 (d) and (e), which states that the subpart does not apply to CCR landfills that have ceased receiving CCR prior to October 19, 2015. AP-3 is, however, subject to the requirements of relevant portions of the State CCR Rule (Georgia EPD Rule 391-3-4-.10; EPD, 2018a), which includes semi-annual groundwater monitoring and reporting.

This report presents the results of a human health and ecological risk evaluation for CCR constituents that exhibit statistically significant levels (SSLs) in groundwater at the site, cobalt and molybdenum. A conservative, health-protective approach was used that is consistent with United States Environmental Protection Agency (USEPA) risk assessment guidance, Georgia EPD regulations and guidance, and standard practice for risk assessment in the State of Georgia. Molybdenum was previously identified as a state SSL-related constituent using the Groundwater Protection Standards (GWPS) established

1

¹ The full citation for the Federal CCR Rule is: 40 C.F.R. § 257, Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments. The rule was finalized with an effective date of October 14, 2015 and last amended August 28, 2020 with an effective date of September 28, 2020 (USEPA, 2020a).

for AP-3 pursuant to the State CCR Rule, but would not be identified as a SSL-related constituent under the Federal CCR Rule (Wood, 2020). Cobalt was also previously identified as a state SSL-related constituent and would be identified as a federal SSL-related constituent under the Federal CCR Rule if it was applicable (Wood, 2020). The risk evaluation relies on recent (September 2016 to April 2020) groundwater data collected by Georgia Power in compliance with the State CCR Rule.

Consistent with USEPA guidance, this risk evaluation used a tiered approach to evaluate potential risks, which included the following steps:

- 1. Development of a conceptual exposure model (CEM) for AP-3.
- 2. Initial groundwater risk screening: Comparison of groundwater concentrations for SSL-related constituents (cobalt and molybdenum) to conservative, health-protective criteria to assess whether constituents pose a risk to human health.
- 3. Refined groundwater risk evaluation: Performance of a more refined analysis for Constituents of Potential Interest (COPIs) that were retained in the initial risk screening in order to evaluate the potential risks to human health due to groundwater exposure.
- 4. Development of risk conclusions and identification of associated uncertainties.

Using this approach that includes multiple conservative assumptions, SSL-related constituents (cobalt and molybdenum) are not expected to pose a risk to human health or the environment. Therefore, no further risk evaluation for groundwater is warranted. Compliance groundwater monitoring for AP-3 under the State CCR Rule will continue. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.

1 INTRODUCTION

This report summarizes a risk evaluation of AP-3 located at the former Georgia Power Plant Arkwright (the site) in Bibb County, Georgia (**Figure 1**). Georgia Power is currently in the permitting process for AP-3 in accordance with the State CCR Rule (EPD, 2018a). AP-3 is exempt from the requirements in the Federal CCR Rule, in accordance with § 257.50(d), which states that the subpart does not apply to CCR landfills that have ceased receiving CCR prior to October 19, 2015 (USEPA, 2020a). Closure construction of the AP-3 Landfill and Monofill was completed in 2009 utilizing a geosynthetic clay liner overlain by 18 inches of cover soil. A Closure Certificate was issued by EPD in August 19, 2010 for AP-3.

This risk evaluation provides additional technical review of the human health and environmental protectiveness associated with the closure of AP-3 with respect to cobalt and molybdenum concentrations in groundwater, which were identified as SSL-related constituents. Molybdenum was previously identified as a state SSL-related constituent using the groundwater GWPS established for AP-3 pursuant to the State CCR Rule, but would not be identified as an SSL-related constituent under the Federal CCR Rule². Cobalt was also previously identified as a state SSL-related constituent and would be identified as a federal SSL-related constituent under the Federal CCR Rule if it was applicable. The evaluation relies on a conservative, health-protective approach that is consistent with the risk approaches outlined in Voluntary Remediation Program (VRP) (Georgia Voluntary Remediation Act, OCGA §12-8-100) and USEPA Regional Screening Levels (RSLs) User's Guide (USEPA, 2020b). This evaluation also incorporated principles and assumptions consistent with the Federal and State CCR Rules.

The risk evaluation includes the development of a site-specific CEM and a stepwise risk screening process for identified SSL-related constituents for AP-3. Cobalt was identified as an SSL-related constituent in monitoring well ARGWC-17, and molybdenum was identified as an SSL-related constituent in monitoring well ARGWC-8. Based on the

² A state SSL-related constituent is determined by comparing the confidence intervals developed to either the constituent's MCL, if available, or the calculated background interwell prediction limit. A federal SSL-related constituent is determined by comparing the confidence intervals developed to either the constituent's MCL, if available, the USEPA RSL, if no MCL is available, or the calculated background interwell prediction limit.

results of the risk evaluation for these SSL-related constituents, a site-specific recommended path forward is provided.

The remainder of the report is organized as follows:

- Section 2, Basis and Background for the Development of the Conceptual Exposure Model Presents site-specific information related to the site history, monitoring network, topography and surface hydrology, geology and hydrogeology, potential transport pathways, and receptors that could potentially be exposed to SSL-related constituents.
- Section 3, Risk Evaluation Screening Describes the process for the initial risk-based screening of SSL-related constituents in groundwater to identify COPIs.
- Section 4, Refined Risk Evaluation Describes the risk screening process for the groundwater COPIs, including calculation of exposure point concentrations (EPCs) and analysis of concentration trends over time.
- **Section 5, Uncertainty Assessment** Describes the uncertainties associated with the risk screening process.
- *Section 6, Conclusions* Presents the conclusions of the risk evaluation.
- **Section 7, References** Provides reference information for the sources cited in this document.

2 BASIS AND BACKGROUND FOR THE DEVELOPMENT OF THE CONCEPTUAL EXPOSURE MODEL

This section provides a brief overview of the site location and operational history, site regulatory status, and geology/hydrogeology.

A CEM representing the site-specific processes and conditions that are relevant to the potential migration of groundwater and potential exposure to SSL-related constituents has been developed based on a review and compilation of information previously presented in former Plant Arkwright AP-3 documents, including the *CCR Unit Permit Application Part A, Former Plant Arkwright – AP3 Landfill and Monofill* (Jacobs, 2018a), *CCR Unit Permit Application Part B, Former Plant Arkwright – AP3 Landfill and Monofill* (Jacobs, 2018b), 2019 Semiannual Groundwater Monitoring and Corrective Action Report (Atlantic Coast Consulting [ACC], 2020), and the *Plant Arkwright AP-3 2020 Annual Groundwater Monitoring and Corrective Action Report* (Wood, 2020). The CEM includes a conservative evaluation of potential transport pathways, potential exposure pathways, and potential human and ecological receptors.

2.1 Site Description

The former Plant Arkwright is located in Bibb County, Georgia, approximately 6 miles northwest of the city of Macon. Plant Arkwright is bordered by the Ocmulgee River on the east (**Figure 1**). The former Plant Arkwright was a four-unit coal-fired power generating facility that was retired in 2002 and decommissioned in 2003. CCR landfill units at the former Plant Arkwright include AP-1, AP-2 (Dry Ash Stockpile Landfill) and AP-3.

AP-3 was initially constructed as a surface impoundment prior to 1958, but did not receive CCR material until the 1970s. The CCR unit was closed in 2010 in accordance with the solid waste landfill regulations specified by Georgia EPD Rule 391-3-4, in effect at the time of its closure. Closure construction of AP-3 was completed in 2009 utilizing a geosynthetic clay liner overlain by 18 inches of cover soil. The closed footprint of the AP-3 Landfill encompasses 31.54 acres, and the closed footprint of the Monofill encompasses 4.08 acres. A closure certificate was issued by Georgia EPD for AP-3 on August 19, 2010. The Closure Certificate initiated the post-closure care period for the CCR unit.

Semi-annual groundwater monitoring and reporting for AP-3 is performed in accordance with the monitoring program requirements of the State CCR Rule. A groundwater

monitoring network was installed to monitor groundwater quality both upgradient and downgradient of AP-3. The AP-3 certified monitoring well network consists of five upgradient monitoring wells and eight downgradient monitoring wells. Three piezometers (ARAMW-3, ARAMW-4, and ARAMW-6) were also installed at AP-3 in November 2019. The locations of the certified compliance well network are provided on **Figure 2**.

2.1.1 Topography and Surface Hydrology

The site is located along the southern edge of the Washington Slope Physiographic District. The Washington Slope is characterized by a gently undulating surface which generally slopes to the south and southeast towards the Coastal Plain Physiographic District located approximately 3.8 miles to the southeast of the site. Topography of the Washington Slope ranges from approximately 700 feet above sea level in the areas of southern Atlanta and Athens to approximately 300 feet above sea level at its southern limit along the Georgia Fall Line. Streams follow the structure of underlying crystalline rocks eastward toward the Ocmulgee River. Relief throughout the district is between 50 and 100 feet with the greatest relief being along the Ocmulgee River with steep walled valleys with elevation changes between 150 and 200 feet.

Wetland areas delineated on the former Plant Arkwright property are located south of the AP-3 Landfill earthen dike and not within the AP-3 permit boundary (**Figure 2**). A small, man-made pond is located adjacent to AP-3 to the north. Circa 2005, the configuration of the man-made pond was adjusted to allow for drainage into a man-made, jurisdictional surface water channel constructed between the AP-3 Landfill and Monofill, which generally runs from north to south. This man-made surface water channel discharges surface water through a weir structure located at the southeastern corner of AP-3 and into the wetlands area located further south alongside Beaverdam Creek. Beaverdam Creek is a tributary of the Ocmulgee River and is located approximately 1,200 feet south of the southernmost extent of AP-3. Beaverdam Creek runs roughly from northwest to southeast, eventually discharging to the Ocmulgee River at a location over ¾-mile from AP-3. At its closest point, AP-3 is located approximately 1,400 feet west of the Ocmulgee River. The Ocmulgee River is part of the Lower Ocmulgee River Basin, flowing from north to south in the vicinity of former Plant Arkwright. All surface water and groundwater in the former Plant Arkwright area eventually flows in a southerly direction.

2.1.2 Geology and Hydrogeology

The geologic and hydrogeologic characteristics of the site have been extensively evaluated and compiled in previous reports. The following presents a brief summary of this information from the *Plant Arkwright AP-3 2020 Annual Groundwater Monitoring & Corrective Action Report* (Wood, 2020):

The general geology beneath AP-3 Landfill and Monofill consists of clays, silty and sandy clays, silty sands, sandy silts, and minor gravel at depth, underlain by silty sand saprolite and bedrock. Historic borings at the Site indicate bedrock occurs at depths ranging from approximately 14 feet to 63 feet below ground surface, and consists of weathered quartzofeldspathic gneiss, hornblende gneiss, and schist. Boring logs also indicate a relatively thin zone of partially weathered rock (PWR) above bedrock which ranges in thickness from 1 to 4 feet in the southern and eastern portions of the site, and up to 14 feet in the northeastern portion of the site.

Pertinent hydrogeologic information from the *Plant Arkwright AP-3 2020 Annual Groundwater Monitoring and Corrective Action Report* (Wood, 2020) is presented below:

Two main hydrostratigraphic units are present at the Site: the water table aquifer and the underlying bedrock aquifer. The water table aquifer is composed of the unconsolidated silty sands and sandy silts with clays and variable thicknesses of PWR [partially weathered rock] mantling the bedrock surface. The water table aquifer is hydraulically connected to the underlying bedrock aquifer (Southern Company Services, 2005) and comprise the uppermost aquifer. The monitoring well network for AP-3 Landfill and Monofill monitors the water table aquifer and the upper weathered and fractured bedrock.

Slug testing data from the site reflect a range of hydraulic conductivities from 10-3 to 10-4 centimeters per second. Groundwater level monitoring data from the site show stable water level trends and the potentiometric maps reflect groundwater generally flowing to the south and southeast across AP-3 Landfill and Monofill.

The potentiometric surface elevation contours for April 2020 is presented in **Figure 3**.

2.2 Potential Exposure Pathways and Receptors

A variety of geologic, hydrogeologic, and geochemical mechanisms can occur in the subsurface and serve to attenuate constituent concentrations in groundwater such as soil or rock characteristics, the local geology and hydrogeology, and the distance the groundwater must travel before reaching a potential receptor. The CEM (**Figure 4**) depicts the conservative potential exposure pathways and receptors included in the risk evaluation.

The following potential exposure pathways and receptors were considered:

- On-site industrial worker: The groundwater exposure pathway for the on-site industrial worker was considered incomplete because there are no wells on-site that are classified for use as potable wells.
- On-site construction worker: While there is a potential for limited exposure to groundwater by a future construction worker through dermal contact with on-site shallow groundwater during subsurface activities, future construction workers would be expected to have little to no direct contact with on-site groundwater due to safety procedures outlined in their site-specific health and safety plans.
- On-site resident: The groundwater exposure pathway for the on-site resident was considered incomplete because there is no residential use on-site under current site conditions and future residential use of the site is considered unlikely. Land use surrounding the site is zoned agricultural to the north, planned industrial to the west, agricultural to the southwest, and multi-family residential to the south (Bibb County, 2020). Beyond the Ocmulgee River to the east, land use is predominantly zoned agricultural/forestry (Jones County, 2007).
- Off-site industrial/construction worker: The potential for off-site worker exposure
 through direct contact with shallow groundwater was addressed through the
 evaluation of hypothetical off-site residential receptors. Health-protective
 screening levels for residential receptors would be more conservative than
 industrial and construction worker screening levels.
- Off-site resident: The groundwater exposure pathway for hypothetical off-site residential receptors was assumed potentially complete. A well survey of potential groundwater wells within a three-mile radius of AP-3 was conducted and consisted of reviewing Federal, State, and County records and online sources, in

addition to conducting a windshield survey of the area (Newfields, 2020). The well survey is included as **Appendix A**. Results of the survey are presented on **Figure 5**.

Combining well information from all sources with parcel data, 639 total parcels likely to be associated with an active or inactive private well within the three-mile radius were identified. Municipal water from the Macon Water Authority is widely available throughout the Bibb County portion of the area. The majority of the water lines around the plant were built in the 1970s, when the nearby homes were constructed. Municipal water is not available in the Monroe County part of the area. The residential area east of the Ocmulgee River is served by public water. No active public wells were located within the 3-mile radius. The closest private wells to AP-3 are south of the site and Beaverdam Creek, which was assumed to represent a localized hydraulic discharge boundary for groundwater flow in the upper aquifer from the area.

No surface water intakes have been identified for public water supplies within three miles downgradient of the site. Evaluation of information presented on the Water Quality Portal (2020) indicates a surface water intake is located approximately 4.6 miles downstream of the site. Use of surface water as a drinking water source within three miles downgradient of the site is an incomplete exposure pathway; therefore, drinking water exposure assumptions for surface water do not apply.

As a conservative measure, potential off-site residential exposure to SSL-related constituents was evaluated using on-site groundwater wells around the perimeter and downgradient of AP-3. This comparison makes the conservative assumption that on-site groundwater may potentially migrate to off-site drinking water wells, through advective transport in groundwater without any attenuation within the aquifer media through factors such as dilution, dispersion, or adsorption. The risk evaluation screening conservatively assumed that hypothetical off-site residential receptors could be exposed to the concentrations of SSL-related constituents in groundwater through its use as a potable water supply by ingestion and dermal contact with groundwater.

Off-site recreational surface water receptors: The surface water exposure pathway
for recreational receptors was addressed qualitatively through the evaluation of
on-site groundwater data. Molybdenum and cobalt concentrations were either
below the health-protective screening criteria or were delineated below health-

protective screening criteria in on-site groundwater; therefore, evaluation of the surface water pathway was not necessary.

• Off-site ecological surface water receptors: The surface water exposure pathway for off-site ecological receptors was addressed qualitatively through the evaluation of on-site groundwater data. Molybdenum and cobalt concentrations were either below the health-protective screening criteria or were delineated below health-protective screening criteria in on-site groundwater; therefore, evaluation of the surface water pathway was not necessary.

3 RISK EVALUATION SCREENING

The CEM developed in Section 2 was used to identify the potentially completed exposure pathways to human receptors that are considered in the risk evaluation. The initial step in the risk evaluation is the comparison of SSL-related constituents in groundwater collected between September 2016 to April 2020 to health-protective levels for potentially complete exposure pathways. The approach used is consistent with the Georgia EPD regulations and guidance, USEPA guidance, and standard practice for risk assessment in the State of Georgia. The Georgia EPD allows for the site-specific evaluation of risk in programs such as the Voluntary Remediation Program (EPD, 2009).

The initial risk evaluation screening was performed for the potential groundwater exposure pathway by comparing the constituent concentrations of on-site groundwater wells determined to have SSL-related constituents to appropriate health-protective screening criteria. These criteria included the risk reduction standards (RRS) established under the Hazardous Site Response Act (HSRA) for drinking water and site-specific background for the protection of human health. If the maximum concentration of a SSL-related constituent exceeded the screening criterion, the constituent was identified as a COPI for further evaluation in the refined risk evaluation. The methodology and screening criteria used were identified in accordance with regulatory guidance and standard risk assessment practices using an approach designed to conservatively overestimate possible exposures and risks, providing an additional level of confidence in the conclusions. The methodology is summarized on **Figure 6** and discussed in more detail below.

3.1 Data Used in Risk Evaluation Screening

This section provides information on the groundwater dataset used in the risk evaluation screening.

3.1.1 Groundwater Data

For the initial risk screening evaluation, groundwater data from samples collected between September 2016 to April 2020 from on-site monitoring well ARGWC-17 (cobalt data) and between August 2016 to April 2020 from on-site monitoring well ARGWC-8 (molybdenum data) were used in the risk screening evaluation for hypothetical off-site residential exposure. Cobalt in monitoring well ARGWC-17 and molybdenum in monitoring well ARGWC-8 were previously identified as SSL-related constituents. The

data for these SSL-related constituents from the wells listed above were screened against relevant health-protective screening criteria.

The two wells with SSL-related constituents are depicted on **Figure 2** and the groundwater dataset used in the risk evaluation is presented in **Appendix B.** Method detection limits for the groundwater dataset used in the risk evaluation were reviewed and confirmed to be less than the screening levels.

3.1.2 Background Groundwater Quality

Statistical analysis of groundwater monitoring data is performed at the former Plant Arkwright pursuant to §257.93-95 following the established statistical method from the Unified Guidance (USEPA, 2009) for AP-3; background values are routinely updated under the program. Five monitoring wells in the certified monitoring well network are designated as upgradient or background locations, including ARGWA-3, ARGWA-5, ARGWA-12, ARGWA-13, and ARGWA-14. The statistical analyses performed on the groundwater data were described in the 2020 Annual Groundwater Monitoring & Corrective Action Report Statistical Summary (Wood, 2020) and text from that document is presented below.

Non-parametric Interwell tolerance limits were used to calculate the site-specific background limits from pooled upgradient well data for Appendix IV constituents. Parametric tolerance limits are used when data follow a normal or transformed-normal distribution such as for radium. When data contained greater than 50% nondetects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used. The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR § 257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a).

Naturally occurring or site-specific background concentrations can exceed health-protective screening criteria. Therefore, site-specific background values were used as the groundwater screening values if background concentrations were identified as greater than the groundwater screening values, as further described in Section 3.2.

3.2 Groundwater Screening Evaluation

The process of screening SSL-related constituents in groundwater against human health screening levels for groundwater is discussed below and presented in **Figure 6**. The HSRA RRS evaluated under the VRP approach presented herein included Type 1 and

Type 2 standards for off-site residential receptors. The Hazardous Site Response Act, Rule 391-3-19.07(1) notes that "[a]ll risk reduction standards will, when implemented, provide adequate protection of human health and the environment." In addition, Rule 391-3-19.07(3) notes a corrective action, if needed, may be considered complete when "a site meets any or a combination of the applicable risk reduction standards described in Rule 391-3-19-.07."

In accordance with risk standards and methodologies approved by the Georgia EPD, the screening level hierarchy for the SSL-related constituents is as follows:

- The higher of the Type 1 or Type 2 RRS for hypothetical off-site residential exposures, which are considered protective of human health for those constituents regulated under HSRA (i.e., cobalt).
 - The Type 2 RRS was used for cobalt, which is the lower of the calculated carcinogenic and non-carcinogenic values derived using the default exposure factors for residential receptors and the methodology found in Appendix III of the HSRA rule (EPD, 2018b). Toxicity values for cobalt used for the Type 2 RRS calculations were identified in the Provisional Peer Reviewed Toxicity Value for Cobalt (USEPA, 2008). The risk-based Type 2 RRS were calculated using USEPA's RSL calculator (USEPA, 2008) assuming a target cancer risk of 1×10⁻⁵ and a target hazard quotient of 1, consistent with the Georgia EPD guidance (EPD, 2018b). The calculations of the Type 2 RRS values for the SSL-related constituents are presented in **Appendix C**.
- Site-specific screening levels were calculated for those chemical constituents like molybdenum that do not have RRS under HSRA using residential exposure assumptions consistent with the HSRA rules (EPD, 2018b) and are equivalent to the USEPA tapwater RSLs. The screening level for molybdenum is essentially a Type 2 RRS calculated at a target hazard quotient of 1, consistent with Georgia EPD guidance, and has been adopted by USEPA as the risk-based level for the Federal CCR Rule (USEPA, 2020a). The calculations of the site-specific and Type 2 RRS values for the SSL-related constituents are presented in **Appendix** C. A site-specific screening level was used for molybdenum.
- If site-specific background concentrations are greater than the criteria described above, then the site-specific background concentration is used as the screening level in accordance with the CCR methodology for development of groundwater

protection standards (USEPA, 2020a). Background was not used as a screening level in the evaluation.

Groundwater data collected from the wells identified to have SSL-related constituents were compared to residential screening criteria as a surrogate for protection of hypothetical off-site receptors. Concentrations of cobalt in ARGWC-17 and molybdenum in ARGWC-8 were compared to the higher of the HSRA Type 1 RRS, Type 2 RRS, and background values for groundwater pursuant to standard practice for risk assessment within the State of Georgia.

Table 1 presents the maximum detected concentration of each SSL-related constituent (0.037 mg/L for cobalt and 0.051 mg/L for molybdenum), which was used to represent potential off-site groundwater quality for comparison to the selected screening levels for hypothetical off-site residential receptors of 0.006 mg/L for cobalt and 0.1 mg/L for molybdenum. As noted in **Table 1**, cobalt was detected at concentrations that exceeded the screening level, was identified as a COPI, and was retained for further evaluation in the refined risk evaluation. Concentrations of molybdenum were below the health-protective screening level, and therefore, no further evaluation of molybdenum is necessary.

4 REFINED RISK EVALUATION

A refined risk evaluation was conducted for the groundwater COPI, cobalt, that was detected in ARGWC-17 at concentrations that exceeded the health-protective screening criterion. The refined risk evaluation identified an EPC for potential exposure to cobalt for the purposes of characterizing potential risk to human receptors.

4.1 Refined Groundwater Risk Evaluation

Potential risk associated with exposure to cobalt by hypothetical off-site residential receptors was refined using the methodology described in the HSRA and VRP guidance (EPD, 2018b; EPD, 2009) and is presented in the following section and on **Figure 7**.

For the refined risk evaluation, groundwater data from the on-site well that was identified to have an SSL-related constituent and downgradient monitoring wells that represent groundwater flow in the same hydraulically downgradient direction were used as a surrogate for hypothetical off-site residential exposure. The downgradient groundwater monitoring wells included in the refined risk evaluation are depicted with yellow well labels on **Figure 2** and include the well with the SSL-related constituent (ARGWC-17) along with the wells downgradient of ARGWC-17 (ARAMW-4 and ARGWC-18).

Groundwater data used in the refined risk evaluation were collected from the uppermost aquifer and are considered to be representative of groundwater conditions at the site. The groundwater data used in the refined risk evaluation are presented in **Appendix B.** Method detection limits for the groundwater datasets used in the risk evaluation were reviewed and confirmed to be less than the screening levels.

4.1.1 Groundwater Exposure Point Calculation

The refined risk evaluation for cobalt includes the development of an EPC. The EPC is a conservative estimate of potential exposure to a receptor. The EPC is based on the 95 percent upper confidence limit of the arithmetic mean (UCL) and accounts for uncertainty and variability in the dataset (USEPA, 2002). Consistent with USEPA guidance for developing groundwater EPCs (USEPA, 2014), UCLs were calculated using USEPA ProUCL 5.1 software (ProUCL) (USEPA, 2016) and user's guide (USEPA, 2015a). For the refined risk evaluation, the UCLs for cobalt were calculated using the following specific datasets:

• UCL for the individual well with an SSL-related constituent;

- UCL based on combined data from the well with an SSL-related constituent and other wells/piezometers in the general vicinity to include additional downgradient monitoring wells/piezometers that represent groundwater flow in the same hydraulically downgradient direction; and
- UCL based on the combined data from the farthest downgradient well that is hydraulically downgradient of the well with an SSL-related constituent.

Other assumptions made in the calculations of the UCLs include:

- Primary samples (no duplicates) were used to calculate EPCs as duplicate samples were analyzed for quality assurance purposes.
- If the calculated UCL exceeded the maximum detected concentration or if enough samples were not available to calculate an UCL, then the maximum detected concentration was used as the EPC.

ProUCL software calculates multiple UCLs and provides a recommended UCL that was selected as the EPC. If there were multiple UCLs recommended by ProUCL, the maximum UCL value was selected. **Appendix D-1** provides a summary of the UCLs calculated using the methods described above, and **Appendix D-2** presents a figure showing the wells used in the calculation of the EPCs for cobalt. **Appendix D-3** provides the input and output files associated with the ProUCL software.

Table 2 summarizes the groundwater EPC selected for cobalt. This table shows the number of samples, the maximum detected concentration, the UCL recommended by ProUCL software, and the selected EPC.

4.1.2 COPI Concentration Trend Analysis

Concentration trends over time were evaluated as one line of evidence in the refined risk evaluation for cobalt. The Mann-Kendall trend test with an alpha value equal to 0.05 and the Theil-Sen line test were conducted on the data from ARGWC-17 for cobalt to evaluate the trends in concentrations over time. The tests were conducted using the USEPA ProUCL 5.1 software (USEPA, 2016).

The Mann-Kendall and Theil-Sen test results are presented on a time series graph in **Appendix D-4** and indicated a statistically significant decreasing trend in cobalt concentrations over time at ARGWC-17.

A trend analysis for cobalt was also evaluated for ARGWC-18, the farthest downgradient well of ARGWC-17. Similar to ARGWC-17, the Mann-Kendall and Theil-Sen test results presented in **Appendix D-4** indicated a statistically significant decreasing trend in cobalt concentrations over time at ARGWC-18.

4.1.3 Refined Groundwater Risk Evaluation Results

Cobalt was identified as a groundwater COPI in the initial risk screening. In the refined risk evaluation, comparison of the calculated EPC to the screening level was used to identify whether cobalt is a constituent of interest (COI) that may pose a potential risk to hypothetical off-site residential receptors exposed through the use of groundwater as potable water. If the EPC from the farthest downgradient well is greater than the respective screening level, then the constituent is identified as having the potential for risk that warrants additional evaluation (i.e, performing a surface water evaluation).

Cobalt was detected in 11 out of 11 groundwater samples in well ARGWC-17 at concentrations that exceeded the off-site groundwater screening level for residential receptors. For the refined risk evaluation, the following EPCs were calculated for cobalt using the monitoring wells/piezometers shown in **Appendices D-1** and **D-2**:

- Data from ARGWC-17 were combined to represent groundwater exposure for the well with an SSL-related constituent (EPC Step 1 in **Appendix D-1**).
- Data from ARGWC-17 and the downgradient wells ARAMW-4 and ARGWC-18 were combined to represent groundwater exposure in the same hydraulically downgradient direction (EPC Step 2 in **Appendix D-1**).
- Data from ARGWC-18 were combined to represent groundwater exposure using the well that is the farthest hydraulically downgradient of well ARGWC-17 (EPC Step 3 in **Appendix D-1**).

The UCLs for the dataset for ARGWC-17 of 0.025 milligrams per liter (mg/L) and the combined dataset from ARGWC-17, ARAMW-4, and ARGWC-18 of 0.021 mg/L exceeded the screening level of 0.006 mg/L. The UCL for the dataset of the farthest hydraulically downgradient well (ARGWC-18) of 0.0016 mg/L is below the screening level of 0.006 mg/L. In addition, the distance from ARGWC-18 to the nearest property boundary within the potential groundwater flow direction is approximately 900 feet.

Table 3 presents the results of the refined screening comparing the farthest hydraulically downgradient EPC to the screening criterion. Cobalt was not identified as a groundwater

COI for hypothetical off-site residential receptors and is not expected to pose a risk to human health through potable water use.

4.1.4 Refined Groundwater Risk Evaluation Summary and Conclusions

Detections of cobalt at ARGWC-17 were reported at concentrations above the groundwater screening value. However, the results of the refined risk evaluation for groundwater indicate the following:

- Cobalt is not expected to pose a risk to hypothetical off-site residential receptors.
- All of the individual data points used to calculate the cobalt EPC to represent potential groundwater exposure for hypothetical off-site residential receptors based on the farthest hydraulically downgradient monitoring well (ARGWC-18) were less than the health-protective screening level.
- Statistically significant decreasing trends in cobalt concentrations have been observed at the well exhibiting an SSL and the farthest downgradient well over time.

Therefore, based on the multiple lines of evidence, further risk evaluation for groundwater is not warranted. Compliance groundwater monitoring under the State CCR Rule will continue.

5 UNCERTAINTY ASSESSMENT

USEPA guidance stresses the importance of providing an analysis of uncertainties so that risk managers are better informed when evaluating risk assessment conclusions (USEPA, 1989). The uncertainty assessment provides a better understanding of the key uncertainties that are most likely to affect the risk assessment results and conclusions.

The potential uncertainties associated with the risk evaluation are as follows:

Health-Protective Screening Criteria Uncertainties:

- In accordance with risk standards and methodologies approved by the Georgia EPD, the higher of the Type 1 or Type 2 standard were selected for screening criteria. Selection of the screening criteria per standard practice for risk assessment within the State of Georgia is considered appropriate for risk quantification for AP-3. The Hazardous Site Response Act, Rule 391-3-19.07(1) notes that "[a]ll risk reduction standards will, when implemented, provide adequate protection of human health and the environment." Thus, this approach is likely to overestimate hypothetical risks for off-site receptors.
- Screening criteria based on RRSs, including cobalt, represent the reasonable maximum exposure (RME). The RME is defined as "the highest exposure that is reasonably expected to occur at a site but that is still within the range of possible exposures" (USEPA, 1989). USEPA (1989) states that the "intent of the RME is to estimate a conservative exposure case (i.e., well above the average case) that is still within the range of possible exposures." Potential receptors will likely have lower exposures than those presented in this risk evaluation (i.e., a majority of the site concentrations will be less than the UCL), and therefore, potential exposures are likely overestimated.

Exposure Uncertainties:

- The maximum detected concentrations of SSL-related constituents were compared to conservative screening criteria to identify the COPIs. Use of the maximum detected concentration is consistent with standard practice; however, use of the maximum detected concentration for exposure likely overestimates potential risk.
- The constituents included in the risk evaluation occur naturally in the site geologic setting. Although background concentrations were evaluated and used

in the screening process, contributions to exposure and risk were assumed to be entirely CCR-related and natural background sources were not quantified. Thus, SSL-related exposures were likely overestimated.

- Hypothetical off-site residential exposure was evaluated using on-site groundwater data from wells around the perimeter and downgradient of AP-3. This comparison makes the conservative assumption that on-site groundwater may potentially migrate to off-site drinking water wells through advective transport in groundwater, but without any attenuation within the aquifer media through factors such as dilution, dispersion, or adsorption, overestimating potential exposure and risk to hypothetical off-site receptors. Concentrations above screening criteria are not migrating off-site as wells located downgradient of the screening level exceedances for cobalt have concentrations less than the health-protective criterion.
- EPCs for metals in groundwater were assumed to be 100 percent bioavailable by ingestion and dermal contact. This assumption may tend to overestimate risk.
- A well survey of potential groundwater wells within a three-mile radius of the
 former Plant Arkwright was conducted by NewFields in 2020 and consisted of
 reviewing publicly available federal, state, and county records as well as a
 windshield survey of the area (Appendix A). Wood relied on the data collected
 by NewFields.

The evaluation used on-site groundwater data to represent hypothetical off-site exposure, which is a conservative approach that likely results in overestimation of assumed exposure and assumed potential risk. The closest private wells to AP-3 are south of the site and Beaverdam Creek, which represents a localized discharge boundary for groundwater flow in the upper aquifer from the area. Although off-site potable wells identified in the well survey were not included in the risk evaluation, the presence of these wells do not appear to change the conclusions of the risk evaluation because concentrations of COPIs are delineated on-site.

Toxicity Uncertainties:

• Toxicity factors used to calculate health-protective criteria are established at conservative levels to account for uncertainties and often result in criteria that are many times lower than the levels observed to cause effects in human or animal studies. Therefore, a screening level exceedance does not necessarily equate to an adverse effect.

6 CONCLUSIONS

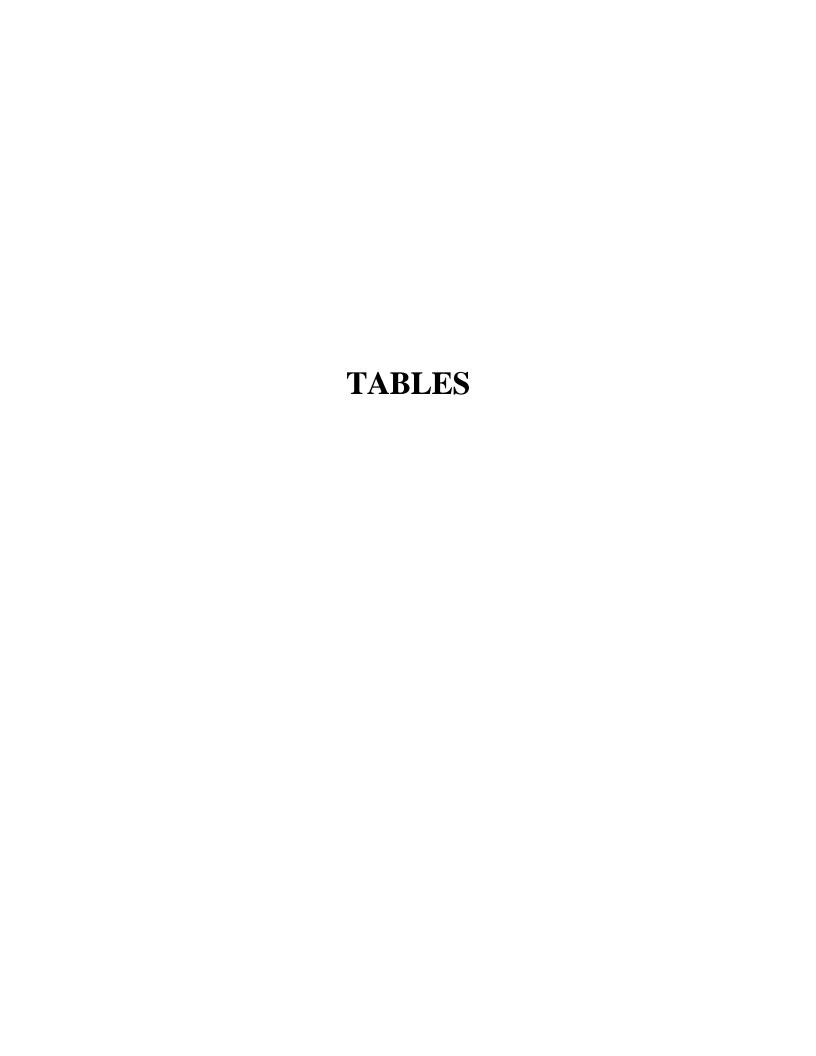
This human health and ecological risk evaluation for SSL-related constituents in groundwater at the site was conducted using methods consistent with Georgia EPD and USEPA guidance and included multiple conservative assumptions. Based on this evaluation, cobalt and molybdenum are not expected to pose a risk to human health or the environment.

Accordingly, no further risk evaluation for groundwater is warranted. Compliance groundwater monitoring for AP-3 under the State CCR Rule will continue. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.

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Table 1 SSL-Related Constituent Groundwater Screening Arkwright AP-3 Former Plant Arkwright, Bibb County, Georgia

CCR Rule Designation	Constituent	CAS No.	Detection Frequency ^[1]	Exceedance Frequency ^[2]	Maximum Concentration (mg/L)	Screening Level (mg/L)	Source	Site-Specific Background (mg/L)	COPI? (Y/N)	Rationale ^[3]
Appendix IV	Cobalt	7440-48-4	11 / 11	11 / 11	0.037	0.006	Type 2 RRS ^[4]	0.0025	Υ	ASL
Appendix IV	Molybdenum	7439-98-7	11 / 11	0 / 11	0.051	0.1	Site-Specific	0.015	N	BSL

Notes:

- [1] September 2016 to April 2020 data for downgradient well ARGWC-17 (cobalt) and August 2016 to April 2020 data for ARGWC-8 (molybdenum)
- [2] Exceedance frequency is for the specific constituent that exceeds the first screening value in the hierarchy of screening values.
- [3] Rationale for classification or exclusion of constituent as a COPI:

ASL = Above respective screening level

BSL = Below respective screening level

[4] The Type 2 RRSs and site-specific screening levels are calculated by the EPA RSL calculator with exposure factors inputs from HSRA Appendix III, Table 3.

Definitions:

CAS = Chemical Abstract Service

CCR = Coal Combustion Residuals

COPI = Constituent of Potential Interest

EPA = United States Environmental Protection Agency

RRS = Risk Reduction Standard

Prepared by/Date: IMR 9/24/2020 Checked by/Date: LMS 10/23/20

Table 2 Groundwater Exposure Point Concentration Summary Arkwright AP-3 Former Plant Arkwright, Bibb County, GA

Exposure Unit	CCR Rule Designation	Constituent	CAS No.	Detection Frequency	Maximum Concentration (mg/L)	95% UCL (mg/L)	Recommended UCL Method	Selected EPC ^[1] (mg/L)
AP-3	Appendix IV	Cobalt	7440-48-4	11 / 11	0.0021	0.0016	95% Student's-t UCL	0.0016

Notes:

[1] EPCs calculated in accordance with USEPA, 2014. Memorandum for Determining Groundwater Exposure Point Concentrations, Supplemental Guidance. OSWER Directive 9283.1-42, February 2014. Located at https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=236917. For further detail on the selected EPC, refer to Appendix D.

Definitions:

CAS = Chemical Abstract Service

CCR = Coal Combustion Residuals

mg/L = milligrams per liter

95% UCL = 95 percent upper confidence limit

EPC = Exposure Point Concentration

Table 3 Downgradient Groundwater Refined Screening Arkwright AP-3 Former Plant Arkwright, Bibb County, GA

Exposure Unit	CCR Rule Designation	Constituent	CAS No.	Detection Frequency	Exceedance Frequency ^[1]	Selected EPC ^[2] (mg/L)	Screening Level (mg/L)	Source	Site-Specific Background (mg/L)	COI? (Y/N)	Rationale ^[3]
AP-3	Appendix IV	Cobalt	7440-48-4	11 / 11	0 / 11	0.0016	0.006	Type 2 RRS ^[4]	0.0025	N	BSL

Notes:

[1] The exceedance frequency is based on the number of samples with detected concentrations that exceed the identified screening level.

[2] EPCs calculated in accordance with USEPA, 2014. Memorandum for Determining Groundwater Exposure Point Concentrations, Supplemental Guidance. OSWER Directive 9283.1-42, February 2014. Located at https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=236917.

For further detail on the selected EPC, refer to Appendix D.

[3] Rationale for classification of constituent as a COI or exclusion as a COI:

ASL = Above respective screening level

BSL = Below respective screening level

ND = Not detected (maximum practical quantitation limit [PQL])

[4] The Type 2 RRSs are calculated by the EPA RSL calculator with exposure factors inputs from HSRA Appendix III, Table 3.

Definitions:

CAS = Chemical Abstract Service

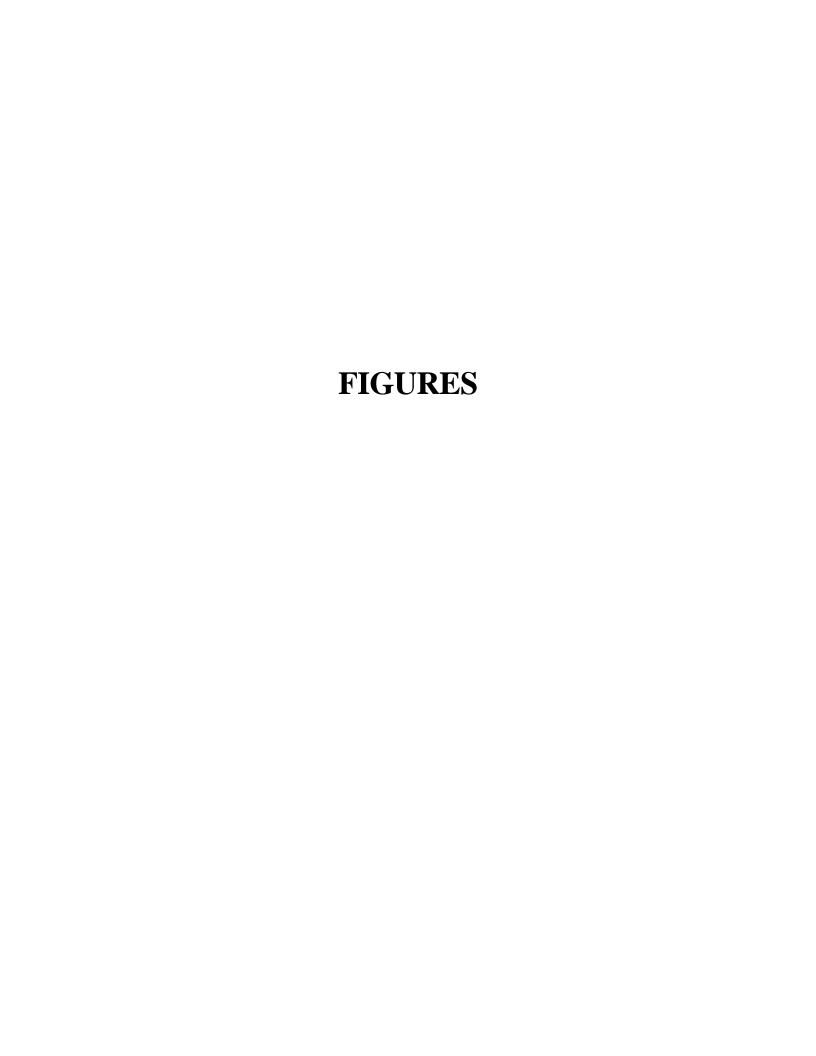
CCR = Coal Combustion Residuals

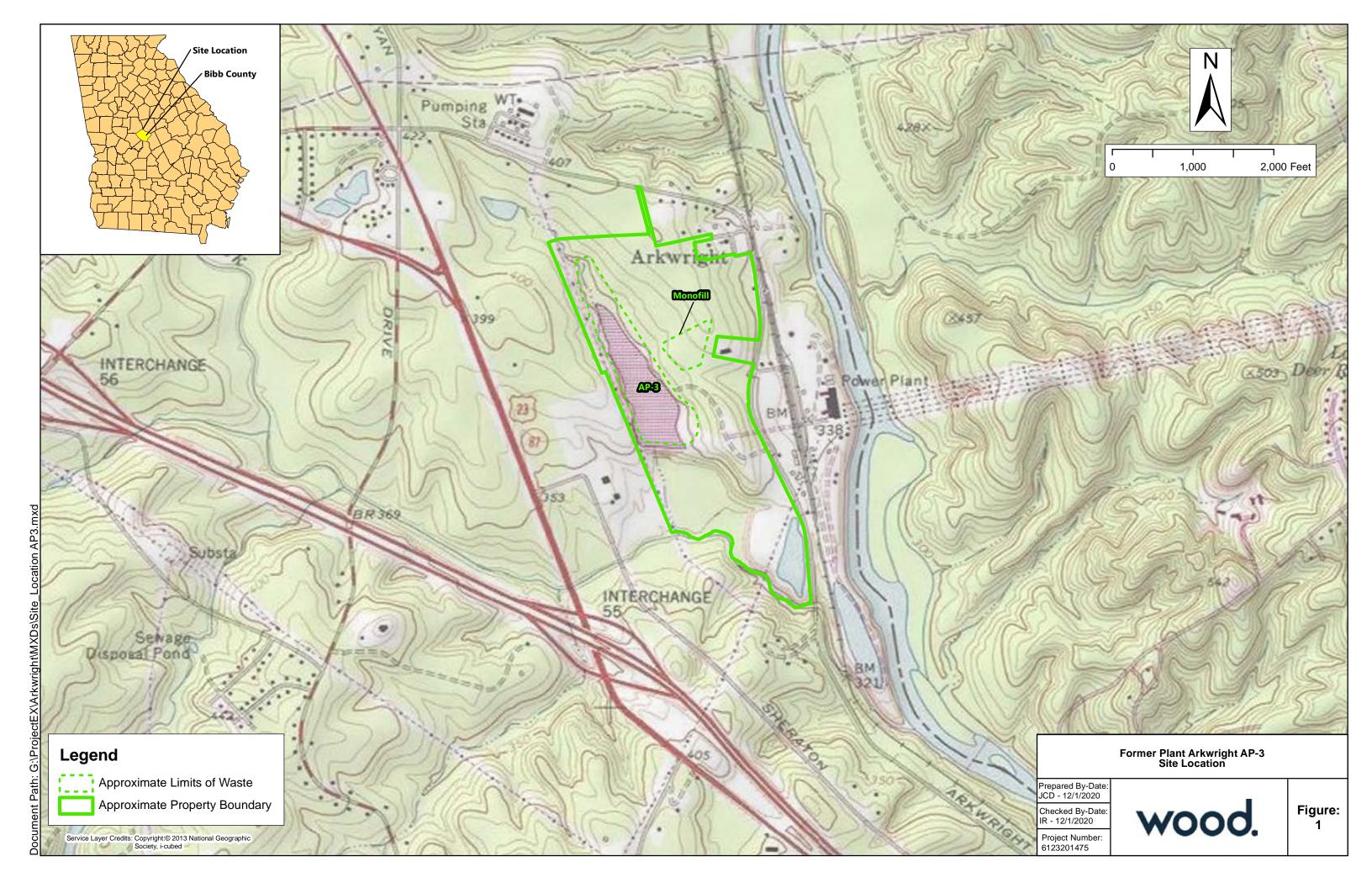
COI = Constituent of Interest

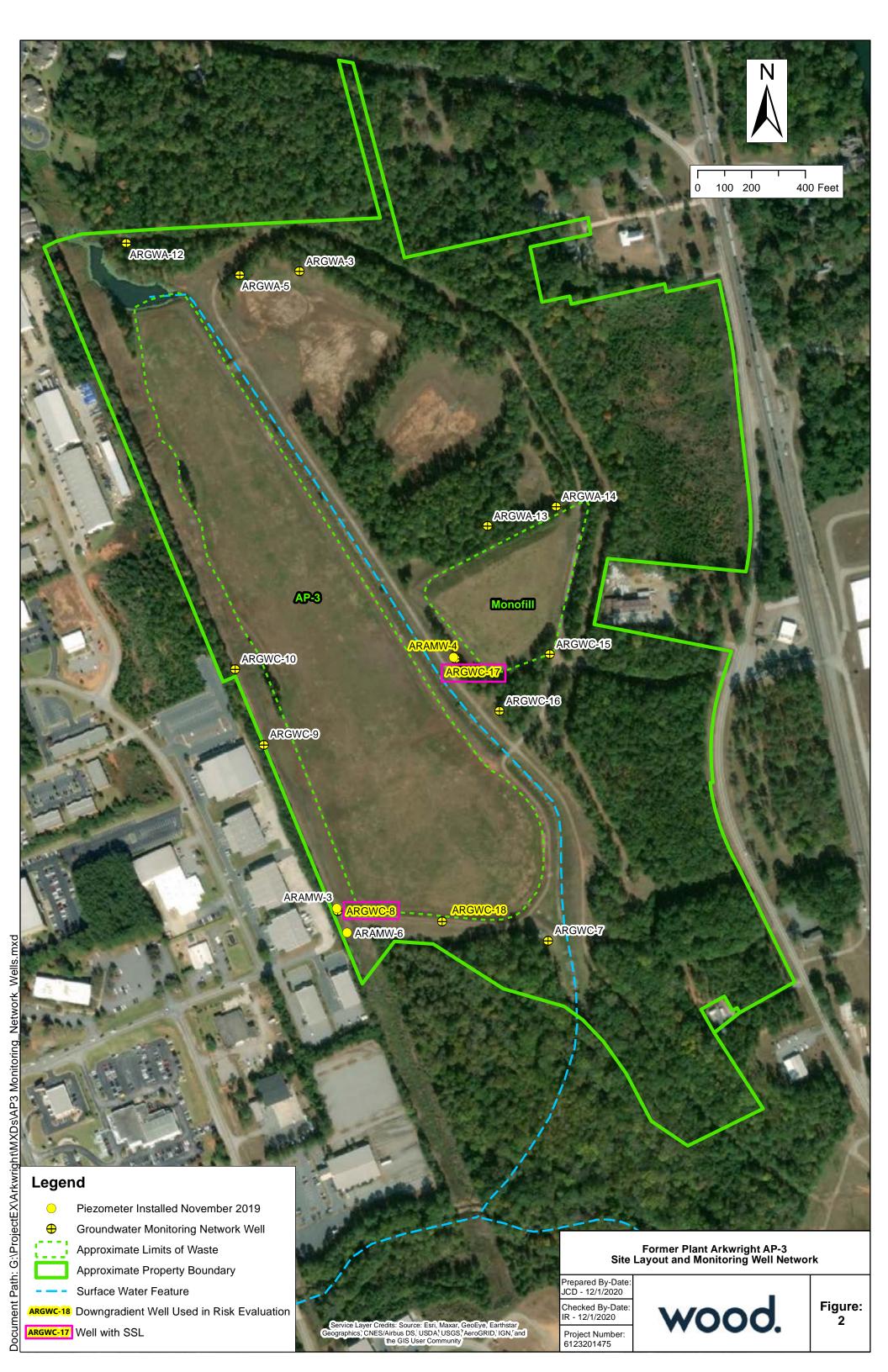
mg/L = milligrams per liter

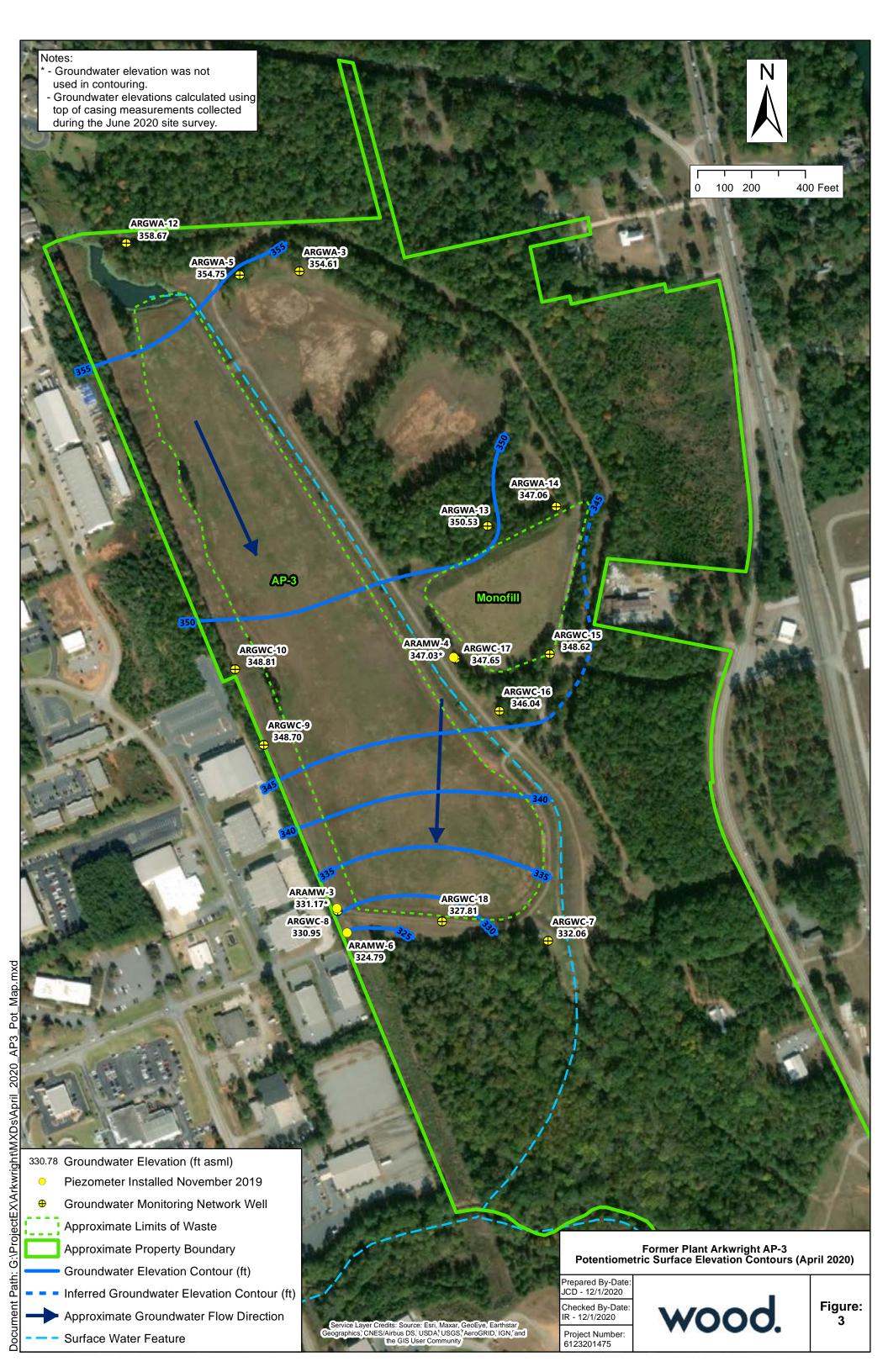
EPC = Exposure Point Concentration

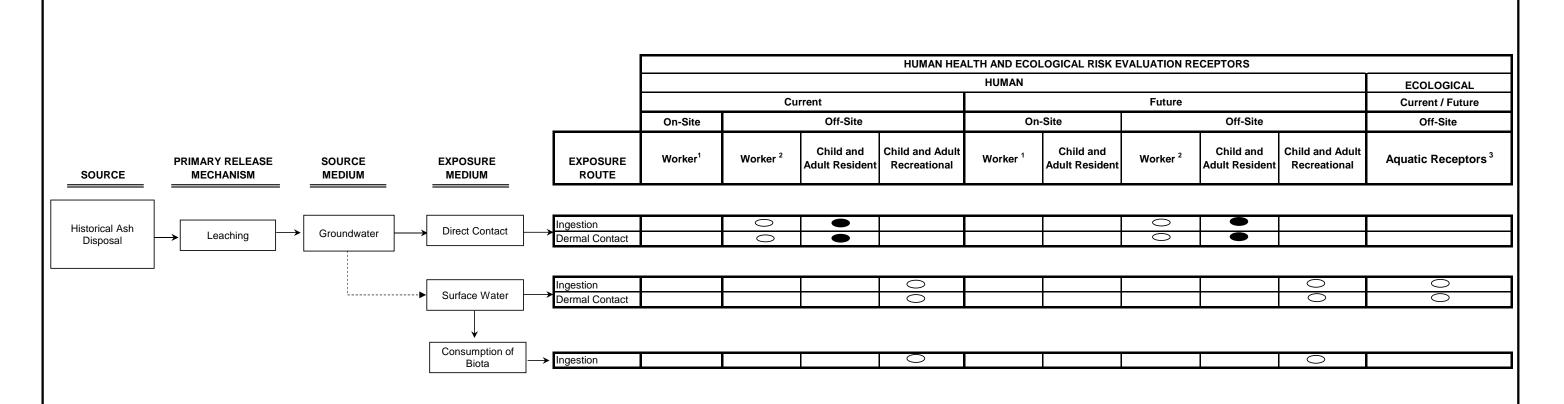
Prepared by/Date: <u>IMR 9/24/2020</u> Checked by/Date: <u>LMS 10/23/20</u>











.

<u>Legend</u>

A conservative assumption for this assessment was made that groundwater from the site flows to the downgradient surface water.

Indicates potentially
Indicates potentially

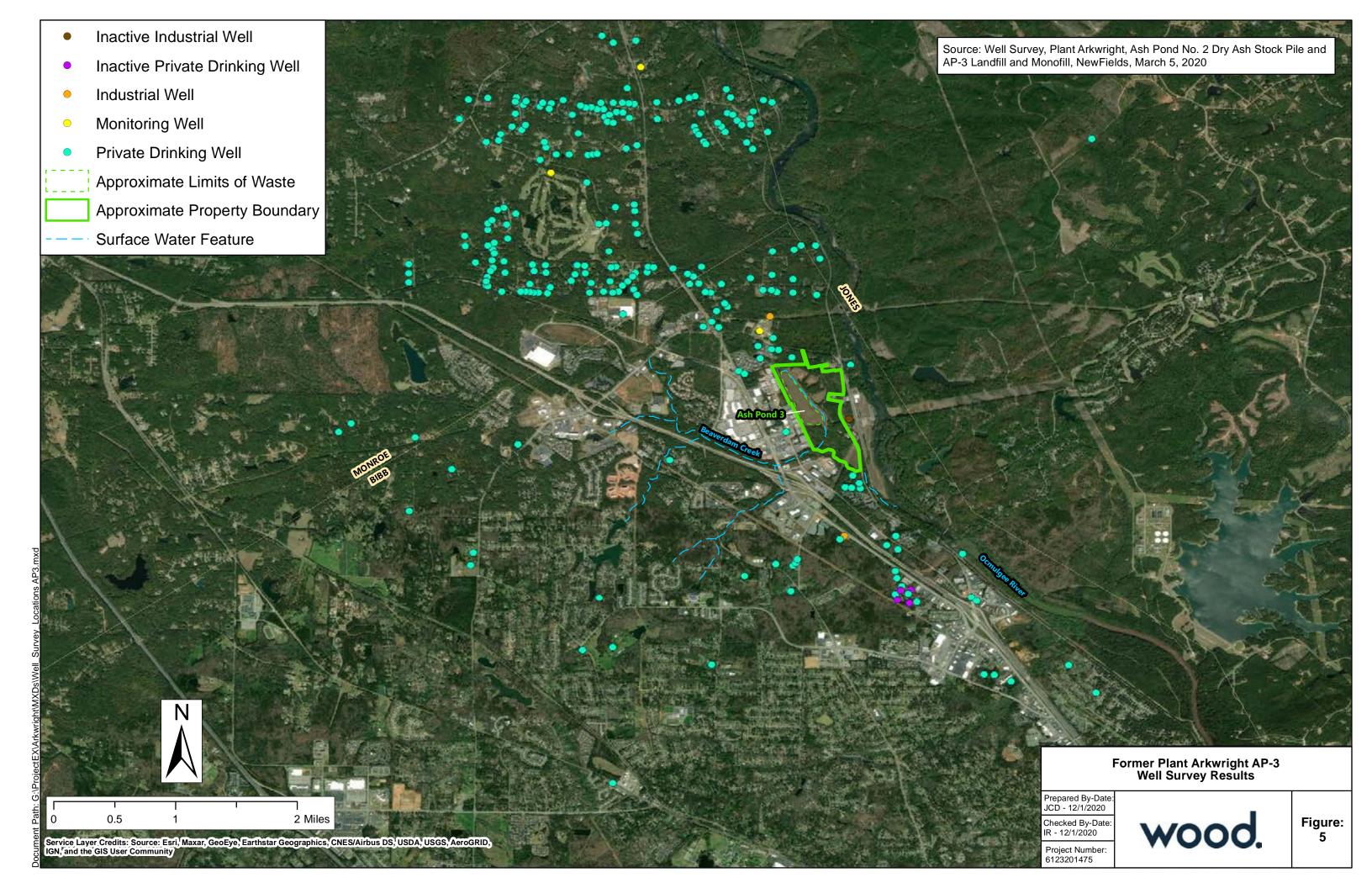
Indicates potentially complete pathway, which is evaluated quantitatively.

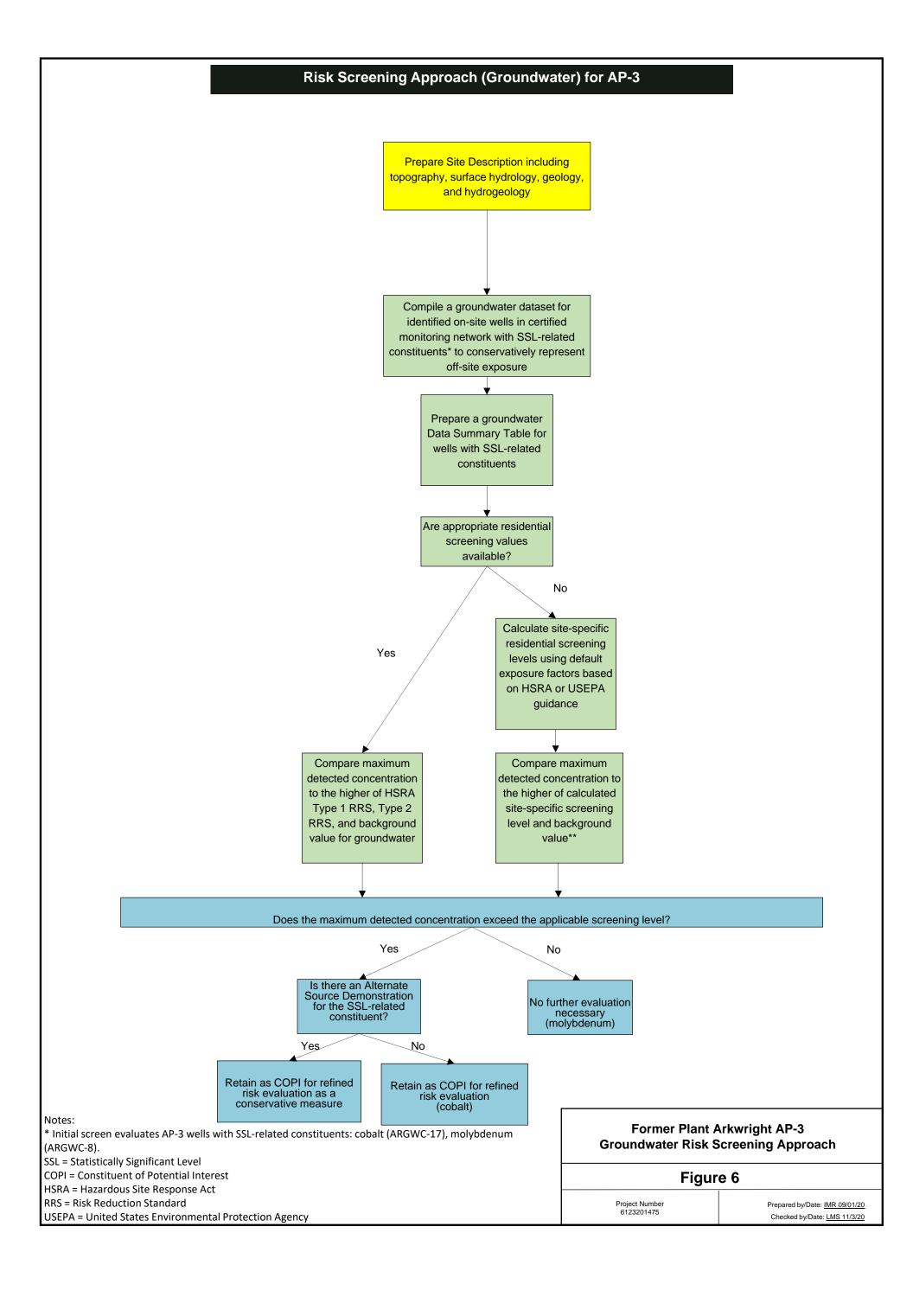
Indicates potentially complete pathway, which is evaluated qualitatively.

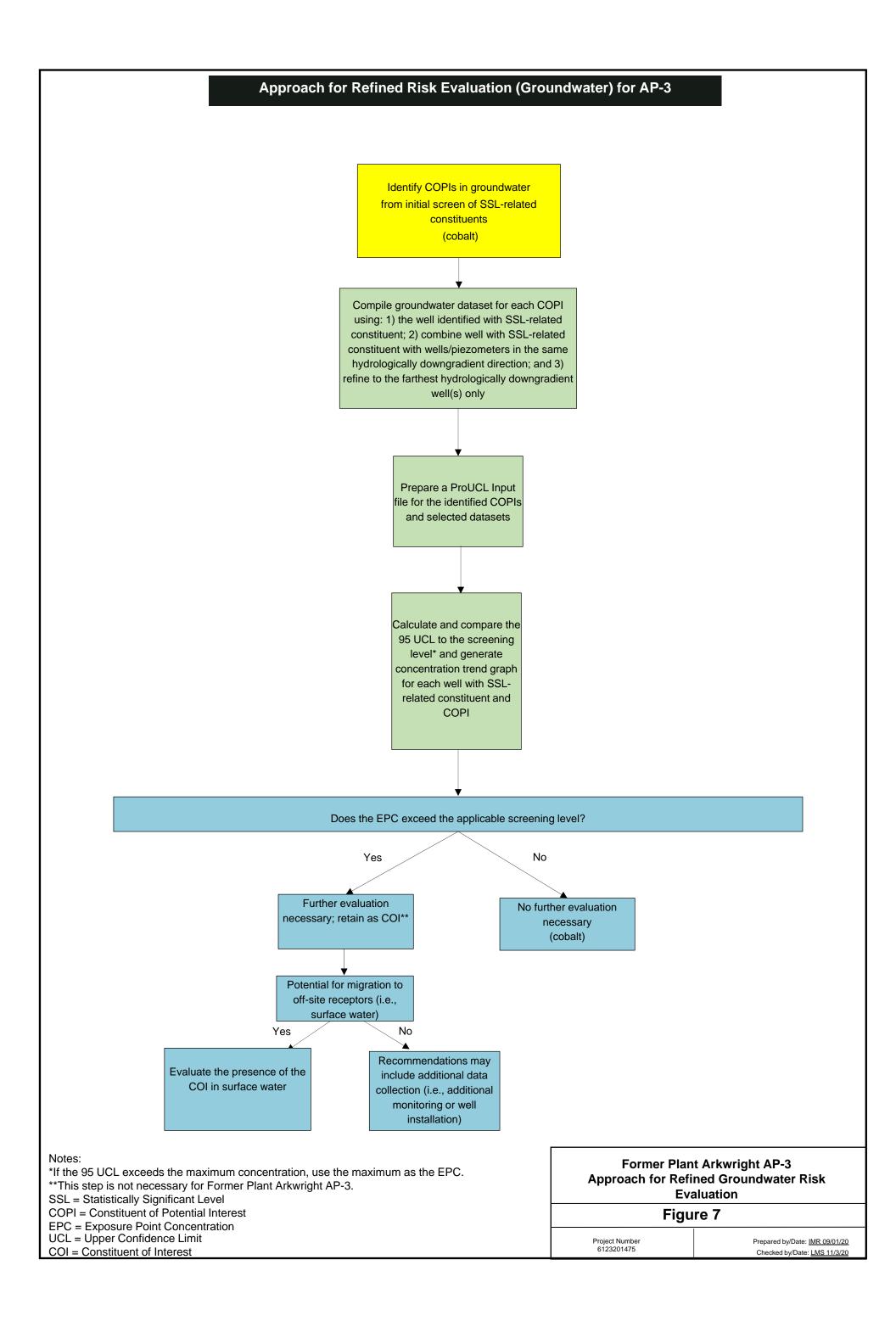
Footnotes

- 1. Industrial worker was considered incomplete because there are no wells on-site that are classified for use as potable wells. On-site construction workers would be expected to have little to no direct contact with on-site groundwater due to safety procedures outlined in their site-specific health and safety plans.
- 2. Off-site industrial/construction worker addressed through the evaluation of hypothetical off-site residential receptors as health-protective screening levels for residential receptors would be more conservative than industrial and construction worker screening levels.
- 3. Generalized receptor for ecological health risk evaluation.

Former Plant Arkwright AP-3 Conceptual Exposure Model									
Figu	re 4								
Project Number 6123201475	Prepared by/Date: <u>IMR 10/01/20</u> Checked by/Date: <u>LMS 11/3/20</u>								







APPENDIX A Plant Arkwright Well Survey



Well Survey

Plant Arkwright

Ash Pond No. 2 Dry Ash Stock Pile and AP-3 Landfill and Monofill

Macon, GA

Prepared for

Georgia Power Company
241 Ralph McGill Blvd., Atlanta, GA 30308

Prepared by

NewFields

1349 W. Peachtree Street, Suite 2000 Atlanta, GA 30309

March 5, 2020

Introduction

Plant Arkwright is located along the Ocmulgee River approximately six miles northwest of Macon, Ga. Plant Arkwright ceased electricity generation in 2002.

Newfields conducted a well survey of potential drinking water wells within a three-mile radius of the two CCR Units at Plant Arkwright: Ash Pond No. 2 Dry Ash Stock Pile (AP-2DAS) and AP-3 Landfill and Monofill (AP-3 Landfill). Both units received a closure certificate in 2010. This radius is referred to in this report as the Investigated Area, and is shown on Figure 1.

As part of this survey, NewFields accessed and reviewed information from a number of Federal, State, and County records and online sources, as well as a windshield survey of the Investigated Area. Information from each identified well was then compiled into a geographic information system (GIS) database.

Information Collection

This section summarizes the sources utilized for identifying potential drinking water wells within the Investigated Area.

1. Federal Sources

- a. **United States Geological Survey (USGS).** USGS maintains an inventory database of wells sampled by a USGS-affiliated program for ground-water levels and/or water quality parameters at any time in the past. Well information and coordinates were downloaded for the state of Georgia and compiled into the GIS database. The wells in the Investigated Area in the USGS database included several that are labelled 'monitoring wells' and one labelled 'private drinking'. Many of the monitoring wells appear to be co-located with drinking water wells and may in fact be private drinking water wells utilized for monitoring purposes by USGS. Some listings in this database are over 50 years old and may be inactive.
- b. **Safe Drinking Water Information System (SDWIS).** This EPA database has listings of public water systems but does not have well location information. SDWIS information was used to help identify the suppliers of public water in the vicinity of the facility. Public water in the Investigated Area is supplied primarily by the Macon Water Authority. Monroe and Jones counties have much smaller municipal water systems.

2. State Sources

- a. Georgia Environmental Protection Division
 - i. Drinking Water Branch. EPD maintains records about municipal and industrial wells, whose presence or absence within a radius of a site can be ascertained by contacting the agency. An email was sent to Michael Gillis of EPD on October 21st, 2019 requesting information about wells in the Investigated Area. Mr. Gillis confirmed that there are no public wells in the Investigated Area.

¹ http://waterdata.usgs.gov/ga/nwis/inventory?introduction



- ii. Hazardous Site Inventory (HSI) files. EPD maintains the Hazardous Site Inventory files for sites which are undergoing state-led corrective action. These files usually contain groundwater data and well surveys. There are no HSI sites within the Investigated Area.
- iii. Hazardous Site Response Act (HSRA) notifications. EPD maintains non-HSI HSRA notification reports (i.e., notifications submitted after releases of reportable substances). NewFields reviewed reports associated with sites Bibb, Jones, and Monroe Counties and identified a previous well survey conducted in 2003. The survey identified a public well at what is now the Brickyard Golf Course (approximately 2.25 miles to the northwest of AP-2DAS and AP-3 Landfill) that was active in 2003. NewFields determined that well is now inactive based on the results of the EPD search. The 2003 well survey also identified both active and inactive private wells, active industrial wells on the other side of Arkwright Road to the north of AP-2DAS and AP-3 Landfill, and an inactive industrial well at the former Stewart McElreath Lumber property. These were added to the database as inactive public or industrial wells.
- b. Agricultural and Environmental Services Laboratory (AESL) records. The University of Georgia's AESL Laboratory tests drinking water samples submitted by private individuals to their local county extension service. Maps of these sampling results can be viewed online.² Precise coordinates are not available, but NewFields was able to use online images to find approximate locations. For many of these points, the well appears to be located in the roadway and could not be placed on a real estate parcel.
- c. **State Department of Public Health (DPH).** During July 2012 and January 2013, the Department of Public Health, DPH tested 64 wells in Monroe County as part of an assessment of uranium and radionuclides in the area. Street addresses of the wells sampled were obtained from the DPH with an Open Records Request.
- 3. County and Local Sources
 - a. Health Department Records. The Macon-Bibb County Health Department County maintains records of known private wells within the County. NewFields provided the Health Department the coordinates of the plant and requested a search of a three-mile radius. The Health Department responded with a list of known private drinking water wells. NewFields also contacted the Monroe County Health Department to search septic permits, which typically indicate the water source for each property. Monroe County would not grant NewFields access to the septic permits.

² http://aesl.ces.uga.edu/water/map/



- b. Water Departments. NewFields contacted the Macon Water Authority, which provided a shapefile of waterlines within Bibb County, including the dates of construction. Waterlines began to be constructed as far back as 1922, with most of the lines in the Investigated Area constructed in the 1970s. NewFields also contacted the Monroe County Water System, who indicated that their public water infrastructure does not extend into the Monroe County portion of the Investigated Area. Jones County Water stated that the River North area of the county, the neighborhood across the Ocmulgee River from Plant Arkwright, has public water.
- c. Tax Assessor Records. NewFields contacted the Middle Georgia Regional Commission and obtained parcel shapefiles and parcel improvement data dated January 2019 for Monroe County. The parcel data for Monroe County includes information about the water source for each parcel, and the majority of parcels in the Monroe County portion of the Investigated Area are identified as having a private well.

Parcel shapefiles and parcel improvement data from Bibb County, current as of July 2019, were available for download from the Internet. Parcel shapes for Jones County were downloaded from the county website. Due to the high cost and relatively small number of relevant parcels, the parcel improvement data for Jones County was not acquired.

4. Windshield Surveys

A windshield survey of the area was conducted on November 15, 2019. During the survey wells were visually identified and compiled into the GIS database. The majority of these wells were located near residences. The windshield survey could not be conducted in the area across the Ocmulgee River in Jones County, as the entire area is part of a gated community.

Summary

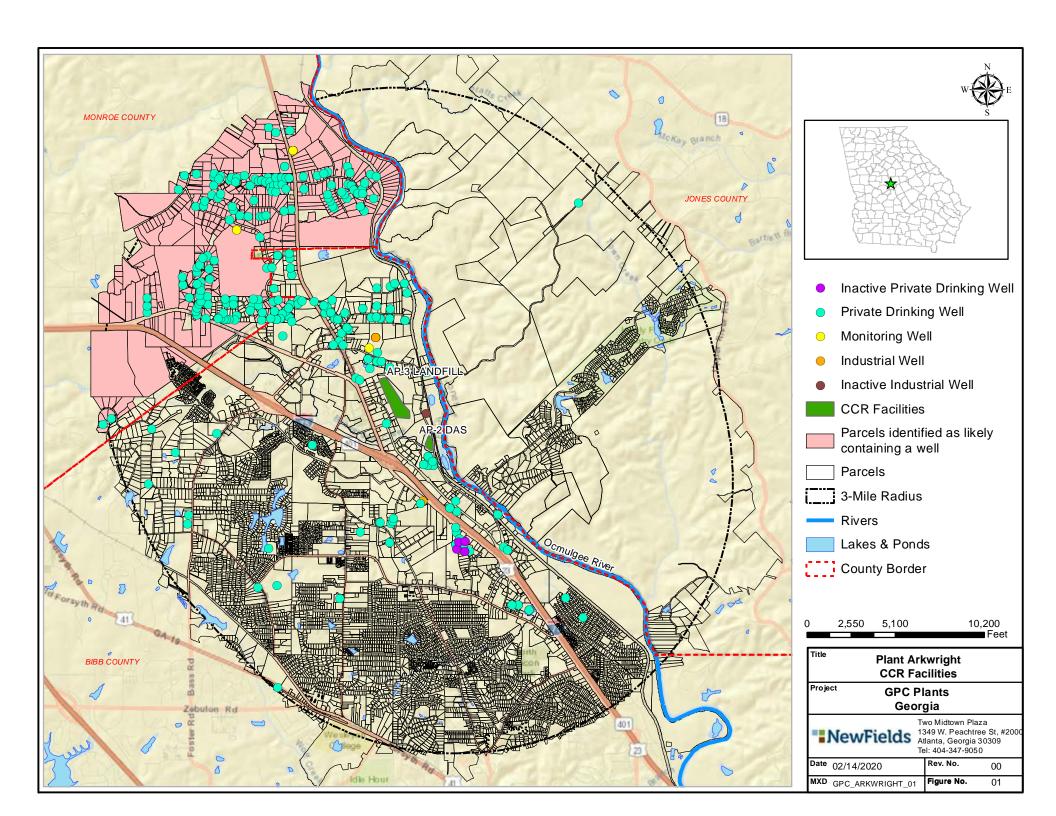
Municipal water from the Macon Water Authority is widely available throughout the Bibb County portion of the Investigated Area. Some water lines dates as far back as 1922, with the majority of the water lines around the plant being built in the 1970s, when the nearby homes were constructed. Municipal water is not available in the Monroe County part of the Investigated Area. The River North community, which constitutes the residential parcels in the Jones County portion of the Investigated Area (east of the Ocmulgee River), are all served by public water. There are no active public wells in the Investigated Area.

Combining well data from all sources with parcel data, NewFields identified 639 total parcels likely to be associated with an active or inactive private well within the Investigated Area. Of these, 515 were identified using parcel data. During the windshield survey, 127 wells were visually identified. Fifty-nine (59) parcels were identified by the Macon-Bibb County Health Department, and 7 parcels by the state Department of Public Health. Fifty-nine (59) wells were shown on a 2003 well survey found in non-HSI files, 40 wells were identified by UGA's AESL sampling program, and 7 wells were in the USGS database (including 3 on one parcel). Most wells were identified by multiple sources.

PLANT ARKWRIGHT WELL SURVEY

Figure 1 shows points for identified wells and shades parcels that were identified from parcel data as likely to contain wells. When viewed as a PDF file, the figure is interactive.





APPENDIX B Groundwater Data

Appendix B Arkwright AP-3 Risk Evaluation Report Groundwater Data for Evaluation of SSLs¹ Arkwright AP-3 Former Plant Arkwright, Bibb County, GA

Well	Date	CAS	Constituent	Units	Obs	Flags	MDL	PQL
ARGWC-17	09/01/16	7440-48-4	Cobalt	mg/L	0.037		0.0004	0.0025
ARGWC-17	10/25/16	7440-48-4	Cobalt	mg/L	0.0144		0.0005	0.01
ARGWC-17	01/26/17	7440-48-4	Cobalt	mg/L	0.022		0.0004	0.0025
ARGWC-17	04/11/17	7440-48-4	Cobalt	mg/L	0.026		0.0004	0.0025
ARGWC-17	06/21/17	7440-48-4	Cobalt	mg/L	0.027		0.0004	0.0025
ARGWC-17	10/26/17	7440-48-4	Cobalt	mg/L	0.021		0.0004	0.0025
ARGWC-17	04/10/18	7440-48-4	Cobalt	mg/L	0.021		0.0004	0.0025
ARGWC-17	10/17/18	7440-48-4	Cobalt	mg/L	0.014		0.0004	0.0025
ARGWC-17	08/21/19	7440-48-4	Cobalt	mg/L	0.018		7.5E-05	0.0005
ARGWC-17	10/09/19	7440-48-4	Cobalt	mg/L	0.017		7.5E-05	0.0005
ARGWC-17	04/08/20	7440-48-4	Cobalt	mg/L	0.016		0.00013	0.0025
ARAMW-4	01/15/20	7440-48-4	Cobalt	mg/L	0.0064		0.00013	0.0005
ARGWC-18	09/01/16	7440-48-4	Cobalt	mg/L	0.0014	J	0.0004	0.0025
ARGWC-18	10/26/16	7440-48-4	Cobalt	mg/L	0.0013	J	0.0005	0.01
ARGWC-18	01/27/17	7440-48-4	Cobalt	mg/L	0.0021	J	0.0004	0.0025
ARGWC-18	04/12/17	7440-48-4	Cobalt	mg/L	0.0015	J	0.0004	0.0025
ARGWC-18	06/21/17	7440-48-4	Cobalt	mg/L	0.0018	J	0.0004	0.0025
ARGWC-18	10/25/17	7440-48-4	Cobalt	mg/L	0.0013	J	0.0004	0.0025
ARGWC-18	04/11/18	7440-48-4	Cobalt	mg/L	0.0014	J	0.0004	0.0025
ARGWC-18	10/17/18	7440-48-4	Cobalt	mg/L	0.0012	J	0.0004	0.0025
ARGWC-18	08/21/19	7440-48-4	Cobalt	mg/L	0.0012		7.5E-05	0.0005
ARGWC-18	10/09/19	7440-48-4	Cobalt	mg/L	0.00099		7.5E-05	0.0005
ARGWC-18	04/09/20	7440-48-4	Cobalt	mg/L	0.00091	J	0.00013	0.0025
ARGWC-8	08/31/16	7439-98-7	Molybdenum	mg/L	0.034		0.00085	0.015
ARGWC-8	10/26/16	7439-98-7	Molybdenum	mg/L	0.0377		0.0017	0.01
ARGWC-8	01/26/17	7439-98-7	Molybdenum	mg/L	0.04		0.00085	0.015
ARGWC-8	04/12/17	7439-98-7	Molybdenum	mg/L	0.035		0.00085	0.015
ARGWC-8	06/21/17	7439-98-7	Molybdenum	mg/L	0.038		0.00085	0.015
ARGWC-8	10/26/17	7439-98-7	Molybdenum	mg/L	0.041		0.00085	0.015
ARGWC-8	04/11/18	7439-98-7	Molybdenum	mg/L	0.037		0.00085	0.015
ARGWC-8	10/17/18	7439-98-7	Molybdenum	mg/L	0.036		0.002	0.015
ARGWC-8	08/21/19	7439-98-7	Molybdenum	mg/L	0.051		0.00061	0.005
ARGWC-8	10/09/19	7439-98-7	Molybdenum	mg/L	0.049		0.00061	0.005
ARGWC-8	04/09/20	7439-98-7	Molybdenum	mg/L	0.039		0.00061	0.015

Notes:

1) Highlighted rows indicate constituent identified in the well at a statistically significant level (SSL).

J - indicates an estimated value; the substance was detected between the laboratory MDL and PQL.

MDL - method detection limit

mg/L - milligrams per liter

n/a - not available

PQL - practical quantitation limit

Prepared by/Date: <u>LO 11/03/20</u> Checked by/Date: <u>IMR 11/04/20</u>

APPENDIX C USEPA RSL Calculator Generated Residential Screening Levels

Appendix C-1

Arkwright AP-3 Risk Evaluation Report Arkwright AP-3

Former Plant Arkwright, Bibb County, GA

Appendix C-1 Arkwright AP-3 Former Plant Arkwright, Bibb County, GA

Variable	Value
THQ (target hazard quotient) unitless	1
TR (target risk) unitless	0.00001
LT (lifetime) years	70
K (volatilization factor of Andelman) L/m ³	0.5
l _{sc} (apparent thickness of stratum corneum) cm	0.001
ED _{res} (exposure duration - resident) years	26
ED _{res-c} (exposure duration - child) years	6
ED _{res-a} (exposure duration - adult) years	20
ED ₀₋₂ (mutagenic exposure duration first phase) years	2
ED ₂₋₆ (mutagenic exposure duration second phase) years	4
ED ₆₋₁₆ (mutagenic exposure duration third phase) years	10
ED ₁₆₋₂₆ (mutagenic exposure duration fourth phase) years	10
EF _{res} (exposure frequency) days/year	350
EF _{res-c} (exposure frequency - child) days/year	350
EF _{res-a} (exposure frequency - adult) days/year	350
EF ₀₋₂ (mutagenic exposure frequency first phase) days/year	350
EF ₂₋₆ (mutagenic exposure frequency second phase) days/year	350
EF ₆₋₁₆ (mutagenic exposure frequency third phase) days/year	350
EF ₁₆₋₂₆ (mutagenic exposure frequency fourth phase) days/year	350
ET _{event-res-adj} (age-adjusted exposure time) hours/event	0.67077
ET _{event-res-madj} (mutagenic age-adjusted exposure time) hours/event	0.67077
ET _{res} (exposure time) hours/day	24
ET _{res-c} (dermal exposure time - child) hours/event	0.54
ET _{res-a} (dermal exposure time - adult) hours/event	0.71
ET _{res-c} (inhalation exposure time - child) hours/day	24
ET _{res-a} (inhalation exposure time - adult) hours/day	24
Appendix D-3	24
ET ₁₆₋₂₆ (mutagenic inhalation exposure time fourth phase) hours/day	24
ET ₀₋₂ (mutagenic dermal exposure time first phase) hours/event	0.54
ET ₂₋₆ (mutagenic dermal exposure time second phase) hours/event	0.54
ET ₆₋₁₆ (mutagenic dermal exposure time third phase) hours/event	0.71
ET ₁₆₋₂₆ (mutagenic dermal exposure time fourth phase) hours/event	0.71
BW _{res-a} (body weight - adult) kg	80

Appendix C-1

Arkwright AP-3 Risk Evaluation Report Arkwright AP-3

Former Plant Arkwright, Bibb County, GA

Appendix C-1 Arkwright AP-3 Former Plant Arkwright, Bibb County, GA

Variable	Value
BW _{res-c} (body weight - child) kg	15
BW ₀₋₂ (mutagenic body weight) kg	15
BW ₂₋₆ (mutagenic body weight) kg	15
BW ₆₋₁₆ (mutagenic body weight) kg	80
BW ₁₆₋₂₆ (mutagenic body weight) kg	80
FW _{res-adj} (adjusted intake factor) L/kg	327.95
IFW _{res-adj} (adjusted intake factor) L/kg	327.95
IFWM _{res-adj} (mutagenic adjusted intake factor) L/kg	1019.9
IFWM _{res-adj} (mutagenic adjusted intake factor) L/kg	1019.9
IRW _{res-c} (water intake rate - child) L/day	0.78
IRW _{res-a} (water intake rate - adult) L/day	2.5
IRW ₀₋₂ (mutagenic water intake rate) L/day	0.78
IRW ₂₋₆ (mutagenic water intake rate) L/day	0.78
IRW ₆₋₁₆ (mutagenic water intake rate) L/day	2.5
IRW ₁₆₋₂₆ (mutagenic water intake rate) L/day	2.5
EV _{res-a} (events - adult) per day	1
EV _{res-c} (events - child) per day	1
EV ₀₋₂ (mutagenic events) per day	1
EV ₂₋₆ (mutagenic events) per day	1
EV ₆₋₁₆ (mutagenic events) per day	1
EV ₁₆₋₂₆ (mutagenic events) per day	1
DFW _{res-adj} (age-adjusted dermal factor) cm ² -event/kg	2610650
DFWM _{res-adj} (mutagenic age-adjusted dermal factor) cm ² -event/kg	8191633
SA _{res-c} (skin surface area - child) cm ²	6365
SA _{res-a} (skin surface area - adult) cm ²	19652
SA ₀₋₂ (mutagenic skin surface area) cm ²	6365
SA ₂₋₆ (mutagenic skin surface area) cm ²	6365
SA ₆₋₁₆ (mutagenic skin surface area) cm²	19652
SA ₁₆₋₂₆ (mutagenic skin surface area) cm ²	19652

6123201475 Page 2 of 2

Appendix C-2 Arkwright AP-3 Risk Evaluation Report Arkwright AP-3

Former Plant Arkwright, Bibb County, GA

Appendix C-2

Default

Resident Risk-Based Regional Screening Levels (RSL) for Tap Water

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; G = see user's guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

					SF _o	QE.	IUR	IUR	D/D	D.CD	RfC	D(O		V	
					01 0	SF _o		IUK	RfD	RfD	RIC	RfC		r\ _p	
Chemical	CAS Number	Mutagen?	Volatile?	Chemical Type	(mg/kg-day) ⁻¹	Ref	(ug/m ³) ⁻¹	Ref	(mg/kg-day)	Ref	(mg/m ³)	Ref	GIABS	(cm/hr)	MW
Cobalt	7440-48-4	No	No	Inorganics	-		9.00E-03	Р	3.00E-04	Р	6.00E-06	Р	1.00E+00	4.00E-04	5.89E+01
Molybdenum	7439-98-7	No	No	Inorganics	-		-		5.00E-03	I	-		1.00E+00	1.00E-03	9.59E+01

Appendix C-2 Arkwright AP-3 Risk Evaluation Report Arkwright AP-3

Former Plant Arkwright, Bibb County, GA

Appendix C-2

Default

Resident Risk-Based Regional Screening Levels (RSL) for Tap Water

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; G = see user's guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

						*							
					В	t	Tevent	FA					MCL
Chemical	CAS Number	Mutagen?	Volatile?	Chemical Type	(unitless)	(hr)	(hr/event)	(unitless)	In EPD?	DA _{event (ca)}	DA _{event (nc child)}	DA _{event (nc adult)}	(ug/L)
Cobalt	7440-48-4	No	No	Inorganics	1.18E-03	5.40E-01	2.25E-01	1.00E+00	Yes	-	7.37E-04	1.27E-03	-
Molybdenum	7439-98-7	No	No	Inorganics	3.77E-03	8.70E-01	3.62E-01	1.00E+00	Yes	-	1.23E-02	2.12E-02	-

6123201475 Page 2 of 5

Appendix C-2 Arkwright AP-3 Risk Evaluation Report Arkwright AP-3

Former Plant Arkwright, Bibb County, GA

Appendix C-2

Default

Resident Risk-Based Regional Screening Levels (RSL) for Tap Water

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; G = see user's guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

Chemical	CAS Number	Mutagen?	Volatile?	Chemical Type	Ingestion SL TR=1E-05 (ug/L)	Dermal SL TR=1E-05 (ug/L)	Inhalation SL TR=1E-05 (ug/L)	Carcinogenic SL TR=1E-05 (ug/L)	Ingestion SL Child THQ=1 (ug/L)	Dermal SL Child THQ=1 (ug/L)
Cobalt	7440-48-4	No	No	Inorganics	-	-	-	-	6.02E+00	3.41E+03
Molybdenum	7439-98-7	No	No	Inorganics	-	-	-	-	1.00E+02	2.28E+04

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Appendix C-2 Arkwright AP-3 Risk Evaluation Report Arkwright AP-3

Former Plant Arkwright, Bibb County, GA

Appendix C-2

Default

Resident Risk-Based Regional Screening Levels (RSL) for Tap Water

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; G = see user's guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

Chemical	CAS Number	Mutagen?	Volatile?	Chemical Type	Inhalation SL Child THQ=1 (ug/L)	Noncarcinogenic SL Child THI=1 (ug/L)	Ingestion SL Adult THQ=1 (ug/L)	Dermal SL Adult THQ=1 (ug/L)	Inhalation SL Adult THQ=1 (ug/L)
Cobalt	7440-48-4	No	No	Inorganics	-	6.01E+00	1.00E+01	4.48E+03	-
Molybdenum	7439-98-7	No	No	Inorganics	-	9.98E+01	1.67E+02	2.99E+04	-

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Appendix C-2 Arkwright AP-3 Risk Evaluation Report Arkwright AP-3

Former Plant Arkwright, Bibb County, GA

Appendix C-2

Default

Resident Risk-Based Regional Screening Levels (RSL) for Tap Water

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; G = see user's guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

Chemical	CAS Number	Mutagen?	Volatile?	Chemical Type	Noncarcinogenic SL Adult THI=1 (ug/L)	Screening Level (ug/L)
Cobalt	7440-48-4	No	No	Inorganics	9.99E+00	6.01E+00 nc
Molybdenum	7439-98-7	No	No	Inorganics	1.66E+02	9.98E+01 nc

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APPENDIX D Support for Refined Risk Evaluation

Appendix D-1 Exposure Point Concentration Calculation Results

Appendix D-1 Exposure Point Calculation Details¹ Arkwright AP-3 Former Plant Arkwright, Bibb County, GA

						EPC Step 1	EPC Step 2	EPC Step 3
CCR Rule Designation	Constituent	Well IDs Included	Maximum Concentration	Detection Frequency	Exceedance Frequency	Individual Target Well(s) 2016-2020	Target Well(s) & Downgradient Well(s) 2016-2020	Farthest Downgradient Well(s) 2016-2020
			(mg/L)			(mg/L)	(mg/L)	(mg/L)
		ARGWC-17	0.037	11 / 11	11 / 11	0.025		
Appendix IV	Cobalt	ARAMW-4 ARGWC-17 ARGWC-18	0.037	23 / 23	12 / 23		0.021	
		ARGWC-18	0.0021	11 / 11	0 / 11			0.0016

Notes:

Highlighted value is the EPC selected for the refined screening.

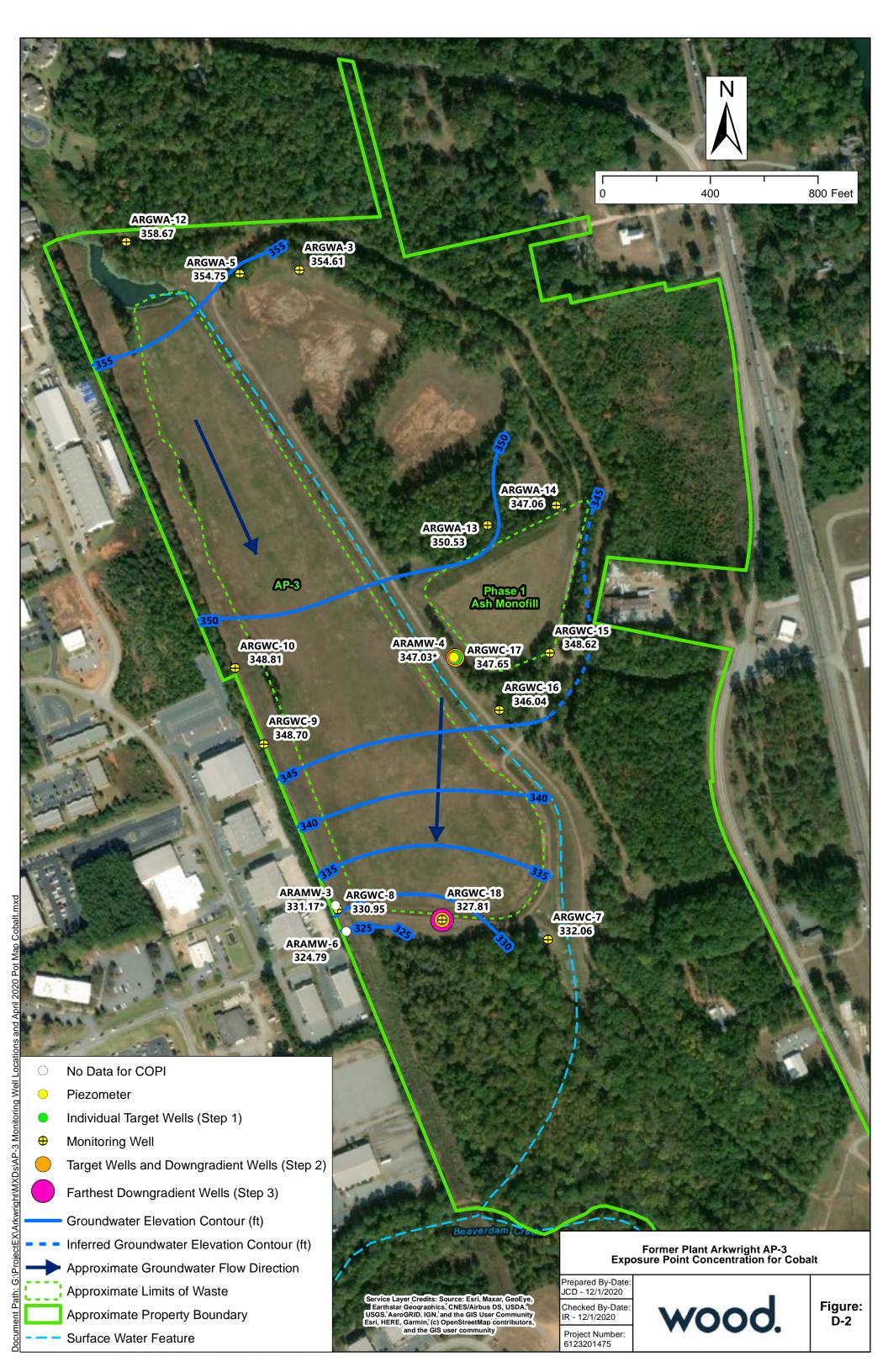
1 - EPCs calculated in accordance with USEPA, 2014. Memorandum for Determining Groundwater Exposure Point Concentrations, Supplemental Guidance. OSWER Directive 9283.1-42, February 2014. Located at https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=236917

Definitions:

EPC = Exposure Point Concentration mg/L = milligrams per liter Prepared by/Date: <u>IMR 9/24/20</u> Checked by/Date: <u>LMS 10/23/20</u>

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Appendix D-2 Exposure Point Concentration Figure



Appendix D-3 Groundwater ProUCL Input/Output Files

Appendix D-3a
Groundwater ProUCL Input - Cobalt
Arkwright AP-3 Risk Evaluation Report
Arkwright AP-3
Former Plant Arkwright, Bibb County, GA

Step 1	<u>—</u>			
Well(1)	Date(1)	Cobalt1	D_Cobalt1	
ARGWC-17	09/01/16	0.037		1
ARGWC-17	10/25/16	0.0144		1
ARGWC-17	01/26/17	0.022		1
ARGWC-17	04/11/17	0.026		1
ARGWC-17	06/21/17	0.027		1
ARGWC-17	10/26/17	0.021		1
ARGWC-17	04/10/18	0.021		1
ARGWC-17	10/17/18	0.014		1
ARGWC-17	08/21/19	0.018		1
ARGWC-17	10/09/19	0.017		1
ARGWC-17	04/08/20	0.016		1

Step 2				
Well(2)	Date(2)	Cobalt2	D_Cobalt2	
ARGWC-17	09/01/16	0.037		1
ARGWC-17	10/25/16	0.014		1
ARGWC-17	01/26/17	0.022		1
ARGWC-17	04/11/17	0.026		1
ARGWC-17	06/21/17	0.027		1
ARGWC-17	10/26/17	0.021		1
ARGWC-17	04/10/18	0.021		1
ARGWC-17	10/17/18	0.014		1
ARGWC-17	08/21/19	0.018		1
ARGWC-17	10/09/19	0.017		1
ARGWC-17	04/08/20	0.016		1
ARGWC-18	09/01/16	0.0014		1
ARGWC-18	10/26/16	0.0013		1
ARGWC-18	01/27/17	0.0021		1
ARGWC-18	04/12/17	0.0015		1
ARGWC-18	06/21/17	0.0018		1
ARGWC-18	10/25/17	0.0013		1
ARGWC-18	04/11/18	0.0014		1
ARGWC-18	10/17/18	0.0012		1
ARGWC-18	08/21/19	0.0012		1
ARGWC-18	10/09/19	0.00099		1
ARGWC-18	04/09/20	0.00091		1
ARAMW-4	01/15/20	0.0064		1

	Step 3	_			
	Well(3)	Date(3)	Cobalt3	D_Cobalt3	
1	ARGWC-18	09/01/16	0.0014		1
1	ARGWC-18	10/26/16	0.0013		1
1	ARGWC-18	01/27/17	0.0021		1
1	ARGWC-18	04/12/17	0.0015		1
1	ARGWC-18	06/21/17	0.0018		1
1	ARGWC-18	10/25/17	0.0013		1
1	ARGWC-18	04/11/18	0.0014		1
1	ARGWC-18	10/17/18	0.0012		1
1	ARGWC-18	08/21/19	0.0012		1
1	ARGWC-18	10/09/19	0.00099		1
1	ARGWC-18	04/09/20	0.00091		1

Notes:

1) Concentrations in units of mg/L.

Prepared by/Date: IMR 10/01/20 Checked by/Date: LMS 10/23/20

UCL Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation ProUCL 5.111/6/2020 11:20:28 AM

From File WorkSheet.xls

Full Precision OFF Confidence Coefficient 95% Number of Bootstrap Operations 2000

Cobalt1

General	Statistics

Total Number of Observations	11	Number of Distinct Observations	10
		Number of Missing Observations	0
Minimum	0.014	Mean	0.0212
Maximum	0.037	Median	0.021
SD	0.00678	Std. Error of Mean	0.00205
Coefficient of Variation	0.32	Skewness	1.289

Normal GOF Test

Shapiro Wilk Test Statistic	0.891	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.85	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.181	Lilliefors GOF Test
5% Lilliefors Critical Value	0.251	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	0.0249	95% Adjusted-CLT UCL (Chen-1995)	0.025

254 95% Modified-t UCL (Johnson-1978) 0.0251

Gamma GOF Test

A-D Test Statistic	0.294	Anderson-Darling Gamma GOF Test
5% A-D Critical Value	0.729	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.139	Kolmogorov-Smirnov Gamma GOF Test
5% K-S Critical Value	0.255	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

I. I. -+ /A/I (C)

8.951	K star (bias corrected MLE)	12.22	K nat (MLE)
0.00237	Theta star (bias corrected MLE)	0.00174	Theta hat (MLE)
196.9	nu star (bias corrected)	268.9	nu hat (MLE)
0.00709	MLE Sd (bias corrected)	0.0212	MLE Mean (bias corrected)
165.5	Approximate Chi Square Value (0.05)		
160.8	Adjusted Chi Square Value	0.0278	Adjusted Level of Significance

Prepared by: IMR 10/1/20 Checked by: LMS 10/23/20

L -t- - /L: - - - - - - - - - - - - | M| E) 0.051

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n<50) 0.0253 95% Adjusted Gamma UCL (use when n<50) 0.026

Lognormal GOF Test

Shapiro Wilk Test Statistic 0.952 Shapiro Wilk Lognormal GOF Test

5% Shapiro Wilk Critical Value 0.85 Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic 0.123 Lilliefors Lognormal GOF Test

5% Lilliefors Critical Value 0.251 Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data -4.269 Mean of logged Data -3.894 Maximum of Logged Data -3.297 SD of logged Data 0.295

Assuming Lognormal Distribution

 95% H-UCL
 0.0255
 90% Chebyshev (MVUE) UCL
 0.0269

 95% Chebyshev (MVUE) UCL
 0.0294
 97.5% Chebyshev (MVUE) UCL
 0.033

 99% Chebyshev (MVUE) UCL
 0.0401

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0246	95% Jackknife UCL	0.0249
95% Standard Bootstrap UCL	0.0243	95% Bootstrap-t UCL	0.0265
95% Hall's Bootstrap UCL	0.0274	95% Percentile Bootstrap UCL	0.0247
95% BCA Bootstrap UCL	0.025		
90% Chebyshev(Mean, Sd) UCL	0.0274	95% Chebyshev(Mean, Sd) UCL	0.0301
97.5% Chebyshev(Mean, Sd) UCL	0.034	99% Chebyshev(Mean, Sd) UCL	0.0416

Suggested UCL to Use

95% Student's-t UCL 0.0249

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cobalt2

General Statistics

Total Number of Observations	23	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum 9	0.1000E-4	Mean	0.0111
Maximum	0.037	Median	0.0064
SD	0.011	Std. Error of Mean	0.00229
Coefficient of Variation	0.991	Skewness	0.703

Nonnai GOF	Norma	I GOF	l est
------------	-------	-------	-------

Shapiro Wilk Test Statistic	0.837	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.914	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.271	Lilliefors GOF Test
5% Lilliefors Critical Value	0.18	Data Not Normal at 5% Significance Level

Lilliefors Test Statistic	0.271	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.18	Data Not Normal at 5% Significance Level	
Data Not	Normal at 5% Sign	nificance Level	
Ass	suming Normal Dis	stribution	
95% Normal UCL	-	95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	0.015	95% Adjusted-CLT UCL (Chen-1995)	0.0152
		95% Modified-t UCL (Johnson-1978)	0.015
	Gamma GOF T	est	
A-D Test Statistic	1.748	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.78	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.255	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.188	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamm	na Distributed at 5	% Significance Level	
	Gamma Statist	cics	
k hat (MLE)	0.798	k star (bias corrected MLE)	0.723
Theta hat (MLE)	0.0139	Theta star (bias corrected MLE)	0.0153
nu hat (MLE)	36.69	nu star (bias corrected)	33.24
MLE Mean (bias corrected)	0.0111	MLE Sd (bias corrected)	0.013
		Approximate Chi Square Value (0.05)	21.06
Adjusted Level of Significance	0.0389	Adjusted Chi Square Value	20.36
Ass	uming Gamma Di	stribution	
95% Approximate Gamma UCL (use when n>=50))	0.0175	95% Adjusted Gamma UCL (use when n<50)	0.0181
	Lognormal GOF	Test	
Shapiro Wilk Test Statistic	0.819	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.914	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.239	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.18	Data Not Lognormal at 5% Significance Level	
Data Not Lo	ognormal at 5% Si	, and the second	
	Lognormal Statis	stire	
Minimum of Logged Data	-7.002	Mean of logged Data	-5.248
Maximum of Logged Data	-3.297	SD of logged Data	1.385
Annu	mina Loanormal F	Notribution	

Assuming Lognormal Distribution

95% H-UCL	0.034	90% Chebyshev (MVUE) UCL	0.026
95% Chebyshev (MVUE) UCL	0.032	97.5% Chebyshev (MVUE) UCL	0.0404
99% Chebyshev (MVUE) UCL	0.0567		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0148	95% Jackknife UCL	0.015
95% Standard Bootstrap UCL	0.0147	95% Bootstrap-t UCL	0.0157
95% Hall's Bootstrap UCL	0.0151	95% Percentile Bootstrap UCL	0.0149
95% BCA Bootstrap UCL	0.0149		
90% Chebyshev(Mean, Sd) UCL	0.0179	95% Chebyshev(Mean, Sd) UCL	0.021
97.5% Chebyshev(Mean, Sd) UCL	0.0254	99% Chebyshev(Mean, Sd) UCL	0.0338

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 0.021

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Cobalt3

General Statistics

Total Number of Observations	11	Number of Distinct Observations	8
		Number of Missing Observations	0
Minimum 9	.1000E-4	Mean	0.00137
Maximum	0.0021	Median	0.0013
SD 3	3.4059E-4	Std. Error of Mean	1.0269E-4
Coefficient of Variation	0.248	Skewness	0.924

Normal GOF Test

Shapiro Wilk Test Statistic	0.929	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.85	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.195	Lilliefors GOF Test
5% Lilliefors Critical Value	0.251	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	0.00156	95% Adjusted-CLT UCL (Chen-1995)	0.00157
		95% Modified-t UCL (Johnson-1978)	0.00156

Gamma GOF Test

Anderson-Darling Gamma GOF Test	0.285	A-D Test Statistic
Detected data appear Gamma Distributed at 5% Significance Le	0.729	5% A-D Critical Value
Kolmogorov-Smirnov Gamma GOF Test	0.163	K-S Test Statistic
Detected data appear Gamma Distributed at 5% Significance Le	0.255	5% K-S Critical Value

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	19.02	k star (bias corrected MLE)	13.9
Theta hat (MLE)	7.2160E-5	Theta star (bias corrected MLE) 9).8787E-5
nu hat (MLE)	418.5	nu star (bias corrected)	305.7
MLE Mean (bias corrected)	0.00137	MLE Sd (bias corrected) 3	3.6825E-4
		Approximate Chi Square Value (0.05)	266.2
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	260.2

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)) 0.00158 95% Adjusted Gamma UCL (use when n<50) 0.00161

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.966	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value	0.85	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.151	Lilliefors Lognormal GOF Test
5% Lilliefors Critical Value	0.251	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.002	Mean of logged Data	-6.617	
Maximum of Logged Data	-6.166	SD of logged Data	0.239	

Assuming Lognormal Distribution

95% H-UCL	0.00159	90% Chebyshev (MVUE) UCL	0.00167
95% Chebyshev (MVUE) UCL	0.00181	97.5% Chebyshev (MVUE) UCL	0.00199
99% Chebyshev (MVUE) UCL	0.00236		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

0.00156	95% Jackknife UCL	0.00154	95% CLT UCL
0.00163	95% Bootstrap-t UCL	0.00154	95% Standard Bootstrap UCL
0.00154	95% Percentile Bootstrap UCL	0.00177	95% Hall's Bootstrap UCL
		0.00155	95% BCA Bootstrap UCL
0.00182	95% Chebyshev(Mean, Sd) UCL	0.00168	90% Chebyshev(Mean, Sd) UCL
0.00239	99% Chebyshev(Mean, Sd) UCL	0.00201	97.5% Chebyshev(Mean, Sd) UCL

Suggested UCL to Use

95% Student's-t UCL 0.00156

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.966	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value	0.85	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.151	Lilliefors Lognormal GOF Test
5% Lilliefors Critical Value	0.251	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-7.002	Mean of logged Data	-6.617
Maximum of Logged Data	-6.166	SD of logged Data	0.239

Assuming Lognormal Distribution

95% H-UCL	0.00159	90% Chebyshev (MVUE) UCL	0.00167
95% Chebyshev (MVUE) UCL	0.00181	97.5% Chebyshev (MVUE) UCL	0.00199
99% Chebyshev (MVUE) UCL	0.00236		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.00154	95% Jackknife UCL	0.00156
95% Standard Bootstrap UCL	0.00153	95% Bootstrap-t UCL	0.00161
95% Hall's Bootstrap UCL	0.00177	95% Percentile Bootstrap UCL	0.00154
95% BCA Bootstrap UCL	0.00156		
90% Chebyshev(Mean, Sd) UCL	0.00168	95% Chebyshev(Mean, Sd) UCL	0.00182
97.5% Chebyshev(Mean, Sd) UCL	0.00201	99% Chebyshev(Mean, Sd) UCL	0.00239

Suggested UCL to Use

95% Student's-t UCL 0.00156

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

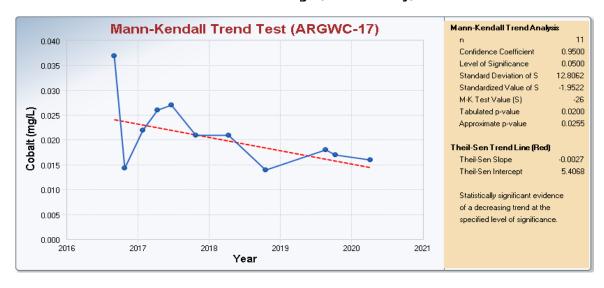
Recommendations are based upon data size, data distribution, and skewness.

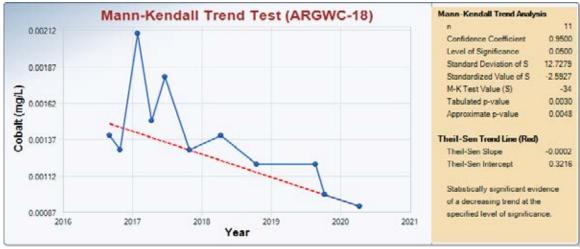
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Appendix D-4 Groundwater Trend Graph

Appendix D-4
Groundwater Mann-Kendall Trend Graph
Arkwright AP-3 Risk Evaluation Report
Arkwright AP-3
Former Plant Arkwright, Bibb County, GA





Prepared by/Date: LO 11/11/20

6123201475 1 of 1 Checked by/Date: <u>IMR 11/12/20</u>

Assessment of Corrective Measures Report Georgia Power Company – Plant Arkwright Ash Pond 3 Landfill and Monofill 12/4/2020

APPENDIX B

Boring and Well Construction Logs

Southern Company Services, Inc. Soil Boring Log



PLANT ARKWRIGHT ASH MONOFILL Project: HOLE No. GWA-3 Location: MACON, GEORGIA **GROUNDWATER MONITORING WELLS** SHEET 1 OF 2 Purpose: Position: 387.15 Surface Elevation: Oriller: KIRK ROBINS Rig Type: CME 75 Contractor: **SCS ATLANTA HOLLOW STEM AUGER** Drilling Method: 45.0 No. SPT: 8 No. UD Samples: Boring Depth: 12/9/92 J. C. REDWINE Date Logged: 12/9/92 Date Started: Date Completed: 12/9/92 Logged By: Hale Closure: SAMPLE TEST RESULTS TABLE E E 3 RECOVERY (%) NUMBER EGEND ELEVN. **GEPTH** S "3/SMDJE COMMENTS SOIL DESCRIPTION MATER SPT 387.15 Red to orange micaceous (biotite) sandy silty CLAY SS-1 3-5-7 (12)Clay relatively stiff above 5.0' 380.15 Red to crange sandy silty CLAY Mica (biotite) not present in SS-2 2-2-3 SS-2 (5) 10 Original rock type not discernable above 10.0' Sample begins to get moist at 375.15 Yallow to orange to red sandy silty CLAY to clayey silty fine SAND (blotite SCHIST to approximately 12.0' SS-3 blotite hornblende quartzfeldspathic 2-3-5 (8) 15 GNEISS) **SS-4** 3-4-5 (9) Foliation near horizontal Gray-green to white to red hornblende 363.65 S**S**-5 10-12-14 GNÉISS SAPROLITE (40% amphibole, 60% (26)plag) (clayey silty very fine SAND) 358,65. Biotite quartzofeldspathic GNEISS SS-6 7-13-12 SAPROLITE (clayey silty fine to (25)medium-grained SAND) Tends to be afternating layers of biotite and quartzofeldspathic gneiss "zebra rock" SS-7 11-10-17 35 (27)SS-7 similar to sample at 23.5' in GWA-2 348.65 AMPHIBOLITE (metagabbro?) to hornblende 14-50/5 Hole No. \square 35.0 while drilling after 24 hours SS = Split Spoon; ST = Shelby Tube; GWA-3 D = Dennison; P = Pitcher; O = Other after drilling

Southern Company Servius, Inc. Soil Boring Log Continuation Sheet

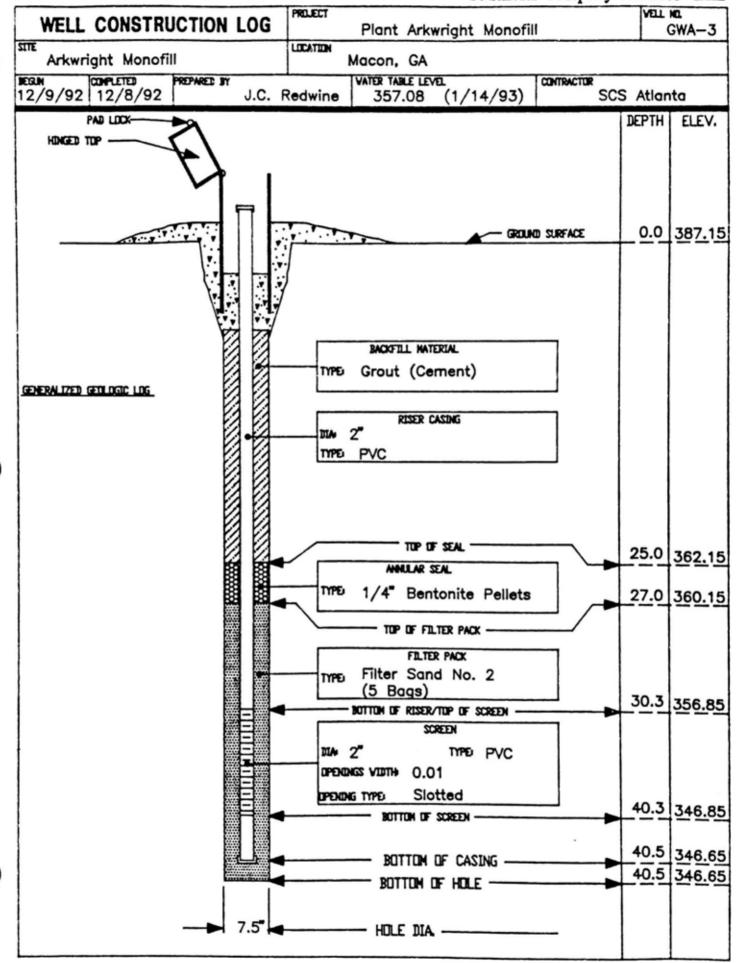


PLANT ARKWRIGHT ASH MONOFILL Project: HOLE No. GWA-3 Location: **MACON, GEORGIA GROUNDWATER MONITORING WELLS** SHEET 2 OF 2 Position: 387.15 Surface Elevation: SAMPLE DEPTH AND ELEVN. (FT) TABLE SPT VALUES BLOWS/6" (N) RECOVERY (%) NUMBER LEGEND SOIL DESCRIPTION **COMMENTS** WATER 40. GNEISS SAPROLITE (clayey silty fine to coarse-grained SAND) Boring Terminated Hole No. after 24 hours 35.0 while drilling SS = Split Spoon; ST = Shelby Tube; GWA-3 D = Dennison; P = Pitcher; O = Other

after drilling

Southern Company Services





Southern Company Service Inc. Soil Boring Log



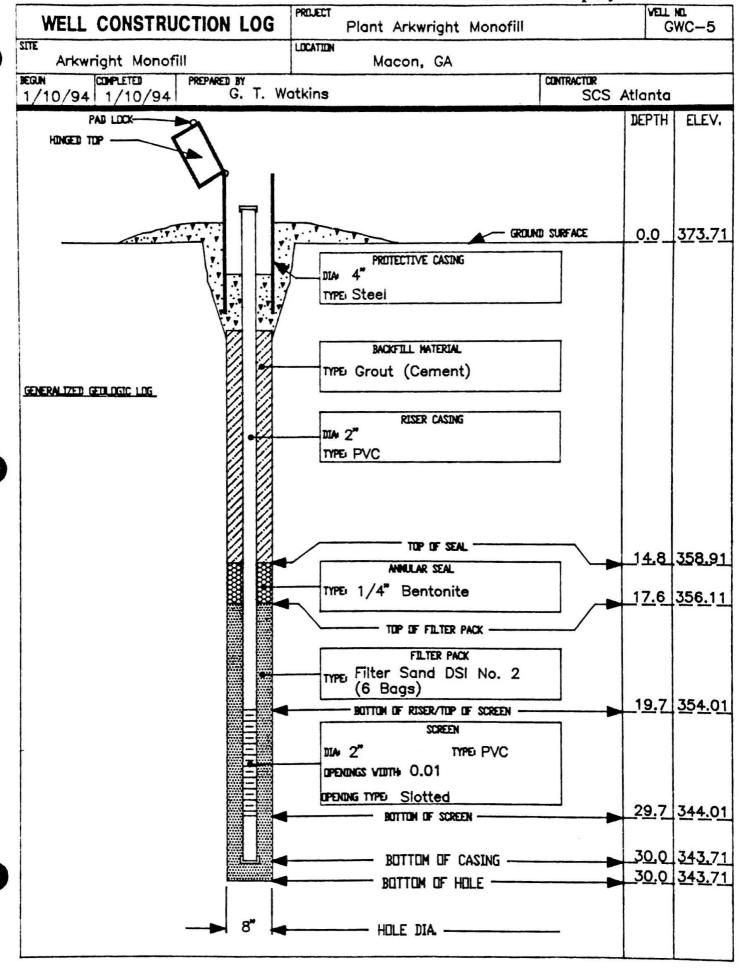
Project: PLANT ARKWRIGHT MONOFILL **HOLE No. GWC-5** MACON, GA Location: **GROUNDWATER MONITORING WELLS** Purpose: SHEET 1 OF 1 E 1,248.1 N 3,613.8 373.71 Position: Surface Elevation: Rig Type: CME 850 Contractor: SCS ATLANTA **JEFF GILREATH** Driller: Drilling Method: HOLLOW STEM AUGER 30.0 Boring Depth: No. SPT: No. UD Samples: Logged By: G.T. WATKINS Date Logged: 1/10/94 Date Started: 1/10/94 Date Completed: 1/10/94 Hole Closure: SAMPLE TEST RESULTS DEPTH AND ELEVN. (FT) WATER TABLE RECOVERY (%) NUMBER **COMMENTS** SOIL DESCRIPTION Brown-Red Slightly Sandy Silty CLAY with Occasional Weathered Amphiboles, Micas 363.21 Brown-Red to Orange Micacious Sandy SILT TOP OF SAPROLITE containing Abundant Weathered Amphiboles and Relict Foliation Tan to Buff-Colored Micaceous Sandy Silt to Silty Fine SAND (SAPROLITE) with Abundant 357.71 Weathered Quartz Fragments Weathered Quartz, Mica, and Amphiboles. to 1/4" 20 Relict Texture Beocmes More Apparent With Depth 351.71 Tan to Buff Wet Silty Fine SAND (SAPROLITE) 25. 348.71 Tan to Buff Micaceous Quartzose Weathered TOP OF WEATHERED ROCK Rock (GNEISS) Weathered, Oxidized, Silty Zones (SAPROLITE) Interbedded with Zones SAMPLE COLLECTED of GNEISS 30.년 **Boring Terminated** while drilling after 24 hours SS = Split Spoon; ST = Shelby Tube; GWC-5

after drilling

D = Dennison; P = Pitcher; O = Other

Southern Company Services





SOU	THERN 4	DRILL	ING L	_OG			Hole No.	GWA-1	2
Energy	COMPA to Serve Your V		AL SE	RVICES			Sheet 1	of	2
SITE					HOLE DEPTH	29	SURF.ELE	v. <u>36</u>	9.39
	LOCATION	Solid Waste Management Area	COOR	DINATES N		3.666	E	2436787.91	
		BEARING	CONTR	RACTOR					
DRILLIN	NG METHOD	HSA/HQ Rock core with water No. SAMPLE	s	3		NO. U.D. SAM	PLES	0	
		LENGTH							
		LE DEPTH 14.2 ELEV 1							
		QUANTITY						11/18/2008	
	DRILLER	S. Milam RECORDER D. Brooks/L. Garland APPRO			lard Penetration Tes		MP. DATE	12/9/2008	_
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	From To	Blows	N N	Comments	% Rec	RQD
0	369.39								
1	368.39								
2	367.39								
3	366.39								
4	365.39								
5	364.39	Reddish brown silty CLAY, damp, stiff	1	4.5-6	4-7-7	14			
6	363.39								
7	362.39								
8	361.39								
9	360.39								
10	359.39	Reddish yellow silty CLAY, with very fine grained sand	2	9.5-11	4-3-6	9			
11	358.39								
12	357.39								
13	356.39								
14	355.39								
15	354.39	Reddish yellow silty SAND, with clay, micaceous, saprolite	3	14.5-16	5-8-10	18			
16	353.39								
17	352.39								
18	351.39	A							
19	350.39	Auger refusal at 18.7' Biotite gneiss, slightly to moderately weathered, slightly	1						
20	349.39	to heavily fractured with moderately to highly weathered fracture faces		40.04					
21	348.39	19.1- fracture		19-24				98	
22	347.39	19.75 - fracture							
23	346.39	21.7- fracture							

345.39

SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG GEOLOGICAL SERVICES

Hole No. GWA-12
Sheet 2 of 2

				RVICES			Sheet 2	of	2
SITE _		Former Plant Arkwright			TOTAL DEPTH	2	SURF.ELEV	369	.394
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Stan From To	dard Penetration Test Blows	N	Comments	% Rec	RQD
25	344.39	Same as above		24.20				00	
26	343.39	25.4- fracture		24-29				98	
27	342.39	26.7- fracture							
28	341.39								
29	340.39	29' - Bottom of boring							
30	339.39	25 Bottom of Borning							
31	338.39								
32	337.39								
33	336.39								
34	335.39								
35	334.39								
36	333.39								
37	332.39								
38	331.39								
39 40	330.39								
41	328.39								
42	327.39								
43	326.39								
44	325.39								
45	324.39								
46	323.39								
47	322.39								
48	321.39								
49	320.39								
50	319.39								
51	318.39								
52	317.39								
53 54	316.39 315.39								
	314.39								
56	313.39								

WELL CONSTRUCTION LOG

Southern Company Generation

WELL CONSTRUCTION LOG	Southern Company Gener	ation	
PROJECT: Former Plant Arkwright	DRILLING CO.: SCS, Inc.		WELL
Solid Waste Management Unit	DRILLER: S. Milam		NAME
LOCATION: Ash Ponds 1, 2, 3	RIG TYPE: CME 550		
LOGGER: L. Garland	DRILLING METHODS: HSA, HQ Rock Core		GWA-12
DATE CONSTRUCTED: 12/10/2008			
		DEPTH	ELEVATION
		FEET	FT, MSL
Lastina I Basad Tan	7		11,11102
Locking Hinged Top -			
1/4-inch Vent	TOP OF RISER	3.17	372.56
1/4-inch Weep Hole	2" Threaded Riser Cap		
	Pea Gravel in annular space		
4-ft x 4-ft x 4" concrete pad	Tourist in annual space		
	GROUND SURFACE	0.00	369.39
	GROUND SORT AGE	0.00	303.00
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	PROTECTIVE CASING		
	SIZE: 4x4-inch		
	TYPE: Anodized Aluminum		
	711 E. 7thodized /ttd/fillindiff		
	BOTTOM OF PROTECTIVE CASING		
	BOTTOM OF TROTECTIVE GASING		
	BACKFILL MATERIAL		
	TYPE: Portland Cement Grout		
	AMOUNT: 5 bags @ 1.3 cf/bag = 6.5 cf		
	RISER CASING		
	DIA: 2-inch		
	TYPE: Schedule 40 PVC		
	JOINT TYPE: Flush Threaded		
	TOP OF SEAL	16.04	353.35
	ANNULAR SEAL		
	TYPE: 1/4-inch coated bentonite pellets		
	5-gal buckets		
	AMOUNT: 1 bucket		
	PLACEMENT: Tremie		
	TOP OF FILTER PACK	18.04	351.35
	FILTER PACK		
	TYPE: DSI Sand - 1A (20/30)		
	Drillers Services, Inc.		
	AMOUNT: 2.5 bags; 50 lbs/bag		
	PLACEMENT: Tremie; wash with water		
	BOTTOM OF RISER / TOP OF SCREEN	20.04	349.35
	SCREEN		
	DIA: 2-inch		
	TYPE: Schedule 40 PVC Prepack		
	OPENING WIDTH: 0.01-inch		
	OPENING TYPE: Slotted		
	SLOT SPACING: 0.25-inch		
	SLOT LENGTH: 1.5-inch		
	BOTTOM OF SCREEN	32.04	337.35
	BOTTOM OF CASING	32.34	337.05
HOLE DI	A: 9"		

Secretarion	sou	THERN A	AV	DRILLING	LOG			Hole No.	GW	A-13
COCATION Solid Waste Management Reference Company Compan		to Serve Your	Vorld" GE		ERVICES			Sheet 1	of	2
DRILING THINK T	SITE									
Section Sect										
CASHING SIZE										
MATER TABLE DEPTH 21.8 ELEV TIME AFTER COMP. DON'TE TAKEN 12/19/2008				·				·		
Type Ground										
Description										
Surpey S			-							
0 388.94 1 367.94 2 366.94 3 365.94 4 364.94 5 363.94 light reddish brown sandy SILT, micaceous fine grained sand fine g	Denth	Flev	Material Description Classification and Remarks			dard Penetration Test				ROD ROD
1 367.94 2 366.94 3 365.94 4 364.94 5 363.94 light reddish brown sandy SILT, micaceous 1 4.5-6 4-4-4 8 360.94 7 361.94 8 360.94 9 359.94 10 358.94 11 367.94 12 356.94 13 355.94 14 354.94 15 353.94 16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 20 348.94 21 347.94 22 346.94 23 345.94 24 344.94			waterial Description, Classification and Nemarks		11011110	Blows		Comments	70	Rec RQD
2 366.94 3 365.94 4 364.94 5 363.94 Light reddish brown sandy SILT, micaceous in grained sand 1 4.5-6 362.94 7 361.94 8 360.94 9 359.94 10 358.94 11 357.94 12 356.94 13 355.94 14 354.94 15 353.94 16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 23 345.94 24 344.94	0									
3 365,94 4 364,94 5 363,94 6 362,94 7 361,94 8 360,94 9 359,94 10 358,94 11 357,94 12 356,94 13 355,94 14 354,94 15 353,94 16 352,94 17 351,94 18 350,94 19 349,94 20 348,94 20 348,94 21 347,94 22 346,94 23 345,94 24 344,94	1	367.94								
4 364.94 5 363.94	2	366.94								
1	3	365.94								
The grained sand Figure	4	364.94								
6 362.94 7 361.94 8 360.94 9 359.94 10 358.94 11 357.94 12 356.94 13 355.94 14 354.94 15 353.94 16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 23 345.94 24 344.94	5	363.94	Light reddish brown sandy SILT, micaceous	1	4.5-6	4-4-4	8			
7 361.94 8 360.94 9 359.94 10 358.94 11 357.94 12 356.94 13 355.94 14 354.94 15 353.94 16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 23 345.94 24 344.94	6	362.94	fine grained sand							
8 360.94 9 359.94 10 358.94 11 357.94 12 356.94 13 355.94 14 354.94 15 353.94 16 352.94 17 351.94 18 360.94 19 349.94 20 348.94 21 347.94 22 346.94 24 344.94										
9 359.94 10 358.94 11 357.94 12 356.94 13 355.94 14 354.94 15 353.94 17 351.94 18 350.94 19 349.94 20 348.94 Same as above 4 19.5-21 5-7-13 20 21 347.94 22 346.94 24 344.94										
10 358.94 Tan silty SAND, fine grained, micaceous 2 9.5-11 4-4-5 9 1 1 357.94 1 2 356.94 1 3 355.94 1 3 353.94 1 3 353.94 1 3 359.94 1 3 369.94 1 9 349.94 20 348.94 Same as above 4 19.5-21 5-7-13 20 20 346.94 21 347.94 22 346.94 24 344.94	8	360.94								
11 357.94 12 356.94 13 355.94 14 354.94 15 353.94 16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 24 344.94	9	359.94								
12 356.94 13 355.94 14 354.94 15 353.94 Same as above 3 14.5-16 3-3-5 8 16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 23 345.94 24 344.94	10	358.94	Tan silty SAND, fine grained, micaceous	2	9.5-11	4-4-5	9			
13 355.94 14 354.94 15 353.94 Same as above 3 14.5-16 3-3-5 8 16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 23 345.94 24 344.94	11	357.94								
13 355.94 14 354.94 15 353.94 16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 24 344.94	12	356.94								
14 354.94 15 353.94 16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 23 345.94 24 344.94	13									
15 353.94 Same as above 3 14.5-16 3-3-5 8 16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 Same as above 4 19.5-21 5-7-13 20 21 347.94 22 346.94 23 345.94 24 344.94										
16 352.94 17 351.94 18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 23 345.94 24 344.94			O company of the company		44540					
17 351.94 18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 23 345.94 24 344.94	15		same as above	3	14.5-16	3-3-5	8			
18 350.94 19 349.94 20 348.94 21 347.94 22 346.94 23 345.94 24 344.94	16	352.94								
19 349.94 20 348.94 Same as above 4 19.5-21 5-7-13 20 21 347.94 22 346.94 23 345.94 24 344.94	17	351.94								
20 348.94 Same as above 4 19.5-21 5-7-13 20 21 347.94 22 346.94 23 345.94 24 344.94	18	350.94								
21 347.94 22 346.94 23 345.94 24 344.94	19	349.94								
21 347.94 22 346.94 23 345.94 24 344.94	20	348.94	Same as above	4	19.5-21	5-7-13	20			
22 346.94 23 345.94 24 344.94										
23 345.94 24 344.94										
24 344.94	22	346.94								
	23	345.94								

SOUTHERN COMPANY
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DRILLING LOG GEOLOGICAL SERVICES

Hole No. GWA-13
Sheet 2 of 2

Former Plant Arkwright 40 SITE TOTAL DEPTH SURF.ELEV. 368.94066 Standard Penetration Test RQD Depth Elev. Material Description, Classification and Remarks No. From To Blows Ν Comments % Rec 24.5' - Auger refusal 343.94 25 26 342.94 Biotite gneiss, moderatly weathered to decomposed, 24.5-28 88 slightly to heavily fractured 341.94 27 340.94 28.6- fracture 28 29 339.94 338.94 Biotite gneiss, unweathered, slightly to heavily fractured, 28-33 90 30 slightly weathered fracture faces 337.94 31 336.94 32 33 335.94 334.94 Same as above 34 33-38 35 333.94 100 36 332.94 37 331.94 38-40 330.94 Same as above 100 38 39 329.94 40 328.94 40' - Bottom of boring 327.94 41 42 326.94 43 325.94 324.94 <u>4</u>5 323.94 46 322.94 321.94 47 48 320.94 49 319.94 50 318.94 51 317.94 316.94 52 53 315.94 54 314.94 313.94 55 312.94

WELL CONSTRUCTION LOG

Southern Company Generation

IDDO IECT: Former Plant Arkwright			WELL		
PROJECT: Former Plant Arkwright DRILLING CO.: SCS, Inc.					
Solid Waste Management Unit	DRILLER: S. Milam/ S. Denty		NAME		
LOCATION: Ash Ponds 1, 2, 3	RIG TYPE: CME 550				
LOGGER: L. Garland	DRILLING METHODS: HSA, HQ Rock Core		GWA-13		
DATE CONSTRUCTED: 12/11/2008					
		DEPTH	ELEVATION		
		FEET	FT, MSL		
Looking Hingard Top	7		, -		
Locking Hinged Top —					
1/4-inch Vent	TOP OF RISER	2.87	371.81		
1/4-inch Weep Hole	2" Threaded Riser Cap				
	Pea Gravel in annular space				
4-ft x 4-ft x 4" concrete pad	T ca Graver in annidial space				
	GROUND SURFACE	0.00	368.94		
	GROUND SURFACE	0.00	300.94		
	PROTECTIVE CASING				
	SIZE: 4x4-inch				
	\$\$\$\$\frac{1}{2}1				
	TYPE: Anodized Aluminum				
[DOTTOM OF PROTECTIVE OACHAO				
	BOTTOM OF PROTECTIVE CASING				
	DACKELL MATERIAL				
	BACKFILL MATERIAL				
	TYPE: Portland Cement Grout				
	AMOUNT: 5 bags @ 1.3 cf/bag = 6.5 cf				
	DICED CACING				
	RISER CASING				
	DIA: 2-inch				
	TYPE: Schedule 40 PVC				
	JOINT TYPE: Flush Threaded				
		00.00	0.40.04		
	TOP OF SEAL	26.00	342.94		
	ANNULAR SEAL				
	TYPE: 1/4-inch coated bentonite pellets				
	5-gal buckets				
	AMOUNT: 0.5 bucket				
	PLACEMENT: Tremie	00 11	0.40.50		
	TOP OF FILTER PACK	28.44	340.50		
	FILTER PACK				
	TYPE: DSI Sand - 1A (20/30)				
	Drillers Services, Inc.				
	AMOUNT: 2 bags; 50 lbs/bag				
	PLACEMENT: Tremie; wash with water				
		00.44	000 =0		
	BOTTOM OF RISER / TOP OF SCREEN	30.44	338.50		
	SCREEN				
	DIA: 2-inch				
	TYPE: Schedule 40 PVC Prepack				
	OPENING WIDTH: 0.01-inch				
	OPENING TYPE: Slotted				
	SLOT SPACING: 0.25-inch				
	SLOT LENGTH: 1.5-inch	40.44	000 ==		
	BOTTOM OF SCREEN	40.44	328.50		
		40 = 1	000.00		
	BOTTOM OF CASING	40.74	328.20		
_					
HOLE D	A: 9"				
			<u> </u>		

SOUT	THERN	DRILLI	NG L	.OG			Hole N	No. G	WA-14	
Energy 1	COMP o Serve You		AL SE	RVICES			S	heet 1 of	2	
SITE _		Former Plant Arkwright			HOLE DEPTH	54.4		SURF.ELEV.	385.	.374
			COORE	DINATES N	1066023	3.905	E	24383	385.174	ļ
		BEARING	CONTR	ACTOR	SCS, Inc.		DRILL NO.	CM	IE-55	
DRILLIN	IG METHOI	HSA/ HQ Rock Core NO. SAMPLES	s	5	NO. U	.D. SAMP	LES	0		
CASING	SIZE	LENGTH	co				. % REC.			
WATER	TABLE DE	PTH 32.5 ELEV TII	ME AFTE	R COMP.		DA	TE TAKEN	2/9/	/2009	
TYPE G	ROUT	QUANTITY	N	IX	DRII	LING ST	ART DATE	2/4/	/2009	
DRILLE	R	Brandon Poe RECORDER Luke Garland APPRO	VED _		DRII	LING CO	MP. DATE	2/4/	/2009	
Depth	Elev.	Material Description, Classification and Remarks	Sample No.		dard Penetration Test Blows	N	Com	nments	% Rec	RQI
									70 1100	
0	385.37									
1	384.37									
2	383.37									
3	382.37									
4	381.37									
5	380.37									
6		Dark reddish brown clayey SAND with	1	4.5-6	3-5-8	13				
7	378.37	some organic material, medium to fine grained								
8	377.37									
9	376.37									
	375.37									
10		Bod Walt have a section Of Tarrier and Committee		0.5.44	5.4.5					
11	3/4.37	Reddish brown sandy SILT, micaceous fine grained sand	2	9.5-11	5-4-5	9				
12	373.37									
13	372.37									
14	371.37									
15	370.37									
16	369.37	Reddish brown clayey SILT with some sand	3	14.5-16	3-3-3	6				
17	368.37									
18	367.37									
19	366.37									

19.5-21

7-10-4

14

Form GS9901 7-26-2004

365.37

363.37

362.37

364.37 Yellowish brown silty SAND, medium to fine grained

SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG GEOLOGICAL SERVICES

Hole No. GWA-14

Sheet 2 of

Former Plant Arkwright 54.4 SITE TOTAL DEPTH SURF.ELEV 385.374 Standard Penetration Test Depth Elev. Material Description, Classification and Remarks No. From To Blows Ν Comments % Rec RQD 25 360.37 26 359.37 yellowish brown silty medium to fine SAND 5 24.5-26 50/4 R 27 358.37 28 357.37 29 356.37 Drilled through highly weathered rock from approx. 355.37 25 feet to 36 feet. 30 354.37 31 32 353.37 33 352.37 351.37 34 35 350.37 36 349.37 Auger Refusal @ 35.4 feet 37 348.37 BIOTITE GNEISS, unweathered to slightly weathered, 35.4-39.4 38 347.37 very hard to medium hard, highly to slightly fractured 78 with slightly to moderately weathered fracture faces 39 346.37 36.0 - Fracture 36.5 - Fracture BIOTITE GNEISS, unweathered to weathered, very 345.37 40 hard, medium to fine grained, highly to slightly fractured, with slightly weathered fracture faces 41 344.37 41.9 - Fracture, iron staining 42 343.37 39.4-44.4 100 42.9 - Fracture, iron staining 342.37 43 43.4 - Fracture, iron staining 44 341.37 BIOTITE GNEISS, unweathered weathered, very hard, 45 340.37 fine grained, highly to moderately fractured, slightly 44.4-49.4 100 weathered fracture faces 46 339.37 47 338.37 48 337.37 BIOTITE GNEISS unweathered weathered, very hard, 49.4-54.4 336.37 100 49 fine grained, intensely to moderately fractured, 335.37 with moderately weathered joints 50 334.37 51.4 - 52.1 - nearly vertical fracture 51 333.37 52 332.37 53 54 331.37 54.1 - nearly vertical fracture 330.37 54.4' - Bottom of boring 55 329.37

WELL CONSTRUCTION LOG

Southern Company Generation

WELL CONSTRUCTION LOG	Southern Company Generation					
PROJECT: Former Plant Arkwright	DRILLING CO.: SCS, Inc.					
Solid Waste Management Unit	gement Unit DRILLER: B. Poe					
LOCATION: Ash Ponds 1, 2, 3	RIG TYPE: CME 55					
LOGGER: L. Garland	DRILLING METHODS: HSA, HQ Rock Core		GWA-14			
DATE CONSTRUCTED: 2/4/2009	, , , , , , , , , , , , , , , , , , , ,		_			
		DEPTH	ELEVATION			
	-	FEET	FT, MSL			
Locking Hinged Top ———						
1/4-inch Vent —	TOP OF RISER	2.79	388.16			
1/4-inch Weep Hole	2" Threaded Riser Cap	2.70	000.10			
1/4-IIICII Weep Hole	2 Tilleaded Niser Cap					
	Pea Gravel in annular space					
4-ft x 4-ft x 4" concrete pad	x					
	GROUND SURFACE	0.00	385.37			
<u> </u>	SSS SHOOMS CONTINUE	0.00	000.07			
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	PROTECTIVE CASING					
	SIZE: 4x4-inch					
	TYPE: Anodized Aluminum					
	TTPE. Allouized Aluminum					
	3					
	BOTTOM OF PROTECTIVE CASING					
	BACKFILL MATERIAL					
	TYPE: Portland Cement Grout					
	AMOUNT: 4 bags @ 1.3 cf/bag = 5.2 cf					
	RISER CASING					
	DIA: 2-inch					
	TYPE: Schedule 40 PVC					
	JOINT TYPE: Flush Threaded					
	TOP OF SEAL	40.50	344.87			
	ANNULAR SEAL	10.00	011.07			
	TYPE: 1/4-inch coated bentonite pellets					
	5-gal buckets					
	AMOUNT: 0.5 bucket					
	PLACEMENT: Tremie					
	TOP OF FILTER PACK	43.56	341.81			
	FILTER PACK					
	TYPE: DSI Sand - 1A (20/30)					
	Drillers Services, Inc.					
	AMOUNT: 2.5 bags; 50 lbs/bag					
	PLACEMENT: Tremie; wash with water					
	BOTTOM OF RISER / TOP OF SCREEN	45.66	339.71			
	SCREEN					
	DIA: 2-inch					
	TYPE: Schedule 40 PVC Prepack					
	OPENING WIDTH: 0.01-inch					
	OPENING TYPE: Slotted					
	SLOT SPACING: 0.25-inch					
	SLOT LENGTH: 1.5-inch					
		55.66	220.74			
	BOTTOM OF SCREEN	55.66	329.71			
		EE 00	200 44			
	BOTTOM OF CASING	55.96	329.41			
HOLE DIA	A: 9"					

sou	THE	RN 2	DRILLIN						A - 7		
Energy	sa Servi	e Your Wor						Sheet 1			
SITE .					DEPTH						
1			•	COORDINATES N							
										50	
OVER	13DRUB	N DEPTH	NO. PENT. TEST	s <u>8</u>	NO. U	J.D. SAMP	LES	<u></u>	2		
			LENGTH								
			19,3 ELEV TIM						2/11/20		
TYPE	GROUT		OUANTITY	MIX	DRILL	ING STAR	T DATE	12	2/11/20	03	
	ER	Brad Fi	ipovich несоярея Stacy Sprayberry АРРЯС	OVED	DRILL	ING COM	P. DATE	12	2/11/20	03	
Graphic]	Material Description, Classification and Remarks			dard Pen. 1 Blows		Sample	Fluid Chg. %	Rec.	RQD
LOY	Depin	1.01	Jasan da remana			0.01.5		1	City. 70	~	nab
<u>. </u>	0	349.0					·		<u> </u>		
	1		Reddish brown, silty CLAY (CL) FILL with wood	and rock fragments	0-1.5	1-3-4	7	S-1			
	2						•				
								1			
	3								-		
	4										
	. 5				-					i	
		_	Hit hard object at 5.5'. Could not push tube dee	per.							
	6		,		5.0-7.5	TUBE			ĺ		
	7								j ,		1
	8	341,0									
			Reddish brown, clayey SILT(ML/CL) with SAPR	OLITE	7		-				
	9										
	10	٠.									
	11				10-11.5	2-4-4	8	S-2			
	40							 			
	12							•			
	13										
	14										
	4-										
	15		Becoming Sandier with depth								
	16				15-16,5	2-2-3	5	S-3			
l	17							-	ł		
	40	DD4 0									
	18	331.0	Tan to white, elastic SILT (MH) with SAPROLITE		┪						-
	19		Tarrio write, elastic SIET (WIT) with SAL NOETT	~							Ì
	20										
			V 1.05 F am/o-c		20-22	TUBE	:				
	21		K=1.0E-5 cm/sec		20-22	, upt			i		
	22	<u></u>			1						
	23	,									
									.	1	
- 1	24				1			ı		1	

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OU	THEI	RN AN	DRILLING LOG	•				<u>GWA</u>	- 7				
ergy	to Serve	Your Work		<u></u>		Sheet 2 of 2							
SITE _				L DEPTH	46.5		RF ELEV.		349.00	3			
raphic Log	Depth	Elev.	Material Description, Classification and Remarks	Sta From To	ndard Pen. Te Blows	st N	Sample No.	Fluid Chg. %	Rec. %	RC			
	25		Free Water in 25 foot sample				1						
	26		·	25-26.5	3-4-5	9	S-4						
	27						ļ	ļ					
	28												
	29								•				
	30	319.0	Tan to white, sandy SILT (ML) with MICA and SAPROLITE	┫			-			٠			
	31			30-31.5	3-5-13	18	S-5						
-	32					•							
\dashv	33_		·										
\dashv	34												
\dashv	35					•				i			
_	36			35-36.5	4-8-9	17	S-6						
\dashv	37	312,0	Too to white alls, CAND (CAN, with CADDOLITE	_									
\bot	38		Tan to white, silty SAND (SM) with SAPROLITE				1		•				
	39												
	40	.309.0]			·						
	41		Reddish brown to brown, silty SAND (SM) with SAPROLITE	40-40.5	9-22-23	45	S-7						
\neg	42				•		ļ						
\Box	43		<i>,</i>	•						•			
	44		Well screened from 34.6 feet to 44.8 feet below ground surface										
	45		· ·	1									
7	46			15-16 E	12-23-32	2 55	S-8						
\dashv		302.5	Boring Terminated at 46.5 Feet	45-46.5	12-20-32	. 55	3.0		. }				
+	47		Bonng Tenninated at 46.5 Peet			٠							
+	48					•							
	49		· · · · · · · · · · · · · · · · · · ·										
_	50			1:		•] ·						
4	51		· ·						ļ				
4	52			ļ.									
	53]									
\bot	54	<u></u>				٠							
T	7			I			ı i		1				

56 Form GS9902 4/24/2000



,	l nna		ithern Company	WELL	
WELL CONSTRUC		Arkwright Ash Pond 1	#3 SAR		WA-7
Plont Arkwright		Ash Pond #3, N 10		138355.1	07
BEGUN COMPLETED 12/11/03	PREPARED BY Stacy Sprayberry	WATER LEVEL ∼19.3 ft.	CONTRACTOR	SCS	
	······································			DEPTH	ELEV.
		4 1% 4.4 4 1% 4.4		1	
	·				•
		1 4 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4]
	,		TOP OF CASING	3.7_	352.73
	12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		GROUND SURFACE	0.0	349.00
			NG	- <u>2.0</u> _ 2.5	347.00 346.50
GENERALIZED GEOLOGIC LOG		TOP OF SEAL -	<u> </u>	- _2.5	340.30
		SURFACE CASING		ł	
		TYPE: Protector Pipe			
		BACKFILL MATERIAL			
		TYPE: Pel Plug Bentonile Pellets/			
	99	3/8 Shur Plug	<u>.</u>		
	9.9	RISER CASING DIA: 2"			
		TYPE: Schedule 40 PVC			l
	99		•		
	88	ANNULAR SEAL			•
		TYPE: Bentonite Pellets/3/8 Shur Plug			
•	99			32.8	<u>316.20</u>
		TOP OF FILTER PACK	,	-	. <u> </u>
		FILTER PACK	,	-	
		TYPE: DSI Filter Sand #2 Size			
		BOTTOM OF RISER/TOP OF SC	i Creen	34.8	<u>314.20</u>
•		SCREEN		[[
		DIA: 2" TYPE: PVC		Ţ. (
•		OPENINGS WIDTH: 0.010"			
		OPENING TYPE: Machine Slotted			764 **
		BOTTOM OF SCREEN -		44.8	<u>304.20</u>
				465	707 50
	[BOTTOM OF HOLE -		46.5	<u>303.50</u>
·	p or but			1 . 1	
	8.25" DIA HOLE				

SOUTHERN A		RNA	DRILLING LOG				GWA - 8	3
Energy		Your Wor				SI	neet 1 of	2
SITE			Plant Arkwright, Pond #3 SAR					
LOCAT	TION _		Southwestern Edge of Dike COORDINATES N	1064521	.654	F _	24375	72,442
ANGLE	E	<u> </u>	90 BEARING CONTRACTOR					550
OVERI	BURDEN	I DEPTH	NO, PENT. TESTS7	NO. i	J.D. SAMPL	LES	2	·
			LENGTH CORE SIZE					
			23 / 21.1 ELEV TIME AFTER COMP					
TYPE	GROUT		QUANTITY MIX	DRILL	ING STAR	T DATE _	12/10/2	2003
		Brad Fil	ipovich RECORDER Stacy Sprayberry APPROVED	DRILL	ING COMP	. DATE	12/10/2	2003
Graphic Log		Elev.	Material Description, Classification and Remarks	Star From To	dard Pen. T Blows	esl N	Sample Fluid No. Chg.	
	0	352.2	·					
		002.2	Reddish brown, silty CLAY (CL/ML) with MICA FILL		000	4.4		1
	1			0-1.5	3-3-8	11	S-1	1
	2	 					1	}
	3						1 1	}
	4							
	5						1	1 1
	3		1				 	
 	6	ļ		5-6.5	4-5-7	12	S-2	
	7				•			1 1
	8	·					1 1	
[9	343.2					1 1	1.
		040.2	Reddish brown, clayey SILT (ML/CL) FILL					
 	10						 	
<u> </u>	11			10-11.5	2-3-4	7	S-3	
	12			1			 	1 1
	13	339.2	•					'
			Tan to orange SILT (ML) with SAPROLITE; non-plastic				1 1	
	14						}	
	15			+			 	
	16		K=6.4E-5 cm/sec	15-17	TUBE			
	17							
							[]	1.1
 	18		, where	'	•			
 }	19			<u> </u>				1 1
	20	332.2						
	21		Tan to orange to white, damp to wet, silty SAND (SM) with SAPROLITE	20-21.5	2-4-3	7	S-4	
			·			•	<u> </u>	
 - 	22						<u> </u>	
	23							
	24							
Form GS9	9/0/0 100	10		-				

sou		MPANY				-	Shee	(1 2 of	GWA	- 8	
SITE	to Serve	Your World		TOTAL	DEPTH	40.5		F.ELEV.		352.16	9
Graphic Log	Depth	Elev.	Material Description, Classification and Remarks			ndard Pen. Tes Blows	t N	Sample No.	Fluid Chg, %	Hec.	RQD
	25					_					
	26		Brown, wet, silty SAND (SM) with MICA; non-plastic		25-27	TUBE					
	27		K=6.4E-5 cm/sec								•
	28										
	29										
	30	•									
	31				30-31.5	2-6-8	14	S -5			
	32		•						1		
	33		Well screened from 29.6 feet to 39.6 feet below ground surface						Ì		
	34										
	35									•	
	36				35-36,5	3-5-8	13	S-6		·	
	37							-			
	38										
	39				<u> </u>						
	. 40				 						
	41	311.7	Boring Termindated at 40.5 Feet		40-40.5	8-11-18	29	S-7			
	42				<u> </u>			-	1		1
	43										ļ
	44			. 2					,		
	45										1
	46		•								1
	47						,				
	48										' '
	49										1
	50										
	51				,						1
	52										
	53	-									
	54						•				

Form GS9902 4/24/2000

Southern Company Services

	lack
4	3

STE Plant Arkwright BEGUN COMPLETED 12/10/03 12/10/03	PREPARED BY Stocy Sproyb	Ash Pond #3, N 1064521.654, E 24 WATER LEVEL CONTRACTOR erry ~21.1	SCS	······································
GENERALIZED GEOLOGIC LOG		BOTTOM OF SURFACE CASING TOP OF CASING TOP OF SURFACE CASING TOP OF SEAL SURFACE CASING 4" x 4" TYPE: Protector Pipe BACKFILL MATERIAL TYPE: Pel Plug Bentonite Pellets/ 3/8 Shur Plug RISER CASING DIA: 2" TYPE: Schedule 40 PVC		355.17 352.17 350.17 349.17
		TOP OF FILTER PACK FILTER PACK TYPE: DSI Filter Sand #2 Size	28.0	<u>324.17</u>
		BOTTOM OF RISER/TOP OF SCREEN SCREEN DIA: 2" TYPE: PVC OPENINGS WIDTH: 0.010" -	29.6	<u>322.57</u>
•		OPENING TYPE: Machine Slotted BOTTOM OF SCREEN	39.6	<u>312.57</u>
	8.25° DIA.	BOTTOM OF HOLE	40.5	<u>311.67</u>

sou.	THEF	APANY	DRILLING LOG		ļ		GWA	4 - 9		
Energy		Your Work				SI	neet 1	of	2	
SITE_			Plant Arkwright, Pond #3 SAR HOLE							
LOCAT	ION _	· ·	COORDINATES N							
ANGLE			90 BEARING CONTRACTOR SCS		DAIL	L NO	C	ME 55	0	
OVERB	URDEN	DEPTH _	NO, PENT, TESTS 7	NO.	U.D. SAMPLI	s		1		
			LENGTH CORE SIZE							
			14.8 / 13.9 ELEV TIME AFTER COMPTOB							
	TUOR		QUANTITY MIX	DRIL	LING START	DATE _	12	79/200 Vo.4000)3 	
DRILLE	R	Brad Fill	povich RECORDER Stacy Sprayberry APPROVED				12	79/200		
Graphic Log	Depth	Elev,	Malerial Description, Classification and Remarks	From To	ndard Pen. Te Blows	st N	Sample No.	Chg. %	Hec.	ROD
	. 0	363.9		İ						
	1		Reddish brown, slity SAND (SM) with MICA FILL	0.15	2-4-4	8	S-1			
			,] -1.5	⊢ =1:= 1	·				
	2									
	3									İ
	4				_					
	5	358.9		i			1 1			
			Reddish brown, sandy CLAY (CL/SM) with ASH and WOOD FILL	5-6.5	2-2-3	5	S-2			
	6			3-6.5		5	3-2	.		
· ·	7	,				•		.		
	8]	ļ		
	9					•				
	10	353.9								
			Reddish brown to orange, silty SAND (SM) with MICA	1.0.40						
	11			10-12	TUBE		· .			
	12		K=5.2E-5 cm/sec							
	13							1		
	14	349.9						[
			White, medium to coarse grain, wet, silty SAND (SM) with	1						
	15		SAPROLITE					.]		
	16			15-16.5	1-1-3	4	S-3			
	17									
.	18							1		
	.				,					
-+	19							ĺ		
	20	343.9	The CAND CAND IN CARDS IT	1						
	21		Tan to brown, silty SAND (SM) with SAPROLITE	20-21.5	2-3-5	8	S-4			
1	22					Ť	$\vdash \dashv$			
										į
\dashv	23] [
Form GS99	24	99			···	****	لبنا			

DRILLING LOG

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GEOLOGICAL SERVICES Sheet 2 of 2

SITE				TOTAL	DEPTH	36.5		RF.ELEV,		63.93	7
Graphic Log	Depth	Elev.	Material Description, Classification and Remarks		5la From To	ndard Pen. Blows	Test N	Sample No.	Fluid Chg. %	Rec. %	AQI
	25		Tan to brown, silty SAND (SM) with SAPROLITE							·	
	26		1		25-26.5	4-6-9	14	S-5		• •	
	27				25-20.5	4-0-0					a .
_	28										
一	30	,	Well screened from 24.8 feet to 34.8 feet below ground surface								
	31	· · · · · · · · · · · · · · · · · · ·			30-31.5	4-7-11	18	S-6			
_					30-31.5	4-7-11		3-6			
\dashv	32	<u> </u>									
\dashv	33						:				
\dashv	34		Becoming white with depth								·
-	35				,	7 40 4	7 07	-			
+	36		Daving Town to Add 14 00 5 Feet		35-36.5	/-1U-1	7 27	S-7			
十	37 	······································	Boring Terminated at 36.5 Feet				å				
十	38	. <u></u>				•					
	39										
\dashv	40										
┪	41										
\dashv	42										
\dashv	43										
\dashv	44		·								
+	45		·				•		·		
+	46		·								
\dashv	47					•	÷				
\dashv	48										
+	49						•			. :	
┥	50						• .			į	
+	51									ļ	
+	52									:	
+	53										
+	54			:							
	55										
1	56	3			,]			l



WELL CONSTRUCTION	LOG	PROJECT Arkwright Ash Pond #3 SAP	WELL	
SITE		Arkwright Ash Pond #3 SAR		
Plant Arkwright BEGUN COMPLETED PREPARED	DV	Ash Pond #3, N 1065139.294, E 243	37297.3	527
	tacy Sprayt		::S	
			DEPTH	ELEV.
		* 1	,	
	<u> </u>	च पुर्वे का क च पुरवास (क पुरवास		!
			7,	707.04
		TOP OF CASING GROUND SURFACE	<u>-3.4</u> 0.0	363.94 363.94
		GROUND SURFACE	<u></u>	. 202.37
		BOTTOM OF SURFACE CASING	2 <u>.0</u> 3.0	361.94 360.94
GENERALIZED GEOLOGIC LOG		TOP OF SEAL		300.37
	0 0 -	SURFACE CASING		
		TYPE: Protector Pipe		
		BACKFILL MATERIAL TYPE: Pel Piug Bentonite Pellets/		
		3/8 Shur Plug		
		RISER CASING DIA: 2"		
		TYPE: Schedule 40 PVC	· ·	i
·				
		ANNULAR SEAL	,	•
		TYPE: Bentonite Pellets/3/8 Shur Plug		
		200 00 202	22.0	341 <u>.</u> 94
		TOP OF FILTER PACK		
		FILTER PACK		
		TYPE: DSI Fitter Sand #2 Size	_2 <u>4.8</u>	339.14
		BOTTOM OF RISER/TOP OF SCREEN	_£ <u>T.U</u> _	<u> </u>
		SCREEN DIA: 2" TYPE: PVC		
		OPENINGS WIDTH: 0.010"		
		OPENING TYPE: Machine Slotted	74.0	700 4.4
		BOTTOM OF SCREEN	<u> 34.8 </u>	<u>329.14</u>
·		BOTTOM OF HOLE	<u> 36.5 </u>	327.44
	}			
	8.25 DIA HOLE			

sou	THE	RN	DRILLING LOG	4		GWA	· - 10	,	
Energy	to Serv	. Your Wor	ويورون والموالي والمراكب والمراكب والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع			Sheet 1	of :	2	
SITE			Plant Arkwright, Pond #3 SAR HOLE						
LOCA	TION _	• .s	Northwestern Edge of Pond COORDINATES N	1065419.082	E .	24	13719	1.693	· ·
ANGL	E		90 BEARING CONTRACTOR SCS	DF	RILL NO.	<u>C</u>	ME 55	50	
OVER	BURDEN	DEPTH	NO, PENT, TESTS 9	NO. U.D. SAMP	LES				<u>. </u>
			LENGTH CORE SIZE						
			19 / 13.6 ELEV TIME AFTER COMP. TOB						
TYPE	GROUT		GUANTITY MIX	DRILLING STAF	T DATE	12	78/200)3	
	EA	Brad Fi	RECORDER Stacy Sprayberry APPROVED				-		
Graphic Log	Depth	Elev.	Material Description, Classification and Flemants	Standard Pen. From To Blows	est N	Sample No.	Fluid Chg. %	Hec.	ROD
	0	367.7					,		
.	Ť	001.7	Reddish brown, sandy CLAY (CL/SM) with ASH FILL			1			
-	-'-	<u> </u>		0-1.5 3-4-7	11	S-1			
	2			ļ.					1
į	3	l ·	·	ļ			.		
	4			4		1 1			
-	4-			}				.	
	5	362.7	<u> </u>	4					
	6		White to reddish brown, silty CLAY (CL) with MICA and ASH FILL	5-6.5 7-5-6	11	S-2			
	7								
	8								
	9			,		1 1			
	10	357.7		}					
	11		Reddish brown, silty SAND (SM/ML) with MICA	10-11.5 2-3-5	8	S-3			
			<i>;</i>	10-11.5	·				1
	12			<u> </u>		- 1	{		
	13								
	14			1			1		
				}			- 1	٠,	
	15	352.7	Top to become uset eithe CAND (CM) with MICA and DVDITES						
	16.		Tan to brown, wet silty SAND (SM) with MICA and PYRITES	15-16,5 1-1-1	2	S-4	İ		
	17			j					
	18			}			- [
	10						į		
	19		· . ·	Ì			ļ		j
	20						1	·	
	21	-	SAA with SAPROLITE and Free Water	20-21.5 2-2-3	, 5	S-5		·	•
	$\neg \neg$		·	}	: 3			1	
	22			Ì					
1	23						1	1	1
	24]			İ		I
Form GS9		10							أحسا

SOUTHERN A
Energy to Serve Your World"

DRILLING LOG GEOLOGICAL SERVICES

GWA - 10 Sheet 2 of 2

SME Smphic		· .	Plant Arkwright, Pond #3 SAR TOTAL Material Description,	Sian	dard Pen. Te		F,ELEV.		36
Log	Depth	Elev.	Classification and Remarks	From To	Blows	N	No.	City. %	Ľ
	25								
	26			25-26,5	3-6-9	15	S-6		
	27			-					
	28								l
\exists	29								
	30	337.7							
			White to brown, silty SAND (SM) with MICA and SAPROLITE	20.21 5 1	* 10 16	20	C 7		
\dashv	31			30-31.5 1	1-12-16	28	\$-7	,	
	32								
,	33								
	34				٠.				
_	35		Mall assessed from OF feet to DF feet to DF						
_	36		Well screened from 25 feet to 35 feet below ground surface	35-36.5	9-16-30	46	S-8		İ
_	37				• .				
\downarrow	38								
_	39					*-			
	. 40	· .							ĺ
	41		•	40-41.5	48-50/2"	100+	S-9	ł	
	42	326.2	Boring Termindated at 40 Feet						!
\prod	43			~					!
	44						,		: }
	45			,					l
7	46			·				·	ı
\exists	47					-			ı
\dashv	48								
╁	49		·					.	
\dashv	50			:					
+	51								
4	52		•			-			
\perp	53								
_	54								
	55			•					
	56	1				ł	- 1		



	/ELL	CONSTRUC	CTION LOG	Arkwright Ash Pond #3 SAR (. но. GWA10
	lant	Arkwright		Ash Pond #3, N 1065419.082, E 2437191	.693
12/8	/03	COMPLETED 12/9/03	PREPARED BY Stacy Sprayb	water level. Contractor berry ~13.6 SCS	
				TOP OF CASING -3.2 GROUND SURFACE 0.0	370.87 367.66
<u>G</u>	ENERALIZ	ZED GEOLOGIC LOG		TOP OF SEAL BOTTOM OF SURFACE CASING SURFACE CASING 4" x 4" TYPE: Protector Pipe	365.86 365.66
				BACKFILL MATERIAL TYPE: Pel Plug Bentonite Pellets/ 3/8 Shur Plug RISER CASING DA: 2" TYPE: Schedule 40 PVC	
		· · · · · · · · · · · · · · · · · · ·		ANNULAR SEAL	
5				TYPE: Bentonite Pellets/3/8 Shur Plug TOP OF FILTER PACK FILTER PACK 22.0	345.66
				TYPE: DSI Filter Sand 12 Size BOTTOM OF RISER/TOP OF SCREEN SCREEN DIA: 2" TYPE: PVC	342.66
		•		OPENINGS WIDTH: 0.010" OPENING TYPE: Machine Slotted BOTTOM OF SCREEN 35.0	332.66
			B 25" DA HOLE	BOTTOM OF HOLE 41.5	326.16

sou	THERN A	DRILI	ING L	.OG			Hole No.	GWC-15	5
Energy	to Serve Your V	World" GEOLOGI	CAL SE	RVICES			Sheet 1	of	2
SITE					HOLE DEPTH				
	LOCATION	Solid Waste Management Area	COORE	INATES N	1065475.4	193	_ E 2	2438360.991	1
			CONTR	ACTOR	SCS, Inc.	D	RILL NO.		
DRILLII		HSA/ HQ Rock Core No. SAMPLI							
		LENGTH_							
		SLE DEPTH 26.9 ELEV.						11/18/2008	
		QUANTITY Quantity						12/4/2008	
	DRILLER	S. Milam/S. Denty RECORDER D. Brooks/L. Garland APPR	Sample		DRIL dard Penetration Test	LING CON	MP. DATE	12/4/2000	I
Depth	Elev.	Material Description, Classification and Remarks	No.	From To	Blows	N	Comments	% Rec	RQD
0	372.88								
1	371.88								
2	370.88								
3	369.88								
4	368.88								
5	367.88	Reddish brown SILT, sandy, micaceous	1	4.5-6	9-7-9	16			
6	366.88								
7	365.88								
8	364.88								
9	363.88								
10	362.88	Gray and brown silty SAND, medium to fine grained	2	9.5-11	7-7-8	15			
11	361.88								
12	360.88								
13	359.88								
14	358.88								
15	357.88	Dark yellowish brown SILT, sandy, micaceous	3	14.5-16	4-4-4	8			
16	356.88								
17	355.88								
18	354.88								
19	353.88								
20	352.88	Gray and brown sandy SILT	4	19.5-21	10-9-11	20			
21	351.88								
22	350.88	Auger refusal at 22'	4						
23	349.88								

24 348.88 Form GS9901 8-19-2008 SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG GEOLOGICAL SERVICES

Hole No. GWC-15
Sheet 2 of 2

SITE _		Former Plant Arkwright			TOTAL DEPTH	40	SURF.ELEV.	372.8	38399
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard From To	dard Penetration Test Blows	N	Comments	% Rec	RQD
25	347.88	Unweathered biotite gneiss, very hard, fine grained		22-25.5			3.5/3.5	100	
26	346.88								
27	345.88								
28	344.88								
29	343.88								
30	342.88	Slightly weathered to unweathered biotite gneiss,		25.5-30.5			5.0/5.0	100	
31	341.88	fine to medium grained, slightly to highly fractured with slight to moderate weathering in fractures							
32	340.88								
33	339.88								
34	338.88								
35	337.88	Same as above		30.5-35.5			5.0/5.0	100	
36	336.88								
37	335.88								
38	334.88								
39	333.88	Unweathered biotite gneiss, fine to medium grained,							
40	332.88	slightly to moderately fractured, clean to slightly weathered fractures		35.5-40.5			5.0/5.0	100	
41	331.88	40.5' - Bottom of boring							
42	330.88								
43	329.88								
44	328.88								
45	327.88								
46	326.88								
47	325.88								
48	324.88								
49	323.88								
50	322.88								
51	321.88								
52	320.88								
53	319.88								
54	318.88								
55 56	317.88								
	310.00 9901 8-19-2								

WELL CONSTRUCTION LOG

Southern Company Generation

PROJECT: Former Plant Arkwright Solid Waste Management Unit LOCATION: Ash Ponds 1, 2, 3 LOGGER: L. Garland DATE CONSTRUCTED: 12/4/2008 Locking Hinged Top 1/4-inch Weep Hole 4-ft x 4-ft x 4" concrete pad Pea Gravel in annular space Protective Casing SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf PISER CASING DIA: 2-inch TYPE: Schedule 40 PVC JOINT TYPE: Flush Threaded	DEPTH FEET 3.02	WELL NAME GWC-15 ELEVATION FT, MSL 375.90
LOCATION: Ash Ponds 1, 2, 3 LOGGER: L. Garland DATE CONSTRUCTED: 12/4/2008 Locking Hinged Top 1/4-inch Weep Hole 2" Threaded Riser Cap Pea Gravel in annular space 4-ft x 4-ft x 4" concrete pad GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC	FEET	GWC-15 ELEVATION FT, MSL
DRILLING METHODS: HSA, HQ Rock Core DATE CONSTRUCTED: 12/4/2008 Locking Hinged Top 1/4-inch Vent 1/4-inch Weep Hole 4-ft x 4-ft x 4" concrete pad Pea Gravel in annular space GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC	FEET	ELEVATION FT, MSL
Locking Hinged Top 1/4-inch Vent 1/4-inch Weep Hole Pea Gravel in annular space Protective Casing SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC	FEET	ELEVATION FT, MSL
Locking Hinged Top 1/4-inch Vent 1/4-inch Weep Hole 2" Threaded Riser Cap Pea Gravel in annular space GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC	FEET	FT, MSL
1/4-inch Vent 1/4-inch Weep Hole 2" Threaded Riser Cap Pea Gravel in annular space GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC	FEET	FT, MSL
1/4-inch Vent 1/4-inch Weep Hole 2" Threaded Riser Cap Pea Gravel in annular space GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
1/4-inch Vent 1/4-inch Weep Hole 2" Threaded Riser Cap Pea Gravel in annular space GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC	3.02	
1/4-inch Vent 1/4-inch Weep Hole 2" Threaded Riser Cap Pea Gravel in annular space GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC	3.02	375.90
1/4-inch Weep Hole 2" Threaded Riser Cap Pea Gravel in annular space GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC	3.02	375.90
Pea Gravel in annular space GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
4-ft x 4-ft x 4" concrete pad GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
4-ft x 4-ft x 4" concrete pad GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
4-ft x 4-ft x 4" concrete pad GROUND SURFACE PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
PROTECTIVE CASING SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC	0.00	372.88
SIZE: 4x4-inch TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
TYPE: Anodized Aluminum BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
BOTTOM OF PROTECTIVE CASING BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
BACKFILL MATERIAL TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
TYPE: Portland Cement Grout AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf ———————————————————————————————————		
RISER CASING DIA: 2-inch TYPE: Schedule 40 PVC		
DIA: 2-inch TYPE: Schedule 40 PVC		
DIA: 2-inch TYPE: Schedule 40 PVC		
TYPE: Schedule 40 PVC		
TOP OF SEAL	24.68	348.20
ANNULAR SEAL		
TYPE: 1/4-inch coated bentonite pellets		
5-gal buckets		
AMOUNT: 0.5 bucket		
PLACEMENT: Tremie		
TOP OF FILTER PACK	27.68	345.20
FILTER PACK		
TYPE: DSI Sand - 1A (20/30)		
Drillers Services, Inc.		
AMOUNT: 1.75 bags; 50 lbs/bag		
PLACEMENT: Tremie; wash with water		
BOTTOM OF RISER / TOP OF SCREEN	29.68	343.20
SCREEN	۷۵.۵۵	J 4 J.ZU
DIA: 2-inch		
TYPE: Schedule 40 PVC Prepack		
OPENING WIDTH: 0.01-inch		
OPENING TYPE: Slotted		
SLOT SPACING: 0.25-inch		
SLOT LENGTH: 1.5-inch		
BOTTOM OF SCREEN	39.68	333.20
BOTTOM OF CASING		332.90
	39.98	4
	39.98	
HOLE DIA: 9"	39.98	
	39.98	

sou	THERN A	DRILL	ING L	_OG			Hole No.	GWC-16	;
	to Serve Your V	World GEOLOGIC	CAL SE	RVICES			Sheet 1	of	2
SITE					HOLE DEPTH				
		Solid Waste Management Area			1065458.3			2438010.027	7
ANGLE		BEARING	CONTR	RACTOR	SCS, Inc.		ORILL NO.		
		LENGTH							
	WATER T	ABLE DEPTH 17.5 ELEV.	TIME AFT	ER COMP.		DAT	E TAKEN	11/18/2008	
		QUANTITY S. Milam/S. Denty RECORDER D. Brooks/L. Garland APPRO			DRIL	LING STA	MP. DATE	12/15/2008	
	DRILLER	3. Willatti/3. Defity Recorder D. Blooks/L. Gallatid Appro	Sample		dard Penetration Test	LING CO	MP. DATE	1	
Depth	Elev.	Material Description, Classification and Remarks	No.	From To	Blows	N	Comments	% Rec	RQD
0	365.57								
1	364.57								
2	363.57								
3	362.57								
4	361.57								
5	360.57	Reddish brown silty CLAY, damp, stiff, with medium to	1	4.5-6	5-6-7	13			
6	359.57	fine grained sand							
7	358.57								
8	357.57								
9	356.57								
10	355.57	Reddish yellow silty CLAY, damp, micaceous	2	9.5-11	2-2-3	5			
11	354.57								
12	353.57								
13	352.57								
14	351.57								
15	350.57	Reddish yellow to black silty CLAY, micaceous	3	14.5-16	3-2-4	6			
16	349.57								
17	348.57								
18	347.57								
19	346.57								
20	345.57	Reddish yellow to black sandy CLAY, moist, medium	4	19.5-21	2-3-3	6			
21	344.57	grained sand							
22	343.57								
23	342.57								

SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG GEOLOGICAL SERVICES

Hole No. GWC-16
Sheet 2 of 2

Former Plant Arkwright 45 SITE TOTAL DEPTH SURF.ELEV. 365.56602 Standard Penetration Test Depth Elev. Material Description, Classification and Remarks No. From To Blows Ν Comments % Rec RQD 5 7-50/4 R Reddish brown, white, and black sandy CLAY, moist, 24.5-26 340.57 25 medium to coarse grained sand, micaceous 26 339.57 Auger refusal at 25.5' 27 338.57 28.7- fracture 28 337.57 Biotite gneiss, unweathered to slightly weathered, 25.5-30 100 29 336.57 slightly to heavily fractured, slightly to moderately weathered fracture faces 335.57 30 334.57 31.4- fracture 31 32 333.57 30-35 100 33 332.57 331.57 Same as above 34 35 330.57 329.57 36 35-40 100 37 328.57 38 327.57 Same as above 39 326.57 40 325.57 324.57 41 40-45 100 42 323.57 Same as above 43 322.57 321.57 45 320.57 45' - Bottom of boring 46 319.57 318.57 47 48 317.57 49 316.57 50 315.57 51 314.57 52 313.57 312.57 53 54 311.57 55 310.57 309.57

WELL CONSTRUCTION LOG

Southern Company Generation

WELL CONSTRUCTION LOG	Southern Company Generation					
PROJECT: Former Plant Arkwright	DRILLING CO.: SCS, Inc.					
Solid Waste Management Unit	DRILLER: S. Milam		NAME			
LOCATION: Ash Ponds 1, 2, 3	RIG TYPE: CME 550					
LOGGER: L. Garland	DRILLING METHODS: HSA, HQ Rock Core		GWC-16			
DATE CONSTRUCTED: 12/15/2008	, , , , , , , , , , , , , , , , , , , ,					
		DEPTH	ELEVATION			
	_	FEET	FT, MSL			
Locking Hinged Top ———						
1/4-inch Vent—	TOP OF RISER	2.90	365.21			
1/4-inch Weep Hole	2" Threaded Riser Cap		000.2			
1/4-IIICII Weep Hole	2 Tilleaded Nisel Cap					
	k					
	Pea Gravel in annular space					
4-ft x 4-ft x 4" concrete pad						
	GROUND SURFACE	0.00	362.31			
	5552	0.00	302.01			
	PROTECTIVE CASING					
	SIZE: 4x4-inch					
3	TYPE: Anodized Aluminum					
	TTT E. Anodized Aldmindm					
	POTTOM OF PROTECTIVE CASING					
	BOTTOM OF PROTECTIVE CASING					
	DAGKELL MATERIAL					
	BACKFILL MATERIAL					
	TYPE: Portland Cement Grout					
	AMOUNT: 4 bags @ 1.3 cf/bag = 5.2 cf					
	RISER CASING					
	DIA: 2-inch					
	TYPE: Schedule 40 PVC					
	JOINT TYPE: Flush Threaded					
	TOP OF SEAL	17.00	345.31			
	ANNULAR SEAL					
	TYPE: 1/4-inch coated bentonite pellets					
	5-gal buckets					
	AMOUNT: 1 bucket					
	PLACEMENT: Tremie					
		10.20	2/2/1/			
	TOP OF FILTER PACK FILTER PACK	19.20	343.11			
	8888 C					
	TYPE: DSI Sand - 1A (20/30)					
	Drillers Services, Inc.					
	AMOUNT: 2 bags; 50 lbs/bag					
	PLACEMENT: Tremie; wash with water					
	BOTTOM OF RISER / TOP OF SCREEN	21.28	341.03			
	SCREEN					
	DIA: 2-inch					
	TYPE: Schedule 40 PVC Prepack					
	OPENING WIDTH: 0.01-inch					
	OPENING TYPE: Slotted					
	SLOT SPACING: 0.25-inch					
	SLOT LENGTH: 1.5-inch					
	BOTTOM OF SCREEN	31.28	331.03			
	50					
	BOTTOM OF CASING	31.58	330.73			
	BOTTOM OF GAGING	21.00	230.70			
HOLE DI	۸٠ ۵"					
HOLE DI	M. J					

sou	THERN A	DF	RILLING L	_OG			Hole No.	GWC-1	7
	to Serve Your	World GEOL	GEOLOGICAL SERVICES					of	2
SITE					HOLE DEPTH				
		Solid Waste Management Area							
		BEARING							
DRILLI	NG METHOD	HSA NO. S	SAMPLES	6	NO). U.D. SAMF	PLES	0	
		LENGTH							
		LE DEPTH 19.1 ELEV.							
		QUANTITY			-		RT DATE		
	DRILLER	S. Milam RECORDER L. Garland	Sample		ard Penetration Test	ILLING COM	IP. DATE	12/ 1/2000	
Depth	Elev.	Material Description, Classification and Remarks	No.	From To	Blows	N	Comments	% Rec	RQD
0	365.57								
1	364.57								
2	363.57								
3	362.57								
4	361.57								
5	360.57	Reddish brown sandy SILT, with clay, micaceous	1	4.5-6	5-8-8	16			
6	359.57	fine grained sand							
7	358.57								
8	357.57								
9	356.57								
10	355.57	Same as above	2	9.5-11	4-3-3	6			
11	354.57								
12	353.57								
13	352.57								
14	351.57								
15	350.57	Same as above	3	14.5-16	3-2-3	5			
16	349.57								
17	348.57								
18	347.57								
19	346.57								
20	345.57	Orange brown silty SAND, micaceous	4	19.5-21	2-2-2	4			
21	344.57								
22	343.57								
23	342.57								
24	341.57								
Form GS	9901 8-19-200	8							

SOUTHERN COMPANY
Energy to Serve Your World

DRILLING LOG GEOLOGICAL SERVICES

Hole No. GWC-17
Sheet 2 of 2

Energy	to Serve You		AL DE	KVICES			Sheet	2	of	2
SITE _		Former Plant Arkwright			TOTAL DEPTH	30).8 	SURF.ELEV.	365.5	6602
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standard From To	dard Penetration Test Blows	N	Comr	nents	% Rec	RQD
25	340.57	Brown sandy SILT, micaceous	5	24.5-26	3-4-5	9				
26	339.57									
27	338.57									
28	337.57									
29	336.57									
30	335.57	Gray, white, and black silty SAND, fine grained Auger refusal at 30.8'	6	29.5-31	8-50/2	R				
31	334.57	30.8' - Bottom of boring								
32	333.57	50.0 - Bottom of Boning								
33	332.57									
34	331.57									
35	330.57									
36	329.57									
37	328.57									
38	327.57									
39	326.57									
40	325.57									
41	324.57									
42	323.57									
43	322.57									
44	321.57									
45	320.57									
46	319.57									
47	318.57									
48	317.57									
49	316.57									
50	315.57									
51	314.57									
52 53	313.57									
54	311.57									
55	310.57									
56	309.57									
- 00	0001 0 10 1									

WELL CONSTRUCTION LOG

Southern Company Generation

WELL CONSTRUCTION LOG	Southern Company Gener	ation	
PROJECT: Former Plant Arkwright	DRILLING CO.: SCS, Inc.		WELL
Solid Waste Management Unit	DRILLER: S. Milam		NAME
LOCATION: Ash Ponds 1, 2, 3	RIG TYPE: CME 550		
LOGGER: L. Garland	DRILLING METHODS: HSA, HQ Rock Core		GWC-17
DATE CONSTRUCTED: 12/4/2008			
		DEPTH	ELEVATION
		FEET	FT, MSL
	7	FEET	FI, WISL
Locking Hinged Top —			
1/4-inch Vent—	TOP OF RISER	2.96	368.52
1/4-inch Weep Hole	2" Threaded Riser Cap		
	▶		
	Pea Gravel in annular space		
4-ft x 4-ft x 4" concrete pad			
	GROUND SURFACE	0.00	365.57
	PROTECTIVE CASING		
	SIZE: 4x4-inch		
	TYPE: Anodized Aluminum		
	BOTTOM OF PROTECTIVE CASING		
	DOTTOM OF TROTEGRAL GROWN		
	BACKFILL MATERIAL		
	TYPE: Portland Cement Grout		
	AMOUNT: 5.5 bags @ 1.3 cf/bag = 7.15 cf		
	AMOUNT: 5.5 bags @ 1.5 cl/bag = 7.15 cl		
	RISER CASING		
	DIA: 2-inch		
	TYPE: Schedule 40 PVC		
	JOINT TYPE: Flush Threaded		
	TOP OF SEAL	16.00	349.57
	ANNULAR SEAL		
	TYPE: 1/4-inch coated bentonite pellets		
	5-gal buckets		
	AMOUNT: 1 bucket		
	PLACEMENT: Tremie		
	TOP OF FILTER PACK	18.30	347.27
	FILTER PACK		
	TYPE: DSI Sand - 1A (20/30)		
	Drillers Services, Inc.		
	AMOUNT: 4 bags; 50 lbs/bag		
	PLACEMENT: Tremie; wash with water		
	BOTTOM OF RISER / TOP OF SCREEN	20.59	344.98
	SCREEN		
	DIA: 2-inch		
	TYPE: Schedule 40 PVC Prepack		
	OPENING WIDTH: 0.01-inch		
	OPENING TYPE: Slotted		
	SLOT SPACING: 0.25-inch		
	SLOT SPACING: 0.25-IICH SLOT LENGTH: 1.5-inch		
		20 F0	224.00
	BOTTOM OF SCREEN	30.59	334.98
	207721/05 2121/2	20.00	224.07
	BOTTOM OF CASING	30.89	334.67
	A 011		
HOLE DI.	A: 9"		

SOU	THERN A	DRI	LLING I	_OG			Hole No.	GWC-1	8
	to Serve Your W	Yorld GEOLO	Sheet 1	of	2				
SITE		Former Plant Arkwright	Plant Arkwright HOLE DEPTH					LEV. 3	52.25
	LOCATION	Solid Waste Management Area	COOR	DINATES N	1064482	.185	E	2437961.02	
ANGLE		BEARING	CONTR	RACTOR	SCS, Inc.		ORILL NO.		
DRILLIN	NG METHOD	HSA NO. SAM	IPLES	9	NC	D. U.D. SAM	IPLES	0	
		LENGTH							
		LE DEPTH 22.9 ELEV.							
		QUANTITY							
	DRILLER	S. Milam RECORDER D. Brooks AF	_	I 0:	DR dard Penetration Test	ILLING COI	MP. DATE	11/18/200	<u>-</u>
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	From To	Blows	N	Comments	% Rec	RQD
0	352.25								
1	351.25								
2	350.25								
3	349.25								
4	348.25								
5		Reddish brown silty CLAY, damp, with some medium grained sand	1	4.5-6	3-3-7	10			
6	346.25	granieu sanu							
7	345.25								
8	344.25								
9	343.25								
10	342.25	Same as above, yellowish red, micaceous	2	9.5-11	4-3-5	8			
11	341.25								
12	340.25								
13	339.25								
14	338.25								
15		Yellowish red silty CLAY, damp, micaceous, with fine to medium grained sand	3	14.5-16	6-4-6	10			
16	336.25	to medium grained Sand							
17	335.25								
18	334.25								
19	333.25								
20	332.25	Yellowish red silty CLAY, damp, with sand	4	19.5-21	2-4-7	11			
21	331.25								
22	330.25								
23	329.25								
24	328.25								
Form GS	9901 8-19-200	3							



DRILLING LOG GEOLOGICAL SERVICES

Hole No. GWC-18
Sheet 2 of 2

SITE _		Former Plant Arkwright			TOTAL DEPTH	47	7.5 SURF.ELEV.	352	2.25
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Stand From To	dard Penetration Test Blows	N	Comments	% Rec	RQD
25	327.25	Yellowish red sandy CLAY, damp, with silt and mica	5	24.5-26	3-4-5	10			
26	326.25								
27	325.25								•
28	324.25								
29	323.25								
30	322.25	Same as above with medium grained sand	6	29.5-31	3-5-5	10			
31	321.25								
32	320.25								
33	319.25								
34	318.25								
35	317.25	Brown sandy CLAY, damp, fine to medium grained sand, with black organic matter	7	34.5-36	3-5-7	12			
36	316.25	with black organic matter							
37	315.25								
38	314.25								
39	313.25								
40	312.25	Brown silty CLAY, damp, with sand	8	39.5-41	5-6-7	13			
41	311.25								
42	310.25								
43	309.25								
44	308.25								
45	307.25	Black and white silty SAND, moist, saproplite	9	44.5-46	31-50/2	R			
46	306.25								
47	305.25	Auger refusal at 47.5'							
48	304.25	47.5' - Bottom of boring							
49	303.25								
50	302.25								
51	301.25								
52	300.25								
53	299.25								
54 55	298.25 297.25								
56	296.25								

WELL CONSTRUCTION LOG

Southern Company Generation

WELL CONSTRUCTION LOG	Southern Company Gener	ation	
PROJECT: Former Plant Arkwright	DRILLING CO.: SCS, Inc.		WELL
Solid Waste Management Unit	DRILLER: S. Milam		NAME
LOCATION: Ash Ponds 1, 2, 3	RIG TYPE: CME 550		
LOGGER: L. Garland	DRILLING METHODS: HSA		GWC-18
DATE CONSTRUCTED: 11/19/2008			
		DEPTH	ELEVATION
		FEET	FT, MSL
Locking Hinged Top —			
	TOD OF 01050	0.74	254.00
1/4-inch Vent	TOP OF RISER	2.74	354.99
1/4-inch Weep Hole	2" Threaded Riser Cap		
	x		
	Pea Gravel in annular space		
4-ft x 4-ft x 4" concrete pad			
	GROUND SURFACE	0.00	352.25
	PROTECTIVE CASING		
	SIZE: 4x4-inch		
	TYPE: Anodized Aluminum		
	BOTTOM OF PROTECTIVE CASING		
	BACKFILL MATERIAL		
	TYPE: Portland Cement Grout		
	AMOUNT: 6.5 bags @ 1.3 cf/bag = 8.45 cf		
	DISED CASING		
	RISER CASING		
	DIA: 2-inch TYPE: Schedule 40 PVC		
	JOINT TYPE: Flush Threaded		
	JOINT TTPE. Flush Threaded		
	TOP OF SEAL	34.50	317.75
	ANNULAR SEAL	0 1.00	017.70
	TYPE: 1/4-inch coated bentonite pellets		
	5-gal buckets		
	AMOUNT: 1 bucket		
	PLACEMENT: Tremie		
	TOP OF FILTER PACK	36.50	315.75
	FILTER PACK		
	TYPE: DSI Sand - 1A (20/30)		
	Drillers Services, Inc.		
	AMOUNT: 3 bags; 50 lbs/bag		
	PLACEMENT: Tremie; wash with water		
	BOTTOM OF RISER / TOP OF SCREEN	37.81	314.44
	SCREEN		
	DIA: 2-inch		
	TYPE: Schedule 40 PVC Prepack		
	OPENING WIDTH: 0.01-inch		
	OPENING TYPE: Slotted		
	SLOT SPACING: 0.25-inch		
	SLOT LENGTH: 1.5-inch	47.04	204.44
	BOTTOM OF SCREEN	47.81	304.44
	DOTTOM OF CACINO	48.11	304.14
	BOTTOM OF CASING	4 0.11	504.14
HOLE DIA	۸٠ Q"		
HOLE DIF	n. <i>U</i>		
			<u> </u>

AC			ARAMW-3
ATLANTIC COAST CONSULTING, INC.	oft Attori	ney Client Privileg	BORING ID
i Rooloi. I lant / interigint	art Attori	1 KOULOT NO.: 1004 110	
TOTAL DEPTH: 68.61 ft. BTOC DATE BEGIN: 25-Nov-2019		SITE LOCATION: Macon, Georgia DRILLER: Chris Ruffer	
DATE COMPLETE: 25-Nov-2019 INSTALLED BY: Cascade		RIG TYPE: T-300 Rotosonic METHOD: Rotosonic	
	BGS BTOC	_	
WATER AFTER 40 HOURS. 20.02	ВТОС	Northing: 1064531.307	
Weather Resistant Lock ,	Protective Cover	Easting: 2437570.755	
355.35	stick-up	SURFACE COMPLETION: 4"x4" Aluminum Protective Casing	
TOC Elevation	Well Cap ► Vent Hole 3.00	4'x4'x4" Concrete Pad Weather Resistant Lock	
Weep Hole Survey Pin	Pea Gravel	Survey Pin	
352.35	GROUND SURFACE	SOIL DESCRIPTION	Core Photos
Ground Elev. (MSL)		0-5' Top soil (CL). Reddish brown clay, medium plasticity, dry, mica present (15-20%), soft. Hand augered	
2	Grout: 8.3 cubic feet		
3 🔲	orda. ord dable foot		医汗
4 🗔 📗			
5		5-10' As above, increase in mica present (30%). Color change ~8' to brown low-medium plasticity (ML) silt. Soft	
6			
7			图图
8			
9		10-15' Color change at 12' to a light brown (ML) silt, mica (40%).	图写
11		Saprolite, Black and tan striations present. Cohesive, low plasticity, soft to very soft.	
12			
13			10 P
14			(1)
15		15-20' As above	
16			
17			
18			
19			
20		20-25' Silt with sand (ML) saprolite, soil striations present. Some weathered rock with sand (fine to coarse) present. Non cohesive/	100000
21		non plastic. Mica present (45%). Some black and white mottling.	
22			
24			
25		25-30' As above, saprolite	翼 [4]
26			学与
6.00"	<u> i</u> D		
MATERIALS: GROUT:	Bentonite Grout		
	AquaGuard		
	3/8" Bentonite Pellets Pel-Plug		
	20/30 Mesh Filter Media	Soil Descriptions from Unified Soil Classification System	
	Sch. 40 - 2" PVC Campbell Monoflex		
SLOT SIZE:	0.010-Inch Slot	BTOC - Below Top of Casing ID - Inside Diameter; OD - Outside Diameter	
	Sch. 40 - 2" PVC Campbell Monoflex	MSL - Mean Sea Level BGS - Below Ground Surface Page 1 of	3

ACC ATLANTIC COAS	ST CONSULTING,	ı <mark>lc.</mark>	raft Atto	rney Client Privilege	ARAMW-3 BORING ID
PROJECT:	Plant Arkwright			PROJECT NO.: 1054-110	
TOTAL DEPTH: DATE BEGIN:	68.61 ft. BTOC 25-Nov-2019			SITE LOCATION: Macon, Georgia DRILLER: Chris Ruffer	
DATE COMPLETE	25-Nov-2019			RIG TYPE: T-300 Rotosonic	
INSTALLED BY: SUPERVISED BY:	Cascade Jordan Berisford			METHOD: Rotosonic	-
WATER 1ST ENCO	UNTERED:	23' BC		_	0.51.
WATER AFTER 48 Elevation	Depth 2	5.32' B	TOC		Core Photos
MSL	28			30-35' As above, saprolite	
	35			35-40' As above, saprolite	W.F.
	40			40-45' As above, weathered rock	4
	45 46 47 48 49			45-50' Color change to light brown, black and white mottling At 48' change to a gray weathered rock with a silty sand (SM) with gravel pieces present.	Christ
	50		Top of Bentonite Seal	50-55' Fractured rock	
	51				
300.35 Elevation			Top of Filter Pack		
MATERIALS:	' l	00" OD	-4		
		_			
GROUT: MANUFACTUR	ER:		entonite Grout quaGuard		
BENTONITE SE	EAL:	3/8	8" Bentonite Pellets el-Plug		
FILTER PACK S MANUFACTUR			0/30 Mesh Iter Media		
WELL SCREEN MANUFACTUR SLOT SIZE:	ER:	Si 0.0	ch. 40 - 2" PVC lver-Line 010-Inch Slot	TOC - Top of Casing ID - Inside Diameter; OD - Outside Diameter	
WELL CASING: MANUFACTUR			ch. 40 - 2" PVC Iver-Line	MSL - Mean Sea Level BGS - Below Ground Surface Page 2 of	3

ACC ATLANTIC COAST	CONSULTING, I	D ra	ift Atto	rney Client Privilege	ARAMW-3 BORING ID
PROJECT: FOR TOTAL DEPTH: 6 DATE BEGIN: 2 DATE COMPLETE: 2 INSTALLED BY: 6	Plant Arkwright 68.61 ft. BTOC 25-Nov-2019 25-Nov-2019 Cascade			PROJECT NO.: 1054-110 SITE LOCATION: Macon, Georgia DRILLER: Chris Ruffer RIG TYPE: T-300 Rotosonic METHOD: Rotosonic	
SUPERVISED BY: WATER 1ST ENCOU WATER AFTER 48 H	NTERED:	23' BGS .32' BTOC			Core Photos
	Depth	Filter P	Screen Pack: 2.0 cubic feet	55-60' Dark gray weathered rock with a silty sand with gravel pieces present (SM) 60-64' Weathered gneiss/schist with iron staining. Gneiss becomes more competent and fracturing disappears starting at 62'. Total well depth 64.0' BGS	
MATERIALS:	6.0	0" OD			
GROUT: MANUFACTUREF	₹:	Bentonite AquaGua			
BENTONITE SEA MANUFACTUREF		3/8" Bent Pel-Plug	tonite Pellets		
FILTER PACK SA MANUFACTUREF		20/30 Me Filter Me			
WELL SCREEN: MANUFACTUREF SLOT SIZE:	₹:	Sch. 40 - Silver-Lir 0.010-Ind	ne ch Slot	TOC - Top of Casing ID - Inside Diameter; OD - Outside Diameter	
WELL CASING: MANUFACTUREF	₹:	Sch. 40 - Silver-Lir		MSL - Mean Sea Level BGS - Below Ground Surface Page 3 of	3

Arc			ARAMW-4
ATLANTIC COAST CONSULTING, INC.	t Attorna	ov Client Privilege	BORING ID
PROJECT: Plant Arkwright	t Attorne	ey Client Privilege	
TOTAL DEPTH: 57.70 ft. BTOC DATE BEGIN: 21-Nov-2019		SITE LOCATION: Macon, Georgia DRILLER: Chris Ruffer	
DATE COMPLETE: 21-Nov-2019 INSTALLED BY: Cascade		RIG TYPE: T-300 Rotosonic METHOD: Rotosonic	
SUPERVISED BY: Jordan Berisford	BGS		
	BTOC		
Weather Resistant Lock	Protective Cover	Northing: 1065462.99 Easting: 2438003.898	
7	—	SURFACE COMPLETION:	
367.61 TOC Elevation	stick-up Well Cap	4"x4" Aluminum Protective Casing 4'x4'x4" Concrete Pad	
Weep Hole	✓ Vent Hole 3.00 ✓ Pea Gravel	Weather Resistant Lock Survey Pin	
Survey Pin			
364.61	GROUND SURFACE	SOIL DESCRIPTION 0-5' Light brown top soil (CL), some organics present. Mica present,	Core Photos
1	Grout: 6.3 cubic feet	dry, soft, medium plasticity, cohesive, mica (15-20%). Hand augered	
5		5-10' As above (CL)	
10 11 12 12 13 14 14		10-15' As above (CL), increase in mica (40%)	
15		15-20' As above (CL), saprolite. Some black striations present in soil structure. 17' Light gray to tan saprolite, mica present (40%), trace fine gravel (quartz), sub angular/sub rounded, silt with sand (ML)	
20 21 22 22		20-25' Silt with sand (ML), light brown in color with mica/biotite flakes present (40%). Low plasticity, moist, non-cohesive	
23 24 25 26		25-28' As above with a color change to yellowish tan (ML)	
MATERIALS:	טו		
	Bentonite Grout AquaGuard		
	3/8" Bentonite Pellets Pel-Plug		
	20/30 Mesh Filter Media	Soil Descriptions from Unified Soil Classification System	
MANUFACTURER: SLOT SIZE:	Sch. 40 - 2" PVC Campbell Monoflex 0.010-Inch Slot	BTOC - Below Top of Casing ID - Inside Diameter; OD - Outside Diameter	
	Sch. 40 - 2" PVC Campbell Monoflex	MSL - Mean Sea Level BGS - Below Ground Surface Page 1 of	3

ACC ATLANTIC COAS	T CONSULTING,	ı <mark>ı</mark> c.	raft Δtt	orney Client Privilege	ARAMW-4 BORING ID
PROJECT: TOTAL DEPTH: DATE BEGIN: DATE COMPLETE: INSTALLED BY:	Plant Arkwright 57.70 ft. BTOC 21-Nov-2019		Tan All	PROJECT NO.: 1054-110 SITE LOCATION: Macon, Georgia DRILLER: Chris Ruffer RIG TYPE: T-300 Rotosonic METHOD: Rotosonic	
WATER 1ST ENCO	Jordan Berisford	25' B			
WATER AFTER 48 Elevation MSL	Depth BGS	2.46' E	BTOC		Core Photos
	28 29 30 31			28-30' Saprolite, weathered rock (quartz present with trace fine gravel) silt with gravel (ML) 30-33' Boulder of rock (3' tall gneiss) at 33'	
	32 33 34 35			36'40' Silty gravels with sand, solid gray in color. Course gravel to	
326.61 Elevation	36 37 38 Depth 39		Top of Bentonite Seal	cobbles of bedrock present. Well graded/poorly sorted.	
322.61 Elevation	40 41 42 Depth		Top of Filter Pack	40-45' Well fractured gneiss with iron staining. Pyrite inclusions present	
320.21 Elevation	43 44 Depth 45 46 47 47		Top of Screen	45-50' As above	
	48		Filter Pack: 2.0 cubic feet	50-54' As above	
MATERIALS:	6.	.00" OE	- - 		
GROUT: MANUFACTUR	ER:		entonite Grout quaGuard		
BENTONITE SE MANUFACTUR			8" Bentonite Pellets		
FILTER PACK S MANUFACTUR		_	0/30 Mesh ilter Media		
WELL SCREEN MANUFACTUR SLOT SIZE:		S	ch. 40 - 2" PVC ilver-Line 010-Inch Slot	TOC - Top of Casing ID - Inside Diameter; OD - Outside Diameter	
WELL CASING: MANUFACTUR			ch. 40 - 2" PVC ilver-Line	MSL - Mean Sea Level BGS - Below Ground Surface Page 2 of	i 3

PROJECT: Pla TOTAL DEPTH: 57. DATE BEGIN: 21- DATE COMPLETE: 21- INSTALLED BY: Ca	ant Arkwright .70 ft. BTOC -Nov-2019 -Nov-2019 scade	Praft Atto	rney Client Privilege PROJECT NO.: 1054-110 SITE LOCATION: Macon, Georgia DRILLER: Chris Ruffer RIG TYPE: T-300 Rotosonic METHOD: Rotosonic	ARAMW-4 BORING ID
SUPERVISED BY: Jor WATER 1ST ENCOUNT WATER AFTER 48 HOL	TERED: 25	5' BGS 46' BTOC	_	Core Photos
Elevation De MSL BG	pth	Bottom of Screen Silt Trap (0.3')	Total well depth 54.0' BGS	CONTRIBUTION
	77			
MATERIALO		" OD		
MATERIALS: GROUT:		Bentonite Grout		
MANUFACTURER:		AquaGuard 3/8" Bentonite Pellets		
BENTONITE SEAL: MANUFACTURER:	_	Pel-Plug		
FILTER PACK SAND MANUFACTURER:	D:	20/30 Mesh Filter Media		
WELL SCREEN: MANUFACTURER: SLOT SIZE:		Sch. 40 - 2" PVC Silver-Line 0.010-Inch Slot	TOC - Top of Casing ID - Inside Diameter; OD - Outside Diameter	
WELL CASING: MANUFACTURER:		Sch. 40 - 2" PVC Silver-Line	MSL - Mean Sea Level BGS - Below Ground Surface Page 3 of	3

Arc						ARAMW-6
ATLANTIC COAST CON	SILTING) INC	4	Attorn	New Client Privilege	BORING ID
PROJECT: Plant	Arkwright	וג	L	Allon	ney Client Privilege	
TOTAL DEPTH: 32.37	ft. BTOC ov-2019	;			SITE LOCATION: Macon, Georgia DRILLER: Isaac Young	
INSTALLED BY: Casca					RIG TYPE: T-300 Rotosonic METHOD: Rotosonic	
SUPERVISED BY: Taylor WATER 1ST ENCOUNTER	RED:		0' BG		<u> </u>	
WATER AFTER 48 HOURS	S:	12.45	5. B10	OC	Northing: 1064439.75	
Weather Resistant L	ock			Protective Cover	Easting: 2437607.875	
337.34	, I		T	stick-up	SURFACE COMPLETION: 4"x4" Aluminum Protective Casing	
TOC Elevation		•		Well Cap Vent Hole 2.86	4'x4'x4" Concrete Pad Weather Resistant Lock	
Weep H Survey				Pea Gravel	Survey Pin	
334.48		•	Z	GROUND SURFACE	SOIL DESCRIPTION	Core Photos
Ground Elev. (MSL)	1		1		0-5' Red silty clay (CL). Micaceous. Dry. Some organics present. Hand augered	第一条
	2			2		
	3			Grout: 2.5 cubic feet		
	4					
	5				5-10' As above. Transition to a light brown silty clay at ~8'. Hand augered	
	6					题 [2]
	7					
	8 -					1 33
	10				10-15' Light brown silty sand (SC) with white and black mottling. Moist	日
	11					100
	12					A.A.
	13	~	1			1
	14					
	15		Т	Top of Bentonite Seal	15-20' As above. Mottling disappears around 18'.	
	16			,		
	17					7
316.48 Elevation	18		T	Top of Filter Pack		7
314.48	19 20				20-25' Mottled white and black silty sand (SC). Moist. Some large	
Elevation	21		Ī	Top of Screen	gravel pieces. High plasticity red clay lenses present.	
	22					
	23		F	Filter Pack: 2.0 cubic feet		A
	24					
	25				25-30' As above except more clay present. Wet.	
	26		Щ			
MATERIALS:	_	6.00"	ID			
GROUT:				tonite Grout		
MANUFACTURER:				Bentonite Pellets		
BENTONITE SEAL: MANUFACTURER:				Bentonite Pellets Plug		
FILTER PACK SAND: MANUFACTURER:				30 Mesh er Media	Soil Descriptions from Unified Soil Classification System	
WELL SCREEN: MANUFACTURER:				. 40 - 2" PVC npbell Monoflex		
SLOT SIZE:				10-Inch Slot	BTOC - Below Top of Casing ID - Inside Diameter; OD - Outside Diameter	
WELL CASING: MANUFACTURER:				npbell Monoflex	MSL - Mean Sea Level BGS - Below Ground Surface	
					Page 1 of	2

ACC ATLANTIC COAS	ST CONSULTING, IN	Draft Att	torney Client Privileg	ARAMW-6 BORING ID
PROJECT: TOTAL DEPTH: DATE BEGIN: DATE COMPLETE INSTALLED BY: SUPERVISED BY:	Plant Arkwright 32.37 ft. BTOC 25-Nov-2019 25-Nov-2019 Cascade		PROJECT NO.: 1054-110 SITE LOCATION: Macon, Georgia DRILLER: Isaac Young RIG TYPE: T-300 Rotosonic METHOD: Rotosonic	
WATER 1ST ENCO	OUNTERED: 10	.70' BGS 45' BTOC		Core Photos
Elevation MSL	Depth BGS 28 29 29			
304.97 Elevation	30 31 32 33 34 35 36 37 38 39 40 41 42 43 45 46 47 48 49 50 51 52	Silt Trap (0.3')	Total well depth 30' BGS	
MATERIALS:		" OD		
GROUT: MANUFACTUR		Bentonite Grout AquaGuard		
BENTONITE SI MANUFACTUR		3/8" Bentonite Pellets Pel-Plug		
FILTER PACK : MANUFACTUR		20/30 Mesh Filter Media		
WELL SCREEN MANUFACTUR SLOT SIZE:		Sch. 40 - 2" PVC Silver-Line 0.010-Inch Slot	TOC - Top of Casing ID - Inside Diameter; OD - Outside Diameter	
WELL CASING MANUFACTUR		Sch. 40 - 2" PVC Silver-Line	MSL - Mean Sea Level BGS - Below Ground Surface Page 2	of 2

Assessment of Corrective Measures Report Georgia Power Company – Plant Arkwright Ash Pond 3 Landfill and Monofill 12/4/2020

APPENDIX C

Laboratory Reports

Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-101058-1

Client Project/Site: CCR - Plant Arkwright

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham

Authorized for release by: 1/20/2020 2:13:00 PM

Kathy Myers, Project Management Assistant I

(412)963-2447

kathy.myers@testamericainc.com

Designee for

Veronica Bortot, Senior Project Manager (412)963-2435

veronica.bortot@testamericainc.com

LINKS

Review your project results through

Have a Question?



Visit us at: www.testamericainc.com This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Client: Southern Company Project/Site: CCR - Plant Arkwright Laboratory Job ID: 180-101058-1

Table of Contents

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Case Narrative	3
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Certification Summary	5
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Client Sample Results	9
QC Sample Results	10
QC Association Summary	11
Chain of Custody	12
Pacaint Chacklists	13

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Case Narrative

Client: Southern Company

Job ID: 180-101058-1 Project/Site: CCR - Plant Arkwright

Job ID: 180-101058-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-101058-1

Comments

No additional comments.

Receipt

The samples were received on 1/16/2020 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0° C.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company Job ID: 180-101058-1

Project/Site: CCR - Plant Arkwright

Qualifiers

M	eta	ls
•••	Ctu	•

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery

CFL Contains Free Liquid
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)
LOD Limit of Detection (DoD/DOE)
LOQ Limit of Quantitation (DoD/DOE)

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

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Accreditation/Certification Summary

Client: Southern Company

Job ID: 180-101058-1

Project/Site: CCR - Plant Arkwright

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-20
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	01-31-20
Wisconsin	State	998027800	08-31-20

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Sample Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Lab Sample ID Client Sample ID Matrix Collected Received Asset ID 180-101058-1 ARAMW-3 Water 01/15/20 11:13 01/16/20 08:30 180-101058-2 ARAMW-6 01/15/20 12:45 01/16/20 08:30 Water 180-101058-3 ARAMW-4 Water 01/15/20 10:20 01/16/20 08:30

Job ID: 180-101058-1

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Method Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright

 Method
 Method Description
 Protocol
 Laboratory

 EPA 6020B
 Metals (ICP/MS)
 SW846
 TAL PIT

 3005A
 Preparation, Total Recoverable or Dissolved Metals
 SW846
 TAL PIT

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Job ID: 180-101058-1

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4.6

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Client: Southern Company Job ID: 180-101058-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-3 Lab Sample ID: 180-101058-1

Date Collected: 01/15/20 11:13 Matrix: Water Date Received: 01/16/20 08:30

Batch Dil Initial Final **Batch** Prepared Method Number **Prep Type** Type Run **Factor** Amount Amount or Analyzed Analyst Lab 304164 Total Recoverable Prep 3005A 50 mL 50 mL 01/16/20 11:43 RJR TAL PIT EPA 6020B 01/18/20 01:16 WTR Total Recoverable Analysis 1.0 mL 1.0 mL 304363 TAL PIT Instrument ID: M

Client Sample ID: ARAMW-6

Date Collected: 01/15/20 12:45

Lab Sample ID: 180-101058-2

Matrix: Water

Date Received: 01/16/20 08:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recovera	able Prep	3005A			50 mL	50 mL	304164	01/16/20 11:43	RJR	TAL PIT
Total Recovera	able Analysis	EPA 6020B		1	1.0 mL	1.0 mL	304363	01/18/20 01:21	WTR	TAL PIT
	Instrume	nt ID: M								

Client Sample ID: ARAMW-4 Lab Sample ID: 180-101058-3

Date Collected: 01/15/20 10:20

Date Received: 01/16/20 08:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	304164	01/16/20 11:43	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1	1.0 mL	1.0 mL	304363	01/18/20 01:36	WTR	TAL PIT
	Instrumer	nt ID: M								

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

RJR = Ron Rosenbaum

Batch Type: Analysis

WTR = Bill Reinheimer

Eurofins TestAmerica, Pittsburgh

1/20/2020

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Matrix: Water

Client Sample Results

Client: Southern Company Job ID: 180-101058-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-3 Lab Sample ID: 180-101058-1 Date Collected: 01/15/20 11:13

Matrix: Water

Date Received: 01/16/20 08:30

Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Molybdenum	0.0053		0.0050	0.00061	mg/L		01/16/20 11:43	01/18/20 01:16	1	
Boron	1.0		0.080	0.039	mg/L		01/16/20 11:43	01/18/20 01:16	1	

Lab Sample ID: 180-101058-2 **Client Sample ID: ARAMW-6**

Date Collected: 01/15/20 12:45

Matrix: Water

Date Received: 01/16/20 08:30

Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable											
Analyte	Result Q	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Molybdenum	0.00065 J		0.0050	0.00061	mg/L		01/16/20 11:43	01/18/20 01:21	1		
Boron	0.96		0.080	0.039	mg/L		01/16/20 11:43	01/18/20 01:21	1		

Client Sample ID: ARAMW-4 Lab Sample ID: 180-101058-3

Date Collected: 01/15/20 10:20 **Matrix: Water**

Date Received: 01/16/20 08:30

Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable										
Analyte	Result Q	ualifier	RL MD	L Unit	D	Prepared	Analyzed	Dil Fac		
Cobalt	0.0064	0.00	0.0001	3 mg/L		01/16/20 11:43	01/18/20 01:36	1		
Boron	0.32	0.0	0.03	9 mg/L		01/16/20 11:43	01/18/20 01:36	1		

1/20/2020

QC Sample Results

Client: Southern Company Job ID: 180-101058-1

Project/Site: CCR - Plant Arkwright

Lab Sample ID: MB 180-304164/1-A

Method: EPA 6020B - Metals (ICP/MS)

Matrix: Water

Analysis Batch: 304363

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 304164

_	MB	MB						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	<0.00013		0.00050	0.00013	mg/L		01/16/20 11:43	01/18/20 00:36	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		01/16/20 11:43	01/18/20 00:36	1
Boron	<0.039		0.080	0.039	mg/L		01/16/20 11:43	01/18/20 00:36	1

Lab Sample ID: LCS 180-304164/2-A

Matrix: Water

Analysis Batch: 304363

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Cobalt 0.500 0.478 mg/L 96 80 - 120 0.500 Molybdenum 0.496 mg/L 99 80 - 120 Boron 1.25 89 80 - 120 1.11 mg/L

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable Prep Batch: 304164

QC Association Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright Job ID: 180-101058-1

Metals

Prep Batch: 304164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-101058-1	ARAMW-3	Total Recoverable	Water	3005A	
180-101058-2	ARAMW-6	Total Recoverable	Water	3005A	
180-101058-3	ARAMW-4	Total Recoverable	Water	3005A	
MB 180-304164/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-304164/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 304363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-101058-1	ARAMW-3	Total Recoverable	Water	EPA 6020B	304164
180-101058-2	ARAMW-6	Total Recoverable	Water	EPA 6020B	304164
180-101058-3	ARAMW-4	Total Recoverable	Water	EPA 6020B	304164
MB 180-304164/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	304164
LCS 180-304164/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	304164

TestAmerica Pittsburgh

301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Chain of Custody Record

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

Phone (412) 963-7058 Fax (412) 963-2468	Parentee			E els Da					Carrier To	etiina Niefe'r		COC Na:	
Client Information	Sampler Ryan Phone:	Walk	_	Ver	ionic	a	Bo	tot	Carrier III	cking No(s):		400-73521-29028.1	
Client Contact: Joju Abraham	Phone: 774	5-594	- 5998	E-Mait				N-america inc	6cm			Page: Page	
Company: Southern Company									Requested			Job #:	
Address: PO BOX 2641 GSC8	Due Date Request	ed:			100							Preservation Codes:	
Oty: Birmingham	TAT Requested (di	ys): 2 DAY	TAT									B - NaOH N - C - Zn Acetate O -	Hexane None AsNaO2
Stare, Zip: AL, 35291						П	1	Cobatt				E - NaHSO4 Q -	Na2O4S Na2SO3 Na2S2O3
Phone:	PO#: SCS10347656				(0)	П	- 3	3					H2SO4 TSP Dodecahydrate
Email: JAbraham@southernco.com	WO#:				s or No		Jenum				2	I - Ice U -, J - DI Water V -	Acetone MCAA
Project Name: CCR Plant Arkwright - Ash Pond 3	Project#: 40007712				Sample (Yes ISD (Yes or N	П	lybenc	Coron and			containers		- pH 4-5 other (specify)
Ste: Georgia	SSOW#:				Samp ASD (Y	П	ou pu	10/04			5	Other:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab) sn	Matrix (W-water, 5-solid, 5-wasterol, Fissue, A-Air)	Field Filtered Sample (Yes or Perform MS/MSD (Yes or No)		8 1	Moters (Total Number	Special Instru	octions/Note:
		><	Preservatio	n Code:	\times			7			X		
ARAMW-3	1-15-20	1113	G		NA	_)				1		
ARAMW.	1-15-20	1245	G	Water	Mr	1	1				1		
ARAMW-4	1-15-20	1020	G	Water	NN			ì			ı		
				Water			Ш		$\perp \perp \perp$		13		
*_				Water									
				Water					1	de a la calagada. Ontre la calagada de la calagada de la calagada de la calagada de la calagada de la calagada de la calagada d	11111		
				Water							W		
				Water							Ш		
				Water						180-101058 Ch	ain of	f Custody	
				Water					TT,		100		
				Water	П						19		
Possible Hazard Identification Non-Hazard Flammable Skin Imitant	Poisan B Unkn	own \square	Radiological			\square_R	Return	To Client	Disposal	d if samples are By Lab	retain Arch	ned longer than 1 mo	onth) Months
Deliverable Requested: I, II, III, IV, Other (specify)					Sp	pecial	Instruc	ctions/QC Requ	uirements:				
Empty Kit Relinquished by:		Date:			Time				Me	thod of Shipment:			
Relinquished by:	I-(5-20		430	ACC		15	Elight by	12	_/	1/15/20			ET HE
Reinoushed by:	Date/Time:	16:00		£12			eived by) 85 J	4/_	Date/Time:	6/2:	5 830	ETA NITH
Custody Seals Infact: Custody Seal No.:						Coo	vier Temp	perature(s) °C and	Other Remarks:				

Ver: 08/04/2016









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Login Sample Receipt Checklist

Client: Southern Company Job Number: 180-101058-1

Login Number: 101058 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question Answer Comment

Radioactivity wasn't checked or is </= background as measured by a survey

meter.

The cooler's custody seal, if present, is intact.

Sample custody seals, if present, are intact.

The cooler or samples do not appear to have been compromised or

tampered with.

Samples were received on ice.

Cooler Temperature is acceptable.

Cooler Temperature is recorded.

COC is present.

COC is filled out in ink and legible.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

There are no discrepancies between the containers received and the COC.

Samples are received within Holding Time (excluding tests with immediate

HTs)

Sample containers have legible labels.

Containers are not broken or leaking.

Sample collection date/times are provided.

Appropriate sample containers are used.

Sample bottles are completely filled.

Sample Preservation Verified.

There is sufficient vol. for all requested analyses, incl. any requested

MS/MSDs

Containers requiring zero headspace have no headspace or bubble is

<6mm (1/4").

Multiphasic samples are not present.

Samples do not require splitting or compositing.

Residual Chlorine Checked.

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Eurofins TestAmerica, Pittsburgh

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Date: 2020-01-15 11:14:21

Project Information:

Operator Name Ryan Walker

Company Name Atlantic Coast Consulting Project Name Plant Arkwright - Ash Pond 3

Plant Arkwright Site Name 32° 55' 33.2" Latitude

-83° -42' -25.82" Longitude

Sonde SN 369557

Turbidity Make/Model Hach 2100Q Pump Information:

Pump Model/Type Peristaltic pump

Tubing Type poly Tubing Diameter 0.17 in Tubing Length 68 ft

Pump placement from TOC

63 ft

Well Information:

Well ID ARAMW-3 Well diameter 2 in Well Total Depth 68.90 ft Screen Length 10 ft Depth to Water 24.55 ft

Pumping Information:

Final Pumping Rate 200 mL/min Total System Volume 0.3935128 L Calculated Sample Rate 300 sec Stabilization Drawdown 19 in 4.2 L **Total Volume Pumped**

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	1		+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	10:53:45	600.01	19.54	6.77	436.98	2.17	25.90	0.44	-116.75
Last 5	10:58:45	900.01	19.54	6.77	437.40	5.88	26.00	0.31	-117.97
Last 5	11:03:45	1200.00	19.54	6.77	435.24	5.57	26.10	0.28	-118.85
Last 5	11:08:45	1500.00	19.58	6.77	435.54	2.21	26.10	0.28	-120.32
Last 5	11:13:45	1799.99	19.67	6.77	436.58	2.74	26.10	0.25	-121.51
Variance 0			-0.00	0.00	-2.16			-0.03	-0.88
Variance 1			0.04	0.00	0.31			-0.00	-1.47
Variance 2			0.09	-0.00	1.04			-0.03	-1.20

Notes

Sampled at 11:13. Cloudy, 60's.

Date: 2020-01-15 10:18:58

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

Project Information:

Operator Name Ryan Walker

Company Name
Project Name
Site Name
Plant Arkwright
Plant Arkwright
Plant Arkwright

Latitude 32° 55' 42.2" Longitude -83° -42' -20.78"

Sonde SN 369557

Turbidity Make/Model Hach 2100Q

Q Pump placement from TOC

Well Information:

Well IDARAMW-4Well diameter2 inWell Total Depth57.70 ftScreen Length10 ftDepth to Water21.07 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.3444151 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 3.75 L

Peristaltic pump

poly

.17 in

57 ft

52 ft

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	09:58:09	300.04	18.76	6.21	1425.61	4.35	21.30	0.25	-68.07
Last 5	10:03:09	600.01	18.83	6.15	1415.40	4.00	21.30	0.26	-61.26
Last 5	10:08:09	900.01	18.87	6.17	1412.85	4.10	21.30	0.24	-65.63
Last 5	10:13:09	1200.00	18.91	6.10	1404.73	3.73	21.30	0.22	-58.14
Last 5	10:18:09	1499.99	18.95	6.09	1410.57	3.50	21.30	0.21	-57.82
Variance 0			0.04	0.02	-2.55			-0.02	-4.37
Variance 1			0.03	-0.07	-8.13			-0.02	7.49
Variance 2			0.05	-0.02	5.84			-0.01	0.33

Notes

Sampled at 10:20. Cloudy, 60's.

Date: 2020-01-15 12:46:15

Project Information:

Operator Name Ryan Walker

Company Name
Project Name
Site Name
Atlantic Coast Consulting
Plant Arkwright - Ash Pond 3
Plant Arkwright

Latitude 32° 55' 32.27"

Longitude -83° -42' -25.34"

Sonde SN 369557

Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic pump

27 ft

Tubing TypepolyTubing Diameter0.17 inTubing Length32 ft

Pump placement from TOC

Well Information:

Well ID ARAMW-6
Well diameter 2 in
Well Total Depth 32.37 ft
Screen Length 10 ft
Depth to Water 12.73 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	12:25:35	2999.98	20.67	6.38	368.19	8.69	13.30	0.61	-20.75
Last 5	12:30:35	3299.97	20.65	6.37	367.42	4.87	13.30	0.41	-19.83
Last 5	12:35:35	3600.01	20.61	6.36	367.74	4.81	13.40	0.33	-19.49
Last 5	12:40:35	3899.99	20.56	6.36	367.09	3.77	13.40	0.30	-20.14
Last 5	12:45:35	4199.96	20.48	6.36	367.56	2.38	13.40	0.30	-20.22
Variance 0			-0.04	-0.01	0.32			-0.07	0.34
Variance 1			-0.04	0.00	-0.64			-0.03	-0.65
Variance 2			-0.08	0.00	0.46			0.00	-0.08

Notes

Sampled at 12:45. Sunny, 70's.

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-102294-1

Client Project/Site: CCR - Plant Arkwright

For:

eurofins 🔅

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by: 2/17/2020 3:07:48 PM Jill Colussy, Project Manager I (412)963-2444 jill.colussy@testamericainc.com

Designee for

Veronica Bortot, Senior Project Manager (412)963-2435

veronica.bortot@testamericainc.com

LINKS

Review your project results through

Have a Question?



Visit us at: www.testamericainc.com This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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TS

Client: Southern Company Project/Site: CCR - Plant Arkwright Laboratory Job ID: 180-102294-1

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Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-102294-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-102294-1

Receipt

The sample was received on 2/13/2020 9:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.4° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Job ID: 180-102294-1

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Definitions/Glossary

Client: Southern Company Job ID: 180-102294-1

Project/Site: CCR - Plant Arkwright

Glossarv

	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE) Minimum Detectable Activity (Radiochemistry) MDA MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit MLMinimum Level (Dioxin)

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

2/17/2020

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Accreditation/Certification Summary

Client: Southern Company

Job ID: 180-102294-1

Project/Site: CCR - Plant Arkwright

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-20 *
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

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^{*} Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright

Lab Sample ID Client Sample ID Matrix Collected Received Asset ID 180-102294-1 02/11/20 17:10 02/13/20 09:00 ARAMW-4 Water

Job ID: 180-102294-1

Method Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright

 Method
 Method Description
 Protocol
 Laboratory

 EPA 6020B
 Metals (ICP/MS)
 SW846
 TAL PIT

 3005A
 Preparation, Total Recoverable or Dissolved Metals
 SW846
 TAL PIT

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Job ID: 180-102294-1

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Client: Southern Company Job ID: 180-102294-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-4 Lab Sample ID: 180-102294-1

Date Collected: 02/11/20 17:10 Matrix: Water Date Received: 02/13/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	307077	02/14/20 10:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1	1.0 mL	1.0 mL	307216	02/15/20 19:39	WTR	TAL PIT
	Instrument	ID: M								

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

JL = James Lyu

Batch Type: Analysis

WTR = Bill Reinheimer

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Client Sample Results

Client: Southern Company Job ID: 180-102294-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-4 Lab Sample ID: 180-102294-1

Date Collected: 02/11/20 17:10 Matrix: Water

Date Received: 02/13/20 09:00

Method: EPA 6020B - Metals (IC	CP/MS) - To	otal Recov	/erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.0042		0.00050	0.00013	mg/L		02/14/20 10:06	02/15/20 19:39	1

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QC Sample Results

Client: Southern Company Job ID: 180-102294-1

RL

Project/Site: CCR - Plant Arkwright

Lab Sample ID: MB 180-307077/1-A

Lab Sample ID: LCS 180-307077/2-A

Method: EPA 6020B - Metals (ICP/MS)

Matrix: Water

Matrix: Water

Analyte

Analyte

Cobalt

Cobalt

Analysis Batch: 307216

Analysis Batch: 307216

MB MB

Result Qualifier

<0.00013

0.00050

Spike

Added

0.500

MDL Unit 0.00013 mg/L

LCS LCS

0.482

Result Qualifier

Unit

mg/L

Prepared Analyzed

96

Prep Batch: 307077

Dil Fac

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Prep Batch: 307077

%Rec.

D %Rec

Limits

Client Sample ID: Method Blank

Prep Type: Total Recoverable

80 - 120

QC Association Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright Job ID: 180-102294-1

Metals

Prep Batch: 307077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102294-1	ARAMW-4	Total Recoverable	Water	3005A	
MB 180-307077/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-307077/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 307216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102294-1	ARAMW-4	Total Recoverable	Water	EPA 6020B	307077
MB 180-307077/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	307077
LCS 180-307077/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	307077

TestAmerica Pittsburgh

301 Alpha Drive RIDC Park Pittsburgh, PA 15238

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2/17/2020

Chain of Custody Record



Phone (412) 963-7058 Fax (412) 963-2468 Sampler Chris Parker Carrier Tracking No(s): COC No: ALC Client Information Bortot, Veronica ALL to 400-73521-29028.1 Phone: 404-988-5629 Page Client Contact: E-Mail: TA-ATL Page < Veronica Bortot@testamericainc.com> Joju Abraham Company: Southern Company Analysis Requested Due Date Requested: Preservation Codes: PO BOX 2641 GSC8 A-HCL M - Hexane TAT Requested (days): B - NaOH N - None Z DAY! C - Zn Acetate O - AsNaO2 Birmingham D - Nitric Acid P - Na2O4S State, Zip: E - NaHSO4 Q - Na2SO3 AL 35291 F - MeOH R - Na2S2O3 Phone: G - Amehlor S-H2SO4 SCS10347656 T - TSP Dodecahydrate H - Ascorbic Acid Field Filtered Sample (Yes or No) WO# - loe U - Acetone V - MCAA JAbraham@southernco.com J - DI Water K-EDTA W-pH4-5 Project Name: Project # L-EDA Z - other (specify) 40007712 CCR Plant Arkwright - Ash Pond 3 SSOW#. Other: obal+ to Georgia **Total Number** Matrix Sample Type (C=comp, Sample Special Instructions/Note: Sample Identification Sample Date Time G=grab) ST+Tissue, A+Air Preservation Code: pH= 5.98 ARAMW-4 Water 20 1710 Water G Water G Water G Water G Water G Water G Water G Water G Water Water Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Disposal By Lab □ Non-Hazard □ Flammable □ Skin Irritant □ Poison B 🔀 Unknown □ Radiological Return To Client Archive For Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Empty Kit Relinquished by: Time: Method of Shipment 900 EMAN Custody Seals Intact: Cooler Temperature(s) °C and Other Remarks: Custody Seal No .: △ Yes △ No

Ver: 08/04/2016











Client: Southern Company

Job Number: 180-102294-1

Login Number: 102294 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Date: 2020-02-11 17:08:56

Project Information:

Operator Name C Parker Company Name ACC Project Name Plant Arkwright Plant Arkwright Site Name

0° 0' 0" Latitude 0° 0' 0" Longitude Sonde SN 445707

Turbidity Make/Model Hach 2100Q

Well Information:

Well ID ARAMW-4 Well diameter 2 in Well Total Depth 57.70 ft Screen Length 10 ft Depth to Water 20.78 ft

Pump Information:

Pump Model/Type Peri Pump **Tubing Type** poly Tubing Diameter .17 in Tubing Length 57 ft

Pump placement from TOC

Pumping Information:

Final Pumping Rate 130 mL/min Total System Volume 0.3444151 L Calculated Sample Rate 300 sec Stabilization Drawdown 3 in **Total Volume Pumped** 17 L

52 ft

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS,	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 100
Last 5	16:47:31	6313.90	21.37	6.13	1560.16	5.99	20.90	0.12	-96.93
Last 5	16:52:31	6613.90	21.20	6.00	1559.29	5.76	20.90	0.15	-84.05
Last 5	16:57:34	6916.89	21.19	5.95	1557.48	5.19	20.90	0.13	-77.84
Last 5	17:02:38	7220.87	21.10	6.00	1564.07	5.32	20.90	0.15	-74.27
Last 5	17:07:39	7521.88	21.37	5.98	1551.89	4.88	20.90	0.14	-72.29
Variance 0			-0.01	-0.05	-1.80			-0.02	6.21
Variance 1			-0.09	0.05	6.58			0.02	3.58
Variance 2			0.27	-0.02	-12.17			-0.01	1.97

Notes

Sampled at 17:10. Cloudy 70s

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-104498-1

Client Project/Site: CCR - Plant Arkwright Ash Pond 3

For:

💸 eurofins

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham

Authorized for release by:

Veronica Bortot

4/30/2020 7:43:54 AM

Veronica Bortot, Senior Project Manager

(412)963-2435

veronica.bortot@testamericainc.com

Designee for

Shali Brown, Project Manager II (615)301-5031

shali.brown@testamericainc.com

LINKS

Review your project results through

Have a Question?



Visit us at: www.testamericainc.com This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Job ID: 180-104498-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-104498-1

Comments

No additional comments.

Receipt

The samples were received on 4/10/2020 8:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.2° C, 1.3° C, 2.3° C and 3.3° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 180-104498-1

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Definitions/Glossary

Client: Southern Company Job ID: 180-104498-1

Project/Site: CCR - Plant Arkwright Ash Pond 3

Qualifiers

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Qualifier Qualifier Description

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier Qualifier Description

ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)
LOD Limit of Detection (DoD/DOE)
LOQ Limit of Quantitation (DoD/DOE)

MDA Minimum Detectable Activity (Radiochemistry)
MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

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Accreditation/Certification Summary

Client: Southern Company

Job ID: 180-104498-1

Project/Site: CCR - Plant Arkwright Ash Pond 3

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

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Sample Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright Ash Pond 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-104498-1	ARGWA-3	Water	04/07/20 10:45	04/10/20 08:15	
180-104498-2	ARGWA-5	Water	04/07/20 11:46	04/10/20 08:15	
180-104498-3	ARGWA-12	Ground Water	04/07/20 13:46	04/10/20 08:15	
180-104498-4	ARGWA-13	Water	04/07/20 15:32	04/10/20 08:15	
180-104498-5	ARGWA-14	Water	04/06/20 15:57	04/10/20 08:15	
180-104498-6	ARGWC-7	Water	04/08/20 09:55	04/10/20 08:15	
180-104498-7	ARGWC-8	Water	04/09/20 12:35	04/10/20 08:15	
180-104498-8	ARGWC-9	Water	04/09/20 10:25	04/10/20 08:15	
180-104498-9	ARGWC-10	Water	04/08/20 17:09	04/10/20 08:15	
180-104498-10	ARGWC-15	Water	04/08/20 16:15	04/10/20 08:15	
180-104498-11	ARGWC-16	Water	04/08/20 11:15	04/10/20 08:15	
180-104498-12	ARGWC-17	Water	04/08/20 14:30	04/10/20 08:15	
180-104498-13	ARGWC-18	Water	04/09/20 09:40	04/10/20 08:15	
180-104498-14	EB-1-4-9-20	Water	04/09/20 10:40	04/10/20 08:15	
180-104498-15	FB-1-4-7-20	Water	04/07/20 16:00	04/10/20 08:15	
180-104498-16	DUP-1	Water	04/08/20 00:00	04/10/20 08:15	

Job ID: 180-104498-1

Method Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470Δ	Prenaration Mercury	SW846	ΤΔΙ ΡΙΤ

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Eurofins TestAmerica, Pittsburgh

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Job ID: 180-104498-1

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Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWA-3 Lab Sample ID: 180-104498-1

Date Collected: 04/07/20 10:45 Date Received: 04/10/20 08:15

Matrix: Water

Job ID: 180-104498-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: CHIC2100A		1			313212	04/19/20 02:11	SAC	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: A		1			313608	04/22/20 11:37	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	312737	04/13/20 16:43	NAM	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGZ		1			312866	04/14/20 17:53	NAM	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling at ID: NOEQUIP		1			313430	04/07/20 10:45	FDS	TAL PIT

Lab Sample ID: 180-104498-2 Client Sample ID: ARGWA-5 Date Collected: 04/07/20 11:46 **Matrix: Water**

Date Received: 04/10/20 08:15

Batch **Batch** Dil Initial **Final** Batch Prepared Prep Type Type Method Run **Factor Amount** Amount Number or Analyzed Analyst Lab Total/NA Analysis EPA 300.0 R2.1 313212 04/19/20 02:26 SAC TAL PIT Instrument ID: CHIC2100A Total Recoverable 50 mL 50 mL TAL PIT Prep 3005A 312798 04/14/20 09:33 KEM Total Recoverable Analysis **EPA 6020B** 1 313608 04/22/20 11:54 RSK TAL PIT Instrument ID: A Total/NA Prep 7470A 50 mL 50 mL 312737 04/13/20 16:43 NAM TAL PIT EPA 7470A Total/NA Analysis 312866 04/14/20 17:54 NAM TAL PIT 1

Client Sample ID: ARGWA-12 Lab Sample ID: 180-104498-3 Date Collected: 04/07/20 13:46 **Matrix: Ground Water**

100 mL

100 mL

312644

313430

Date Received: 04/10/20 08:15

Total/NA

Total/NA

Instrument ID: HGZ

Instrument ID: NOEQUIP

Instrument ID: NOEQUIP

SM 2540C

Field Sampling

Analysis

Analysis

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			313212	04/19/20 03:58	SAC	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			313608	04/22/20 11:57	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	312737	04/13/20 16:43	NAM	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			312866	04/14/20 17:55	NAM	TAL PIT

Eurofins TestAmerica, Pittsburgh

4/30/2020

04/11/20 08:52 AVS

04/07/20 11:46 FDS

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TAL PIT

TAL PIT

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWA-12

Lab Sample ID: 180-104498-3

Matrix: Ground Water

Job ID: 180-104498-1

Date Collected: 04/07/20 13:46 Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
Total/NA	Analysis Instrument	Field Sampling ID: NOEQUIP		1			313430	04/07/20 13:46	FDS	TAL PIT

Lab Sample ID: 180-104498-4 **Client Sample ID: ARGWA-13**

Date Collected: 04/07/20 15:32 **Matrix: Water**

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 300.0 R2.1 ID: CHIC2100A		1			313212	04/19/20 04:13	SAC	TAL PIT
Total/NA	Analysis Instrument	EPA 300.0 R2.1 ID: CHIC2100A		5			313212	04/19/20 04:28	SAC	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020B ID: A		1			313608	04/22/20 12:08	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	312737	04/13/20 16:43	NAM	TAL PIT
Total/NA	Analysis Instrument	EPA 7470A ID: HGZ		1			312866	04/14/20 17:56	NAM	TAL PIT
Total/NA	Analysis Instrument	SM 2540C ID: NOEQUIP		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
Total/NA	Analysis Instrument	Field Sampling ID: NOEQUIP		1			313430	04/07/20 15:32	FDS	TAL PIT

Client Sample ID: ARGWA-14

Date Collected: 04/06/20 15:57

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 300.0 R2.1 ID: CHIC2100A		1			313212	04/19/20 04:44	SAC	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020B		1			313608	04/22/20 12:11	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	312736	04/13/20 16:39	NAM	TAL PIT
Total/NA	Analysis Instrument	EPA 7470A ID: HGZ		1			312866	04/14/20 17:27	NAM	TAL PIT
Total/NA	Analysis Instrument	SM 2540C ID: NOEQUIP		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
Total/NA	Analysis Instrument	Field Sampling ID: NOEQUIP		1			313430	04/06/20 15:57	FDS	TAL PIT

Lab Sample ID: 180-104498-5

Matrix: Water

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4/30/2020

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-7 Lab Sample ID: 180-104498-6 Date Collected: 04/08/20 09:55

Matrix: Water

Job ID: 180-104498-1

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: CHIC2100A		1			313212	04/19/20 04:59	SAC	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: A		1			313608	04/22/20 12:15	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	312968	04/15/20 15:19	NAM	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGZ		1			313001	04/15/20 19:05	NAM	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling at ID: NOEQUIP		1			313430	04/08/20 09:55	FDS	TAL PIT

Lab Sample ID: 180-104498-7 **Client Sample ID: ARGWC-8** Date Collected: 04/09/20 12:35 **Matrix: Water**

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			313212	04/19/20 05:14	SAC	TAL PIT
	Instrumen	ID: CHIC2100A								
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			313608	04/22/20 12:18	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	312968	04/15/20 15:19	NAM	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			313001	04/15/20 19:06	NAM	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling		1			313430	04/09/20 12:35	FDS	TAL PIT

Lab Sample ID: 180-104498-8 **Client Sample ID: ARGWC-9** Date Collected: 04/09/20 10:25 **Matrix: Water**

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 300.0 R2.1 at ID: CHIC2100A		1			313354	04/21/20 13:31	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B nt ID: A		1			313608	04/22/20 12:22	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	312737	04/13/20 16:43	NAM	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGZ		1			312866	04/14/20 17:57	NAM	TAL PIT

Eurofins TestAmerica, Pittsburgh

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4/30/2020

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-9

Date Collected: 04/09/20 10:25 Date Received: 04/10/20 08:15

Lab Sample ID: 180-104498-8

Matrix: Water

Job ID: 180-104498-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
Total/NA	Analysis	Field Sampling		1			313430	04/09/20 10:25	FDS	TAL PIT
	Instrument	D: NOEQUIP								

Client Sample ID: ARGWC-10 Lab Sample ID: 180-104498-9

Date Collected: 04/08/20 17:09 **Matrix: Water** Date Received: 04/10/20 08:15

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Type Method **Factor Amount** Amount Number or Analyzed Analyst Run Lab Total/NA Analysis EPA 300.0 R2.1 313354 04/21/20 18:37 MJH TAL PIT Instrument ID: CHIC2100A Total Recoverable Prep 3005A 50 mL 50 mL 312798 04/14/20 09:33 KEM TAL PIT Total Recoverable Analysis **EPA 6020B** 1 313608 04/22/20 12:25 RSK TAL PIT Instrument ID: A Total/NA Prep 7470A 50 mL 50 mL 312737 04/13/20 16:43 NAM TAL PIT EPA 7470A Total/NA Analysis 312866 04/14/20 18:00 NAM TAL PIT 1 Instrument ID: HGZ Total/NA Analysis SM 2540C 100 mL 100 mL 312644 04/11/20 08:52 AVS TAL PIT Instrument ID: NOEQUIP Total/NA Analysis Field Sampling 313430 04/08/20 17:09 FDS TAL PIT

Client Sample ID: ARGWC-15 Lab Sample ID: 180-104498-10 Date Collected: 04/08/20 16:15 **Matrix: Water**

Date Received: 04/10/20 08:15

Instrument ID: NOEQUIP

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			313354	04/21/20 18:52	MJH	TAL PIT
	Instrumen	t ID: CHIC2100A								
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313608	04/22/20 12:29	RSK	TAL PIT
	Instrumen	t ID: A								
Total/NA	Prep	7470A			50 mL	50 mL	312737	04/13/20 16:43	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			312866	04/14/20 18:01	NAM	TAL PIT
	Instrumen	t ID: HGZ								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
	Instrumen	t ID: NOEQUIP								
Total/NA	Analysis	Field Sampling		1			313430	04/08/20 16:15	FDS	TAL PIT
	Instrumen	t ID: NOEQUIP								

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4/30/2020

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-16

Date Collected: 04/08/20 11:15

Lab Sample ID: 180-104498-11

Matrix: Water

Job ID: 180-104498-1

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			313354	04/21/20 19:07	MJH	TAL PIT
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		5			313534	04/22/20 17:39	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			313608	04/22/20 12:32	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	312737	04/13/20 16:43	NAM	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			312866	04/14/20 18:02	NAM	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			313430	04/08/20 11:15	FDS	TAL PIT

Client Sample ID: ARGWC-17

Date Collected: 04/08/20 14:30

Date Received: 04/10/20 08:15

Lab Sample ID: 180-104498-12 **Matrix: Water**

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: CHIC2100A		1			313354	04/21/20 19:23	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: A		1			313608	04/22/20 12:36	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	312737	04/13/20 16:43	NAM	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGZ		1			312866	04/14/20 18:03	NAM	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling at ID: NOEQUIP		1			313430	04/08/20 14:30	FDS	TAL PIT

Client Sample ID: ARGWC-18

Date Collected: 04/09/20 09:40

Date Received: 04/10/20 08:15

atch	Batch		Dil	Initial	Final	Batch	Prepared		
ype	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
nalysis nstrument	EPA 300.0 R2.1 ID: CHIC2100A		1			313354	04/21/20 19:38	MJH	TAL PIT
rep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
nalysis	EPA 6020B		1			313608	04/22/20 12:39	RSK	TAL PIT
n	r pe nalysis nstrument ep nalysis	Vpe Method Italysis EPA 300.0 R2.1 Instrument ID: CHIC2100A ep 3005A Italysis EPA 6020B	rpe Method Run palysis EPA 300.0 R2.1 pastrument ID: CHIC2100A page 3005A	pe Method Run Factor rallysis EPA 300.0 R2.1 1 nstrument ID: CHIC2100A ep 3005A rallysis EPA 6020B 1	Pe Method Run Factor Amount Ialysis EPA 300.0 R2.1 1 1 Instrument ID: CHIC2100A 50 mL Ialysis EPA 6020B 1	rpe Method Run Factor Amount Amount rallysis EPA 300.0 R2.1 1 1 ristrument ID: CHIC2100A 50 mL 50 mL rep 3005A 50 mL 50 mL rallysis EPA 6020B 1	repe Method Run Factor Amount Amount Number salysis EPA 300.0 R2.1 1 313354 ep 3005A 50 mL 50 mL 312798 salysis EPA 6020B 1 313608	repe Method Run Factor Amount Amount Number or Analyzed Jalysis EPA 300.0 R2.1 1 313354 04/21/20 19:38 Instrument ID: CHIC2100A 50 mL 50 mL 312798 04/14/20 09:33 Jalysis EPA 6020B 1 313608 04/22/20 12:39	rpe Method Run Factor Amount Amount Number or Analyzed Analyst Jalysis EPA 300.0 R2.1 1 313354 04/21/20 19:38 MJH Instrument ID: CHIC2100A 50 mL 50 mL 312798 04/14/20 09:33 KEM Jalysis EPA 6020B 1 313608 04/22/20 12:39 RSK

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Lab Sample ID: 180-104498-13

Matrix: Water

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-18 Lab Sample ID: 180-104498-13

Date Collected: 04/09/20 09:40 Date Received: 04/10/20 08:15

Matrix: Water

Job ID: 180-104498-1

Batch	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	7470A	_		50 mL	50 mL	312968	04/15/20 15:19	NAM	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGZ		1			313001	04/15/20 19:09	NAM	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT
Total/NA	Analysis Instrumer	Field Sampling of ID: NOEQUIP		1			313430	04/09/20 09:40	FDS	TAL PIT

Lab Sample ID: 180-104498-14 Client Sample ID: EB-1-4-9-20

Date Collected: 04/09/20 10:40 **Matrix: Water** Date Received: 04/10/20 08:15

Batch Batch Dil Initial Final **Batch Prepared** Туре Method Amount Number **Prep Type Factor Amount** or Analyzed Analyst Run Lab Total/NA TAL PIT Analysis EPA 300.0 R2.1 313354 04/21/20 17:20 MJH Instrument ID: CHIC2100A Total/NA Analysis EPA 300.0 R2.1 04/22/20 19:30 MJH TAL PIT 1 313536 Instrument ID: CHICS2000 Total Recoverable Prep 3005A 50 mL 50 mL 312798 04/14/20 09:33 KEM TAL PIT Total Recoverable Analysis **EPA 6020B** 313608 04/22/20 12:49 RSK TAL PIT 1 Instrument ID: A Total/NA Prep 7470A 50 mL 50 mL 312968 04/15/20 15:19 NAM TAL PIT Total/NA Analysis **EPA 7470A** 313001 04/15/20 19:10 NAM TAL PIT 1 Instrument ID: HGZ Total/NA Analysis SM 2540C 100 mL 100 mL 312644 04/11/20 08:52 AVS TAL PIT Instrument ID: NOEQUIP

Client Sample ID: FB-1-4-7-20 Lab Sample ID: 180-104498-15 Date Collected: 04/07/20 16:00 **Matrix: Water**

Date Received: 04/10/20 08:15

Prep Type	Batch	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
	Type									
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			313354	04/21/20 17:36	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	312798	04/14/20 09:33	KEM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			313608	04/22/20 12:53	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	312737	04/13/20 16:43	NAM	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			312866	04/14/20 18:04	NAM	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	312644	04/11/20 08:52	AVS	TAL PIT

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Lab Chronicle

Client: Southern Company Job ID: 180-104498-1

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: DUP-1 Lab Sample ID: 180-104498-16

Date Collected: 04/08/20 00:00 Matrix: Water
Date Received: 04/10/20 08:15

Batch Batch Dil Initial Final Batch Prepared Method **Prep Type** Type Run **Factor Amount Amount** Number or Analyzed Analyst Lab 313354 Total/NA Analysis EPA 300.0 R2.1 04/21/20 20:24 MJH TAL PIT Instrument ID: CHIC2100A Analysis Total/NA EPA 300.0 R2.1 5 313534 04/22/20 18:25 MJH TAL PIT Instrument ID: CHIC2100A Total Recoverable 3005A 50 mL 50 mL 312798 04/14/20 09:33 KEM TAL PIT Prep Total Recoverable **EPA 6020B** 313608 TAL PIT Analysis 1 04/22/20 12:56 RSK Instrument ID: A Total/NA Prep 7470A 50 mL 50 mL 312737 04/13/20 16:43 NAM TAL PIT Total/NA **EPA 7470A** 312866 04/14/20 18:04 NAM TAL PIT Analysis 1 Instrument ID: HGZ 100 mL Total/NA Analysis SM 2540C 100 mL 312644 04/11/20 08:52 AVS TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

KEM = Kimberly Mahoney

Instrument ID: NOEQUIP

NAM = Nicole Marfisi

Batch Type: Analysis

AVS = Abbey Smith

FDS = Sampler Field

MJH = Matthew Hartman

NAM = Nicole Marfisi

RSK = Robert Kurtz

SAC = Shawn Clemente

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Client: Southern Company Job ID: 180-104498-1

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWA-3

Date Collected: 04/07/20 10:45 Date Received: 04/10/20 08:15

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Lab Sample ID: 180-104498-1

Matrix: Water

Method: EPA 300.0 R2.1 - An	ions, Ion Chr	omatograp	hy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.9		1.0	0.32	mg/L			04/19/20 02:11	1
Fluoride	0.098	J	0.10	0.026	mg/L			04/19/20 02:11	1
Sulfate	0.67	J	1.0	0.38	mg/L			04/19/20 02:11	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 11:37	
Barium	0.018		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 11:37	
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 11:37	
Boron	<0.039	^	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 11:37	
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 11:37	
Calcium	5.5		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 11:37	
Chromium	0.0023		0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 11:37	
Cobalt	<0.00013		0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 11:37	
Molybdenum	<0.00061		0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 11:37	
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 11:37	
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 11:37	
Selenium	<0.0015		0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 11:37	
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 11:37	
Lithium	< 0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 11:37	
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 11:37	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00016	J	0.00020	0.00010	mg/L		04/13/20 16:43	04/14/20 17:53	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	64		10	10	mg/L			04/11/20 08:52	1
– Method: Field Sampling - ∣	Field Sampling								
Analyte	Posult	Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: ARGWA-5

Date Collected: 04/07/20 11:46

Date Received: 04/10/20 08:15

Lab Sample ID: 180-104498-2

Matrix: Water

5.90

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Method: EPA 300.0 F	R2.1 - Anions, Ion Ch	romatograp	hy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.7		1.0	0.32	mg/L			04/19/20 02:26	1
Fluoride	0.072	J	0.10	0.026	mg/L			04/19/20 02:26	1
Sulfate	<0.38		1.0	0.38	mg/L			04/19/20 02:26	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 11:54	1
Barium	0.020		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 11:54	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 11:54	1
Boron	<0.039	^	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 11:54	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 11:54	1

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04/07/20 10:45

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Client: Southern Company Job ID: 180-104498-1

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWA-5

Date Collected: 04/07/20 11:46 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-2

Matrix: Water

Method: EPA 6020B - Meta Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
		Qualifier							Dilla
Calcium	4.0		0.50		mg/L		04/14/20 09:33	04/22/20 11:54	
Chromium	<0.0015		0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 11:54	1
Cobalt	0.00014	J	0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 11:54	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 11:54	•
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 11:54	
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 11:54	1
Selenium	<0.0015		0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 11:54	1
Thallium	0.00015	J	0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 11:54	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 11:54	•
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 11:54	,
- Method: EPA 7470A - Mer	cury (CVAA)								
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		04/13/20 16:43	04/14/20 17:54	
General Chemistry									
Analyte	Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	65		10	10	mg/L			04/11/20 08:52	
Method: Field Sampling -	Field Sampling								
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: ARGWA-12 Lab Sample ID: 180-104498-3

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Date Collected: 04/07/20 13:46

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Date Received: 04/10/20 08:15

5.86

Method: EPA 300.0 R2	2.1 - Anions, Ion Chr	omatograp	hy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11		1.0	0.32	mg/L			04/19/20 03:58	1
Fluoride	0.082	J	0.10	0.026	mg/L			04/19/20 03:58	1
Sulfate	8.0		1.0	0.38	mg/L			04/19/20 03:58	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 11:57	1
Barium	0.066		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 11:57	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 11:57	1
Boron	<0.039	Λ	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 11:57	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 11:57	1
Calcium	12		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 11:57	1
Chromium	0.0015	J	0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 11:57	1
Cobalt	0.00029	J	0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 11:57	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 11:57	1
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 11:57	1
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 11:57	1
Selenium	<0.0015		0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 11:57	1
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 11:57	1
Lithium	0.0036	J	0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 11:57	1
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 11:57	1

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Matrix: Ground Water

04/07/20 11:46

Job ID: 180-104498-1

Client Sample ID: ARGWA-12 Lab Sample ID: 180-104498-3

Date Collected: 04/07/20 13:46 Matrix: Ground Water Date Received: 04/10/20 08:15

Method: EPA 7470A - Mercury (CVAA) Dil Fac **Analyte** Result Qualifier RΙ MDI Unit D Prepared Analyzed <0.00010 04/13/20 16:43 Mercury 0.00020 0.00010 mg/L 04/14/20 17:55 **General Chemistry**

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac 04/11/20 08:52 **Total Dissolved Solids** 10 mg/L 120 10 Method: Field Sampling - Field Sampling

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Face BH SU SU 04/07/20 13:46 1

Client Sample ID: ARGWA-13

Lab Sample ID: 180-104498-4

Matrix: Water

Date Collected: 04/07/20 15:32 Matrix: William Received: 04/10/20 08:15

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography Result Qualifier RL Analyte MDI Unit ח Prepared Dil Fac Analyzed 1.0 0.32 mg/L Chloride 3.8 04/19/20 04:13 0.086 **Fluoride** 0.10 0.026 mg/L 04/19/20 04:13 Л 1 **Sulfate** 270 5.0 1.9 mg/L 04/19/20 04:28 5

Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable Analyte Result Qualifier **MDL** Unit Prepared RL Analyzed Dil Fac Arsenic < 0.00031 0.0010 0.00031 mg/L 04/14/20 09:33 04/22/20 12:08 **Barium** 0.021 0.010 0.0016 ma/L 04/14/20 09:33 04/22/20 12:08 Beryllium <0.00018 0.0025 0.00018 mg/L 04/14/20 09:33 04/22/20 12:08 0.23 0.080 0.039 mg/L 04/14/20 09:33 04/22/20 12:08 **Boron** Cadmium < 0.00022 0.0025 0.00022 mg/L 04/14/20 09:33 04/22/20 12:08 Calcium 0.50 0.13 mg/L 04/14/20 09:33 04/22/20 12:08 61 Chromium < 0.0015 0.0020 0.0015 mg/L 04/14/20 09:33 04/22/20 12:08 04/14/20 09:33 04/22/20 12:08 Cobalt 0.0025 0.00013 mg/L < 0.00013 04/14/20 09:33 04/22/20 12:08 Molvbdenum < 0.00061 0.015 0.00061 ma/L 04/14/20 09:33 04/22/20 12:08 Lead 0.0010 0.00013 mg/L < 0.00013 Antimony <0.00038 0.0020 0.00038 mg/L 04/14/20 09:33 04/22/20 12:08 0.0050 0.0015 mg/L 04/14/20 09:33 04/22/20 12:08 **Selenium** 0.0094 Thallium < 0.00015 0.0010 0.00015 mg/L 04/14/20 09:33 04/22/20 12:08 0.0050 0.0034 mg/L 04/14/20 09:33 04/22/20 12:08 Lithium 0.0036 J Silver <0.00018 0.0010 0.00018 mg/L 04/14/20 09:33 04/22/20 12:08

 Method: EPA 7470A - Mercury (CVAA)
 Result Qualifier
 RL MDL Unit
 D Prepared 04/13/20 16:43 04/14/20 17:56
 Analyzed Dil Fac 04/13/20 16:43 04/14/20 17:56

General Chemistry Analyte Qualifier RLMDL Unit D Analyzed Result Prepared Dil Fac 10 10 mg/L 04/11/20 08:52 **Total Dissolved Solids** 480

Method: Field Sampling - Field SamplingAnalyteResult pHQualifierRL SUUnit SUD Prepared 04/07/20 15:32Analyzed 04/07/20 15:32Dil Fac 04/07/20 15:32

Job ID: 180-104498-1

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWA-14

Date Collected: 04/06/20 15:57

Client: Southern Company

Lab Sample ID: 180-104498-5

Matrix: Water

Date Received: 04/10/20 08:15	

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.2	1.0	0.32	mg/L			04/19/20 04:44	1
Fluoride	0.28	0.10	0.026	mg/L			04/19/20 04:44	1
Sulfate	10	1.0	0.38	mg/L			04/19/20 04:44	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:11	
Barium	0.051		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:11	
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:11	
Boron	0.041	J ^	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:11	
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:11	
Calcium	43		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:11	
Chromium	<0.0015		0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:11	
Cobalt	<0.00013		0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:11	
Molybdenum	0.00084	J	0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:11	
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:11	
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:11	
Selenium	<0.0015		0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:11	
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:11	
Lithium	< 0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:11	
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:11	

	0.00010		0.0010	0.00010	mg/L		0 11 11 11 20 00:00	0 1/22/20 12:11	•
Method: EPA 7470A - Mer	cury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		04/13/20 16:39	04/14/20 17:27	1
General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	280		10	10	mg/L			04/11/20 08:52	1
Method: Field Sampling -									
Analyte	Result	Qualifier	RI	MDI	Unit	D	Prepared	Analyzed	Dil Fac

рН	5.90		04/06/20 15:57
Client Sample ID: AR	GWC-7	Lab	Sample ID: 180-104498-6
Date Collected: 04/08/20	09:55		Matrix: Water

Date Received: 04/10/20 08:15

Method: EPA 300.0 R	R2.1 - Anions, Ion Ch	romatograp	hy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.32	mg/L			04/19/20 04:59	1
Fluoride	0.062	J	0.10	0.026	mg/L			04/19/20 04:59	1
Sulfate	39		1.0	0.38	mg/L			04/19/20 04:59	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:15	1
Barium	0.039		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:15	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:15	1
Boron	0.086	^	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:15	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:15	1

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Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-7 Lab Sample ID: 180-104498-6

Date Received: 04/10/20 08:15

Date Collected: 04/08/20 09:55 **Matrix: Water**

Method: EPA 6020B - Me	tals (ICP/MS) - T	otal Recov	erable (Cor	tinued)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	11		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:15	1
Chromium	0.0027		0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:15	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:15	1
Molybdenum	< 0.00061		0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:15	1
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:15	1
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:15	1
Selenium	<0.0015		0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:15	1
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:15	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:15	1
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:15	1
- Method: EPA 7470A - Me	rcury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		04/15/20 15:19	04/15/20 19:05	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		10	10	mg/L			04/11/20 08:52	1
Method: Field Sampling	- Field Sampling								
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
рН	5.75				SU			04/08/20 09:55	1

Client Sample ID: ARGWC-8 Lab Sample ID: 180-104498-7 Date Collected: 04/09/20 12:35

Date Received: 04/10/20 08:15

Method: EPA 300.0 R	2.1 - Anions, Ion Chr	omatography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.7		1.0	0.32	mg/L			04/19/20 05:14	1
Fluoride	0.16		0.10	0.026	mg/L			04/19/20 05:14	1
Sulfate	59		1.0	0.38	mg/L			04/19/20 05:14	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:18	1
Barium	0.045		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:18	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:18	1
Boron	1.1	^	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:18	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:18	1
Calcium	47		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:18	1
Chromium	<0.0015		0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:18	1
Cobalt	0.00013	J	0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:18	1
Molybdenum	0.039		0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:18	1
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:18	1
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:18	1
Selenium	<0.0015		0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:18	1
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:18	1
Lithium	<0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:18	1
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:18	1

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Job ID: 180-104498-1

Matrix: Water

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-8

Date Collected: 04/09/20 12:35 Date Received: 04/10/20 08:15

Lab Sample ID: 180-104498-7

Matrix: Water

Method: EPA 7470A - Mercury	(CVAA)		
Analyte	Result	Qualifier	
Morouny	<0.00010		

Dil Fac RL **MDL** Unit D Prepared Analyzed 04/15/20 15:19 04/15/20 19:06 0.00020 0.00010 mg/L Mercury <0.00010

General Chemistry

Analyte Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac **Total Dissolved Solids** 10 04/11/20 08:52 270 10 mg/L

Method: Field Sampling - Field Sampling

Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 04/09/20 12:35 рН 6.42 SU

Client Sample ID: ARGWC-9 Lab Sample ID: 180-104498-8 Date Collected: 04/09/20 10:25

Date Received: 04/10/20 08:15

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte Result Qualifier RL Dil Fac **MDL** Unit D Prepared Analyzed 1.0 0.32 mg/L Chloride 5.6 04/21/20 13:31 0.10 04/21/20 13:31 **Fluoride** 0.066 J 0.026 mg/L **Sulfate** 1.1 1.0 0.38 mg/L 04/21/20 13:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:22	1
Barium	0.044		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:22	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:22	1
Boron	<0.039	Λ	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:22	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:22	1
Calcium	5.3		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:22	1
Chromium	0.0069		0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:22	1
Cobalt	0.00015	J	0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:22	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:22	1
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:22	1
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:22	1
Selenium	<0.0015		0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:22	1
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:22	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:22	1
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:22	1

	Method:	EPA 7470	A - Mercury	/ (CVAA)
ı				_

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		04/13/20 16:43	04/14/20 17:57	1

Genera	l Chemi	stry
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Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70	10	10 mg/L			04/11/20 08:52	1

Method: Fiel	d Sampling -	Field Sampling
Amalusta		Decult

Analyte	Result Qualifier	RL	MDL (Unit	D	Prepared	Analyzed	Dil Fac
pH	5.90			SU	_		04/09/20 10:25	1

RL

1.0

Job ID: 180-104498-1

D

SU

Prepared

MDL Unit

0.32 mg/L

Project/Site: CCR - Plant Arkwright Ash Pond 3

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Result Qualifier

3.9

5.95

Client Sample ID: ARGWC-10

Date Collected: 04/08/20 17:09

Client: Southern Company

Analyte

Chloride

Lab Sample ID: 180-104498-9

Analyzed 04/21/20 18:37

Matrix: Water

Dil Fac

Date Received: 04/10/20 08:15

Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
 Method: Field Sampling -	Field Sampling								
Total Dissolved Solids	82		10	10	mg/L			04/11/20 08:52	1
General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		04/13/20 16:43	04/14/20 18:00	1
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
- Method: EPA 7470A - Mei	cury (CVAA)								
Silver _	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:25	1
Lithium	<0.0034		0.0050	0.0034	•			04/22/20 12:25	1
Thallium	<0.00015		0.0010	0.00015	•			04/22/20 12:25	1
Selenium	<0.0015		0.0050	0.0015			04/14/20 09:33		1
Antimony	0.00094	J	0.0020	0.00038	•			04/22/20 12:25	1
Lead	0.031		0.0010	0.00013	J			04/22/20 12:25	1
Molybdenum	<0.00061		0.015	0.00061				04/22/20 12:25	1
Cobalt	<0.00013		0.0025	0.00013	0		04/14/20 09:33		1
Chromium	0.0046		0.0020	0.0015	•			04/22/20 12:25	1
Calcium	7.5		0.50		mg/L		04/14/20 09:33		1
Cadmium	<0.00022		0.0025	0.00022	•		04/14/20 09:33		1
Boron	<0.039	^	0.080	0.039	•			04/22/20 12:25	1
Beryllium	<0.00018		0.0025	0.00018			04/14/20 09:33		1
Barium	0.031		0.010	0.0016	•		04/14/20 09:33		1
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:25	1
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Method: EPA 6020B - Met	als (ICP/MS) - T	otal Recov	verable						
Sulfate _	<0.38		1.0	0.36	mg/L			04/21/20 18:37	1
Fluoride	0.071	J			•				1
Elugrida	0.074	1	0.10	0.026	ma/l			04/21/20 18:37	1

Client Sample ID: ARGWC-15

Date Collected: 04/08/20 16:15

рН

Date Received: 04/10/20 08:15

Method: EPA 300.0 R2.1 - Anions, Ion Chromatogra Analyte Result Qualifier Chloride 1.9 Fluoride 0.12				hy						
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	1.9		1.0	0.32	mg/L			04/21/20 18:52	1
	Fluoride	0.12		0.10	0.026	mg/L			04/21/20 18:52	1
	Sulfate	5.9		1.0	0.38	mg/L			04/21/20 18:52	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:29	1
Barium	0.030		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:29	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:29	1
Boron	<0.039	^	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:29	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:29	1

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Lab Sample ID: 180-104498-10

Matrix: Water

04/08/20 17:09

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-15 Lab Sample ID: 180-104498-10

Date Collected: 04/08/20 16:15 **Matrix: Water** Date Received: 04/10/20 08:15

Method: EPA 6020B - Metals	s (ICP/MS) - T	otal Recov	erable (Con	tinued)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	21		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:29	1
Chromium	<0.0015		0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:29	1
Cobalt	0.00026	J	0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:29	1
Molybdenum	0.00075	J	0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:29	1
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:29	1
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:29	1
Selenium	<0.0015		0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:29	1
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:29	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:29	1
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:29	1
Method: EPA 7470A - Mercu	ırv (CVAA)								
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		04/13/20 16:43	04/14/20 18:01	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130			10	mg/L			04/11/20 08:52	1
Method: Field Sampling - Fi	eld Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: ARGWC-16 Lab Sample ID: 180-104498-11 Date Collected: 04/08/20 11:15 **Matrix: Water**

Date Received: 04/10/20 08:15

Method: EPA 300.0 R2.1 - Anio	ons, Ion Chr	omatograph	ıy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.1		1.0	0.32	mg/L			04/21/20 19:07	1
Fluoride	0.051	J	0.10	0.026	mg/L			04/21/20 19:07	1
Sulfate	200		5.0	1.9	mg/L			04/22/20 17:39	5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:32	1
Barium	0.042		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:32	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:32	1
Boron	0.059	J ^	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:32	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:32	1
Calcium	40		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:32	1
Chromium	0.0021		0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:32	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:32	1
Molybdenum	< 0.00061		0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:32	1
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:32	1
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:32	1
Selenium	0.0022	J	0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:32	1
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:32	1
Lithium	<0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:32	1
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:32	1

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Job ID: 180-104498-1

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-16

Date Collected: 04/08/20 11:15 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-11

Matrix: Water

Method:	EPA	7470A	- M	ercury	(CVAA)
A l					D

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010	0.00020	0.00010 mg/L		04/13/20 16:43	04/14/20 18:02	1

General Chemistry

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	350	10	10 mg/l			04/11/20 08:52	

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
рН	5.07			;	SU			04/08/20 11:15	1

Client Sample ID: ARGWC-17 Lab Sample ID: 180-104498-12 Date Collected: 04/08/20 14:30

Date Received: 04/10/20 08:15

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

method: El A 000.0 RELI - Amono, fon Omonatography									
Analyte	Result Qu	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	3.7	1.0	0.32	mg/L			04/21/20 19:23	1	
Fluoride	0.053 J	0.10	0.026	mg/L			04/21/20 19:23	1	
Sulfate	47	1.0	0.38	mg/L			04/21/20 19:23	1	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:36	1
Barium	0.045		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:36	1
Beryllium	0.00025	J	0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:36	1
Boron	<0.039	Λ	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:36	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:36	1
Calcium	8.3		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:36	1
Chromium	<0.0015		0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:36	1
Cobalt	0.016		0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:36	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:36	1
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:36	1
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:36	1
Selenium	<0.0015		0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:36	1
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:36	1
Lithium	<0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:36	1
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:36	1

Analyte	Result Q	ualifier Rl	. MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010	0.00020	0.00010	mg/L		04/13/20 16:43	04/14/20 18:03	1

G	ene	erai	Ch	em	ıstry
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Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	91	10	10 mg/L			04/11/20 08:52	1

Method: Field	d Sampling - Field	Sampling

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
pH	5.02				SU			04/08/20 14:30	1	

Client: Southern Company Job ID: 180-104498-1

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-18

Date Collected: 04/09/20 09:40 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-13

Matrix: Water

Method: EPA 300.0 R2.1 -	Anions, Ion Chromato	graphy						
Analyte	Result Qualifie	r RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.3	1.0	0.32	mg/L			04/21/20 19:38	1
Fluoride	0.11	0.10	0.026	mg/L			04/21/20 19:38	1
Sulfate	190	1.0	0.38	mg/L			04/21/20 19:38	1
_								

Analyte	Result Q	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031	0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:39	
Barium	0.041	0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:39	•
Beryllium	<0.00018	0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:39	•
Boron	2.3 ^	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:39	•
Cadmium	<0.00022	0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:39	•
Calcium	46	0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:39	•
Chromium	<0.0015	0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:39	•
Cobalt	0.00091 J	0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:39	
Molybdenum	<0.00061	0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:39	
Lead	<0.00013	0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:39	•
Antimony	<0.00038	0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:39	
Selenium	<0.0015	0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:39	•
Thallium	<0.00015	0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:39	
Lithium	<0.0034	0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:39	•
Silver	<0.00018	0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:39	

Method: EPA 7470A - Me Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		04/15/20 15:19	04/15/20 19:09	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	440		10	10	mg/L			04/11/20 08:52	

Analyte Result Qualifier RL MDL Unit Prepared Analyzed SU рН 5.98 04/09/20 09:40

Client Sample ID: EB-1-4-9-20

Date Collected: 04/09/20 10:	40					Matrix	x: water
Date Received: 04/10/20 08:	15						
Mothod: EDA 300 0 D2 1	Anions, Ion Chromatography						
Welliou. EPA 300.0 KZ. I - /	Ailions, ion Ciliomatography	y					
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32		1.0	0.32	mg/L			04/21/20 17:20	1
Fluoride	0.069	J	0.10	0.026	mg/L			04/22/20 19:30	1
Sulfate	<0.38		1.0	0.38	mg/L			04/21/20 17:20	1
Method: FPA 6020B - Metals (ICE	/MS) _ T	otal Recoverab	ما						

Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable								
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031	0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:49	1
Barium	<0.0016	0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:49	1
Beryllium	<0.00018	0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:49	1
Boron	<0.039 ^	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:49	1
Cadmium	<0.00022	0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:49	1

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Lab Sample ID: 180-104498-14

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Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: EB-1-4-9-20

Date Collected: 04/09/20 10:40 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-14

Matrix: Water

Job ID: 180-104498-1

Mathadi EDA COSOD Matala	(ICD/MC) T	otal Dagovarable /	Continued
Method: EPA 6020B - Metals ((ICP/N3) - I	otal Recoverable (Continued

Analyte	Result (Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.13	0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:49	1
Chromium	<0.0015	0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:49	1
Cobalt	<0.00013	0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:49	1
Molybdenum	<0.00061	0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:49	1
Lead	<0.00013	0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:49	1
Antimony	<0.00038	0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:49	1
Selenium	<0.0015	0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:49	1
Thallium	<0.00015	0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:49	1
Lithium	< 0.0034	0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:49	1
Silver	<0.00018	0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:49	1

Method: EPA 7470A - Mercury (CVAA)

Analyte Result Qualifier RL MDL Unit Analyzed Prepared Dil Fac <0.00010 04/15/20 15:19 04/15/20 19:10 Mercury 0.00020 0.00010 mg/L

General Chemistry

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Total Dissolved Solids <10 10 10 mg/L 04/11/20 08:52

Client Sample ID: FB-1-4-7-20

Date Collected: 04/07/20 16:00 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-15

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

	7	a.e	,						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32		1.0	0.32	mg/L			04/21/20 17:36	1
Fluoride	0.049	J	0.10	0.026	mg/L			04/21/20 17:36	1
Sulfate	<0.38		1.0	0.38	mg/L			04/21/20 17:36	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:53	1
Barium	<0.0016		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:53	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:53	1
Boron	<0.039	Λ	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:53	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:53	1
Calcium	<0.13		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:53	1
Chromium	<0.0015		0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:53	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:53	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:53	1
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:53	1
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:53	1
Selenium	<0.0015		0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:53	1
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:53	1
Lithium	<0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:53	1
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:53	1

Method:	FΡΔ	7470A	- Mercury	(CVAA
Metriou.		14100	- IVIEI CUI V	ICVAA

Analyte	Result Qualifie		MDL Unit	D Prepared	Analyzed	Dil Fac
Mercury	<0.00010	0.00020	0.00010 mg/L	04/13/20 16:43	04/14/20 18:04	1

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Client Sample Results

Client: Southern Company Job ID: 180-104498-1

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: FB-1-4-7-20

Date Collected: 04/07/20 16:00

Lab Sample ID: 180-104498-15

Matrix: Water

Date Received: 04/10/20 08:15

General Chemistry Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10	10	10 mg/L			04/11/20 08:52	1

Client Sample ID: DUP-1

Date Collected: 04/08/20 00:00 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-16 **Matrix: Water**

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography Analyte Result Qualifier RL MDL Unit Prepared Analyzed 04/21/20 20:24 Chloride 5.3 1.0 0.32 mg/L **Fluoride** 0.072 J 0.10 0.026 mg/L 04/21/20 20:24 5.0 1.9 mg/L 04/22/20 18:25 **Sulfate** 210 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		04/14/20 09:33	04/22/20 12:56	1
Barium	0.044		0.010	0.0016	mg/L		04/14/20 09:33	04/22/20 12:56	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		04/14/20 09:33	04/22/20 12:56	1
Boron	0.061	J ^	0.080	0.039	mg/L		04/14/20 09:33	04/22/20 12:56	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		04/14/20 09:33	04/22/20 12:56	1
Calcium	41		0.50	0.13	mg/L		04/14/20 09:33	04/22/20 12:56	1
Chromium	0.0019	J	0.0020	0.0015	mg/L		04/14/20 09:33	04/22/20 12:56	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		04/14/20 09:33	04/22/20 12:56	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		04/14/20 09:33	04/22/20 12:56	1
Lead	<0.00013		0.0010	0.00013	mg/L		04/14/20 09:33	04/22/20 12:56	1
Antimony	<0.00038		0.0020	0.00038	mg/L		04/14/20 09:33	04/22/20 12:56	1
Selenium	0.0024	J	0.0050	0.0015	mg/L		04/14/20 09:33	04/22/20 12:56	1
Thallium	<0.00015		0.0010	0.00015	mg/L		04/14/20 09:33	04/22/20 12:56	1
Lithium	<0.0034		0.0050	0.0034	mg/L		04/14/20 09:33	04/22/20 12:56	1
Silver	<0.00018		0.0010	0.00018	mg/L		04/14/20 09:33	04/22/20 12:56	1

Method: EPA 7470A - Mercury	(CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		04/13/20 16:43	04/14/20 18:04	1

General Chemistry								
Analyte	Result Qualifi	ier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	340	10	10	mg/L			04/11/20 08:52	1

Job ID: 180-104498-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-313212/44

Matrix: Water

Analysis Batch: 313212

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32		1.0	0.32	mg/L			04/18/20 23:23	1
Fluoride	<0.026		0.10	0.026	mg/L			04/18/20 23:23	1
Sulfate	<0.38		1.0	0.38	mg/L			04/18/20 23:23	1

Lab Sample ID: LCS 180-313212/43

Matrix: Water

Analysis Batch: 313212

Client Sample ID: Lab Control Sample Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	50.6		mg/L		101	90 - 110	
Fluoride	2.50	2.61		mg/L		105	90 - 110	
Sulfate	50.0	51.4		mg/L		103	90 - 110	

Lab Sample ID: MB 180-313354/39

Matrix: Water

Analysis Batch: 313354

Client Sample ID: Method Blank Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

	MB MB							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32	1.0	0.32	mg/L			04/21/20 16:35	1
Fluoride	<0.026	0.10	0.026	mg/L			04/21/20 16:35	1
Sulfate	<0.38	1.0	0.38	mg/L			04/21/20 16:35	1

Lab Sample ID: LCS 180-313354/38

Matrix: Water

Analysis Batch: 313354

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 50.0	51.0		mg/L		102	90 - 110	
Fluoride	2.50	2.66		mg/L		107	90 - 110	
Sulfate	50.0	51.1		mg/L		102	90 - 110	

Lab Sample ID: MB 180-313534/6

Matrix: Water

Analysis Batch: 313534

MB MB

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.38	1.0	0.38 mg/L			04/22/20 15:22	1

Lab Sample ID: LCS 180-313534/5

Matrix: Water

Analysis Batch: 313534								
	Spike	LCS I	LCS				%Rec.	
Analyte	Added	Result (Qualifier	Unit	D	%Rec	Limits	
Sulfate	50.0	49.7		mg/L	_	99	90 - 110	

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Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Matrix: Water

Analysis Batch: 313536

MB MB

Analyte Result Qualifier RL **MDL** Unit Analyzed Dil Fac Prepared Fluoride 0.10 0.026 mg/L 04/22/20 16:10 <0.026

Lab Sample ID: LCS 180-313536/5

Lab Sample ID: MB 180-313536/6

Matrix: Water

Analysis Batch: 313536

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits 2.50 Fluoride 2.40 mg/L 96 90 - 110

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-312798/1-A

Matrix: Water Prep Type: Total Recoverable Analysis Batch: 313608 Prep Batch: 312798

MB MB **MDL** Unit Analyte Result Qualifier RL D Prepared Analyzed Dil Fac Arsenic 0.0010 0.00031 mg/L 04/14/20 09:33 04/22/20 10:51 < 0.00031 Barium 0.0016 mg/L 04/14/20 09:33 04/22/20 10:51 < 0.0016 0.010 Beryllium <0.00018 0.0025 0.00018 mg/L 04/14/20 09:33 04/22/20 10:51 Boron 0.080 0.039 mg/L 04/14/20 09:33 04/22/20 10:51 < 0.039 Cadmium 0.0025 <0.00022 0.00022 mg/L 04/14/20 09:33 04/22/20 10:51 Calcium 0.50 0.13 mg/L 04/14/20 09:33 04/22/20 10:51 < 0.13 04/14/20 09:33 04/22/20 10:51 Chromium < 0.0015 0.0020 0.0015 mg/L Cobalt < 0.00013 0.0025 0.00013 mg/L 04/14/20 09:33 04/22/20 10:51 Molybdenum 0.015 0.00061 mg/L 04/14/20 09:33 04/22/20 10:51 < 0.00061 Lead < 0.00013 0.0010 0.00013 mg/L 04/14/20 09:33 04/22/20 10:51 Antimony <0.00038 0.0020 0.00038 mg/L 04/14/20 09:33 04/22/20 10:51 04/14/20 09:33 04/22/20 10:51 Selenium 0.0050 0.0015 mg/L < 0.0015 Thallium 0.00015 mg/L < 0.00015 0.0010 04/14/20 09:33 04/22/20 10:51 Lithium < 0.0034 0.0050 0.0034 mg/L 04/14/20 09:33 04/22/20 10:51 Silver <0.00018 0.0010 0.00018 mg/L 04/14/20 09:33 04/22/20 10:51

Lab Sample ID: LCS 180-312798/2-A

Matrix: Water

Matrix. Water						ich i Al	pe. Total Recovera	
Analysis Batch: 313608							Prep Batch: 3127	98
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	1.00	0.918		mg/L		92	80 - 120	
Barium	1.00	0.891		mg/L		89	80 - 120	
Beryllium	0.500	0.448		mg/L		90	80 - 120	
Boron	1.25	1.16		mg/L		93	80 - 120	
Cadmium	0.500	0.446		mg/L		89	80 - 120	
Calcium	25.0	25.5		mg/L		102	80 - 120	
Chromium	0.500	0.444		mg/L		89	80 - 120	
Cobalt	0.500	0.445		mg/L		89	80 - 120	
Molybdenum	0.500	0.453		mg/L		91	80 - 120	
Lead	0.500	0.455		mg/L		91	80 - 120	
Antimony	0.250	0.214		mg/L		86	80 - 120	
Selenium	1.00	0.883		ma/L		88	80 - 120	

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Job ID: 180-104498-1

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

10

Prep Type: Total Recoverable

Client Sample ID: Lab Control Sample

LCS LCS

0.992

0.446

0.219

Result Qualifier

Spike

Added

1.00

0.500

0.250

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-312798/2-A

Matrix: Water

Analyte

Thallium

Lithium

Silver

Analysis Batch: 313608

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 312798

%Rec. Unit %Rec Limits 99 80 - 120 mg/L mg/L 89 80 - 120 mg/L 88 80 - 120

Lab Sample ID: 180-104498-1 MS

Matrix: Water

Analysis Batch: 313608

Client Sample ID: ARGWA-3 **Prep Type: Total Recoverable** Pren Batch: 312798

Analyte Result Qualifier Add Arsenic <0.00031 1	led Result .00 0.907 .00 0.923	Qualifier Unit		Rec Limits 75 - 12	
Arsenic <0.00031 1		mg/l		01 75 12	
	.00 0.923			91 /5-12	5
Barium 0.018 1		mg/l	=	90 75 - 12	5
Beryllium <0.00018 0.5	0.449	mg/l	=	90 75 - 12	5
Boron <0.039 ^ 1	.25 1.14	^ mg/l		91 75 - 12	5
Cadmium <0.00022 0.5	0.445	mg/l	=	89 75 - 12	5
Calcium 5.5 2	5.0 30.6	mg/l	_	100 75 - 12	5
Chromium 0.0023 0.5	0.439	mg/l	-	87 75 - 12	5
Cobalt <0.00013 0.5	0.442	mg/l	=	88 75 - 12	5
Molybdenum <0.00061 0.5	0.453	mg/l	_	91 75 - 12	5
Lead <0.00013 0.5	0.453	mg/l		91 75 - 12	5
Antimony <0.00038 0.2	250 0.215	mg/l	_	86 75 - 12	5
Selenium <0.0015 1	.00 0.880	mg/l	_	88 75 - 12	5
Thallium <0.00015 1	.00 0.987	mg/l		99 75 - 12	5
Lithium <0.0034 0.5	0.435	mg/l	_	87 75 - 12	5
Silver <0.00018 0.2	250 0.220	mg/l	_	88 75 - 12	5

Lab Sample ID: 180-104498-1 MSD

Matrix: Water

Client Sample ID: ARGWA-3 Prep Type: Total Recoverable

Analysis Batch: 313608 Prep Batch: 312798 MSD MSD %Rec. Sample Sample Spike **RPD** Result Qualifier Added Result Qualifier Limits RPD Limit **Analyte** Unit D %Rec Arsenic < 0.00031 1.00 0.931 mg/L 93 75 - 125 3 20 Barium 0.018 1.00 0.944 93 75 - 125 2 20 mg/L Beryllium <0.00018 0.500 0.458 mg/L 92 75 - 125 2 20 Boron < 0.039 1.25 1.18 ^ mg/L 95 75 - 125 20 Cadmium <0.00022 0.500 0.456 mg/L 91 75 - 125 3 20 Calcium 25.0 31.4 mg/L 104 75 - 125 3 20 5.5 Chromium 0.500 75 - 125 20 0.0023 0.457 mg/L 91 Cobalt < 0.00013 0.500 0.453 mg/L 91 75 - 125 2 20 0.500 0.465 93 2 20 Molybdenum < 0.00061 mg/L 75 - 125 < 0.00013 0.500 0.462 92 75 - 125 2 20 Lead mg/L Antimony <0.00038 0.250 0.219 mg/L 88 75 - 125 2 20 Selenium < 0.0015 1.00 0.907 mg/L 91 75 - 125 20 Thallium 1.00 75 - 125 2 20 < 0.00015 1.01 mg/L 101 Lithium < 0.0034 0.500 0.445 mg/L 89 75 - 125 2 20 Silver <0.00018 0.250 0.225 90 75 - 125 20 mg/L

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Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-312736/1-A

Matrix: Water

Analysis Batch: 312866

MB MB

Result Qualifier Analyte

Mercury

<0.00010

RL

Spike

Added

0.00250

Spike

Added

0.00250

Spike

Added

0.00250

Spike

Added

0.00100

Spike

0.00020

RL

RL

0.00020

0.00020

0.00010 mg/L

LCS LCS

0.00243

Result Qualifier

MDL Unit

0.00010 mg/L

LCS LCS

0.00243

Result Qualifier

MDL Unit

0.00010 mg/L

LCS LCS

MS MS

Result Qualifier

0.00250

0.000962

Result Qualifier

MDL Unit

Unit

mg/L

Unit

mg/L

Unit

mg/L

Unit

mg/L

Prepared Analyzed 04/13/20 16:39 04/14/20 17:25

D %Rec

Prepared

D %Rec

D %Rec

100

%Rec

96

97

97

Client Sample ID: Lab Control Sample

%Rec.

Limits 80 - 120

Client Sample ID: Method Blank

04/13/20 16:43 04/14/20 17:51

Client Sample ID: Lab Control Sample

%Rec.

Limits

80 - 120

Analyzed

Client Sample ID: Method Blank

Job ID: 180-104498-1

Prep Type: Total/NA

Prep Batch: 312736

Prep Type: Total/NA **Prep Batch: 312736**

Prep Type: Total/NA

Prep Batch: 312737

Prep Type: Total/NA

Prep Batch: 312737

Dil Fac

Dil Fac

Lab Sample ID: LCS 180-312736/2-A

Matrix: Water

Mercury

Analysis Batch: 312866

Analyte

Lab Sample ID: MB 180-312737/1-A

Matrix: Water

Analysis Batch: 312866

MB MB

Result Qualifier

MB MB

< 0.00010

Result Qualifier

Analyte

Mercury <0.00010

Lab Sample ID: LCS 180-312737/2-A

Matrix: Water

Analysis Batch: 312866

Analyte

Mercury

Lab Sample ID: MB 180-312968/1-A **Matrix: Water**

Analysis Batch: 313001

Analyte

Mercury

Lab Sample ID: LCS 180-312968/2-A

Matrix: Water

Analysis Batch: 313001

Analyte

Mercury

Lab Sample ID: 180-104498-14 MS

Matrix: Water

Analysis Batch: 313001

Analyte Result Qualifier Mercury <0.00010

Lab Sample ID: 180-104498-14 MSD

Matrix: Water

Analysis Batch: 313001

Analyte

<0.00010 Mercury

Result Qualifier

Sample Sample

Sample Sample

Added 0.00100

0.000978

Result Qualifier

MSD MSD

Unit mg/L

%Rec 98

%Rec. Limits 75 - 125

RPD RPD Limit 2

20

4/30/2020

Prep Type: Total/NA

Prep Batch: 312968

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Client Sample ID: EB-1-4-9-20

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Prep Type: Total/NA Prep Batch: 312968

Analyzed 04/15/20 15:19 04/15/20 18:47

Prepared Dil Fac

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Prep Type: Total/NA **Prep Batch: 312968**

%Rec.

Limits

80 - 120

Client Sample ID: EB-1-4-9-20 Prep Type: Total/NA

Prep Batch: 312968

%Rec.

QC Sample Results

Client: Southern Company Job ID: 180-104498-1

Project/Site: CCR - Plant Arkwright Ash Pond 3

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-312644/2 **Client Sample ID: Method Blank**

Matrix: Water

Analysis Batch: 312644

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 10 04/11/20 08:52 Total Dissolved Solids 10 mg/L <10

Lab Sample ID: LCS 180-312644/1 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 312644

LCS LCS Spike %Rec. Added Result Qualifier Unit D %Rec Limits 242 **Total Dissolved Solids** 234 mg/L 97 80 - 120

Client Sample ID: ARGWC-8 Lab Sample ID: 180-104498-7 DU Prep Type: Total/NA

Matrix: Water

Analysis Batch: 312644

Sample Sample DU DU **RPD** Analyte Result Qualifier Result Qualifier Unit D RPD Limit **Total Dissolved Solids** 270 10 280 mg/L

Lab Sample ID: 180-104498-16 DU **Client Sample ID: DUP-1** Prep Type: Total/NA **Matrix: Water**

Analysis Batch: 312644

Sample Sample DU DU **RPD** Result Qualifier Result Qualifier RPD Analyte D Limit Unit **Total Dissolved Solids** 340 363 mg/L 10

Prep Type: Total/NA

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

HPLC/IC

Analysis Batch: 313212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-1	ARGWA-3	Total/NA	Water	EPA 300.0 R2.1	
180-104498-2	ARGWA-5	Total/NA	Water	EPA 300.0 R2.1	
180-104498-3	ARGWA-12	Total/NA	Ground Water	EPA 300.0 R2.1	
180-104498-4	ARGWA-13	Total/NA	Water	EPA 300.0 R2.1	
180-104498-4	ARGWA-13	Total/NA	Water	EPA 300.0 R2.1	
180-104498-5	ARGWA-14	Total/NA	Water	EPA 300.0 R2.1	
180-104498-6	ARGWC-7	Total/NA	Water	EPA 300.0 R2.1	
180-104498-7	ARGWC-8	Total/NA	Water	EPA 300.0 R2.1	
MB 180-313212/44	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-313212/43	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 313354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-8	ARGWC-9	Total/NA	Water	EPA 300.0 R2.1	
180-104498-9	ARGWC-10	Total/NA	Water	EPA 300.0 R2.1	
180-104498-10	ARGWC-15	Total/NA	Water	EPA 300.0 R2.1	
180-104498-11	ARGWC-16	Total/NA	Water	EPA 300.0 R2.1	
180-104498-12	ARGWC-17	Total/NA	Water	EPA 300.0 R2.1	
180-104498-13	ARGWC-18	Total/NA	Water	EPA 300.0 R2.1	
180-104498-14	EB-1-4-9-20	Total/NA	Water	EPA 300.0 R2.1	
180-104498-15	FB-1-4-7-20	Total/NA	Water	EPA 300.0 R2.1	
180-104498-16	DUP-1	Total/NA	Water	EPA 300.0 R2.1	
MB 180-313354/39	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-313354/38	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 313534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-11	ARGWC-16	Total/NA	Water	EPA 300.0 R2.1	
180-104498-16	DUP-1	Total/NA	Water	EPA 300.0 R2.1	
MB 180-313534/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-313534/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 313536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-14	EB-1-4-9-20	Total/NA	Water	EPA 300.0 R2.1	
MB 180-313536/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-313536/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 312736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-5	ARGWA-14	Total/NA	Water	7470A	
MB 180-312736/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-312736/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 312737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-1	ARGWA-3	Total/NA	Water	7470A	
180-104498-2	ARGWA-5	Total/NA	Water	7470A	
180-104498-3	ARGWA-12	Total/NA	Ground Water	7470A	

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Job ID: 180-104498-1

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Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Metals (Continued)

Prep Batch: 312737 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-4	ARGWA-13	Total/NA	Water	7470A	
180-104498-8	ARGWC-9	Total/NA	Water	7470A	
180-104498-9	ARGWC-10	Total/NA	Water	7470A	
180-104498-10	ARGWC-15	Total/NA	Water	7470A	
180-104498-11	ARGWC-16	Total/NA	Water	7470A	
180-104498-12	ARGWC-17	Total/NA	Water	7470A	
180-104498-15	FB-1-4-7-20	Total/NA	Water	7470A	
180-104498-16	DUP-1	Total/NA	Water	7470A	
MB 180-312737/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-312737/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 312798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-1	ARGWA-3	Total Recoverable	Water	3005A	_
180-104498-2	ARGWA-5	Total Recoverable	Water	3005A	
180-104498-3	ARGWA-12	Total Recoverable	Ground Water	3005A	
180-104498-4	ARGWA-13	Total Recoverable	Water	3005A	
180-104498-5	ARGWA-14	Total Recoverable	Water	3005A	
180-104498-6	ARGWC-7	Total Recoverable	Water	3005A	
180-104498-7	ARGWC-8	Total Recoverable	Water	3005A	
180-104498-8	ARGWC-9	Total Recoverable	Water	3005A	
180-104498-9	ARGWC-10	Total Recoverable	Water	3005A	
180-104498-10	ARGWC-15	Total Recoverable	Water	3005A	
180-104498-11	ARGWC-16	Total Recoverable	Water	3005A	
180-104498-12	ARGWC-17	Total Recoverable	Water	3005A	
180-104498-13	ARGWC-18	Total Recoverable	Water	3005A	
180-104498-14	EB-1-4-9-20	Total Recoverable	Water	3005A	
180-104498-15	FB-1-4-7-20	Total Recoverable	Water	3005A	
180-104498-16	DUP-1	Total Recoverable	Water	3005A	
MB 180-312798/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-312798/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-104498-1 MS	ARGWA-3	Total Recoverable	Water	3005A	
180-104498-1 MSD	ARGWA-3	Total Recoverable	Water	3005A	

Analysis Batch: 312866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-1	ARGWA-3	Total/NA	Water	EPA 7470A	312737
180-104498-2	ARGWA-5	Total/NA	Water	EPA 7470A	312737
180-104498-3	ARGWA-12	Total/NA	Ground Water	EPA 7470A	312737
180-104498-4	ARGWA-13	Total/NA	Water	EPA 7470A	312737
180-104498-5	ARGWA-14	Total/NA	Water	EPA 7470A	312736
180-104498-8	ARGWC-9	Total/NA	Water	EPA 7470A	312737
180-104498-9	ARGWC-10	Total/NA	Water	EPA 7470A	312737
180-104498-10	ARGWC-15	Total/NA	Water	EPA 7470A	312737
180-104498-11	ARGWC-16	Total/NA	Water	EPA 7470A	312737
180-104498-12	ARGWC-17	Total/NA	Water	EPA 7470A	312737
180-104498-15	FB-1-4-7-20	Total/NA	Water	EPA 7470A	312737
180-104498-16	DUP-1	Total/NA	Water	EPA 7470A	312737
MB 180-312736/1-A	Method Blank	Total/NA	Water	EPA 7470A	312736
MB 180-312737/1-A	Method Blank	Total/NA	Water	EPA 7470A	312737
LCS 180-312736/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	312736

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Job ID: 180-104498-1

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Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Metals (Continued)

Analysis Batch: 312866 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-312737/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	312737

Prep Batch: 312968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-6	ARGWC-7	Total/NA	Water	7470A	_
180-104498-7	ARGWC-8	Total/NA	Water	7470A	
180-104498-13	ARGWC-18	Total/NA	Water	7470A	
180-104498-14	EB-1-4-9-20	Total/NA	Water	7470A	
MB 180-312968/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-312968/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-104498-14 MS	EB-1-4-9-20	Total/NA	Water	7470A	
180-104498-14 MSD	EB-1-4-9-20	Total/NA	Water	7470A	

Analysis Batch: 313001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-6	ARGWC-7	Total/NA	Water	EPA 7470A	312968
180-104498-7	ARGWC-8	Total/NA	Water	EPA 7470A	312968
180-104498-13	ARGWC-18	Total/NA	Water	EPA 7470A	312968
180-104498-14	EB-1-4-9-20	Total/NA	Water	EPA 7470A	312968
MB 180-312968/1-A	Method Blank	Total/NA	Water	EPA 7470A	312968
LCS 180-312968/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	312968
180-104498-14 MS	EB-1-4-9-20	Total/NA	Water	EPA 7470A	312968
180-104498-14 MSD	EB-1-4-9-20	Total/NA	Water	EPA 7470A	312968

Analysis Batch: 313608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-1	ARGWA-3	Total Recoverable	Water	EPA 6020B	312798
180-104498-2	ARGWA-5	Total Recoverable	Water	EPA 6020B	312798
180-104498-3	ARGWA-12	Total Recoverable	Ground Water	EPA 6020B	312798
180-104498-4	ARGWA-13	Total Recoverable	Water	EPA 6020B	312798
180-104498-5	ARGWA-14	Total Recoverable	Water	EPA 6020B	312798
180-104498-6	ARGWC-7	Total Recoverable	Water	EPA 6020B	312798
180-104498-7	ARGWC-8	Total Recoverable	Water	EPA 6020B	312798
180-104498-8	ARGWC-9	Total Recoverable	Water	EPA 6020B	312798
180-104498-9	ARGWC-10	Total Recoverable	Water	EPA 6020B	312798
180-104498-10	ARGWC-15	Total Recoverable	Water	EPA 6020B	312798
180-104498-11	ARGWC-16	Total Recoverable	Water	EPA 6020B	312798
180-104498-12	ARGWC-17	Total Recoverable	Water	EPA 6020B	312798
180-104498-13	ARGWC-18	Total Recoverable	Water	EPA 6020B	312798
180-104498-14	EB-1-4-9-20	Total Recoverable	Water	EPA 6020B	312798
180-104498-15	FB-1-4-7-20	Total Recoverable	Water	EPA 6020B	312798
180-104498-16	DUP-1	Total Recoverable	Water	EPA 6020B	312798
MB 180-312798/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	312798
LCS 180-312798/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	312798
180-104498-1 MS	ARGWA-3	Total Recoverable	Water	EPA 6020B	312798
180-104498-1 MSD	ARGWA-3	Total Recoverable	Water	EPA 6020B	312798

Job ID: 180-104498-1

Client: Southern Company Project/Site: CCR - Plant Arkwright Ash Pond 3

Job ID: 180-104498-1

General Chemistry

Analysis Batch: 312644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-1	ARGWA-3	Total/NA	Water	SM 2540C	
180-104498-2	ARGWA-5	Total/NA	Water	SM 2540C	
180-104498-3	ARGWA-12	Total/NA	Ground Water	SM 2540C	
180-104498-4	ARGWA-13	Total/NA	Water	SM 2540C	
180-104498-5	ARGWA-14	Total/NA	Water	SM 2540C	
180-104498-6	ARGWC-7	Total/NA	Water	SM 2540C	
180-104498-7	ARGWC-8	Total/NA	Water	SM 2540C	
180-104498-8	ARGWC-9	Total/NA	Water	SM 2540C	
180-104498-9	ARGWC-10	Total/NA	Water	SM 2540C	
180-104498-10	ARGWC-15	Total/NA	Water	SM 2540C	
180-104498-11	ARGWC-16	Total/NA	Water	SM 2540C	
180-104498-12	ARGWC-17	Total/NA	Water	SM 2540C	
180-104498-13	ARGWC-18	Total/NA	Water	SM 2540C	
180-104498-14	EB-1-4-9-20	Total/NA	Water	SM 2540C	
180-104498-15	FB-1-4-7-20	Total/NA	Water	SM 2540C	
180-104498-16	DUP-1	Total/NA	Water	SM 2540C	
MB 180-312644/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-312644/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-104498-7 DU	ARGWC-8	Total/NA	Water	SM 2540C	
180-104498-16 DU	DUP-1	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 313430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
180-104498-1	ARGWA-3	Total/NA	Water	Field Sampling	
180-104498-2	ARGWA-5	Total/NA	Water	Field Sampling	
180-104498-3	ARGWA-12	Total/NA	Ground Water	Field Sampling	
180-104498-4	ARGWA-13	Total/NA	Water	Field Sampling	
180-104498-5	ARGWA-14	Total/NA	Water	Field Sampling	
180-104498-6	ARGWC-7	Total/NA	Water	Field Sampling	
180-104498-7	ARGWC-8	Total/NA	Water	Field Sampling	
180-104498-8	ARGWC-9	Total/NA	Water	Field Sampling	
180-104498-9	ARGWC-10	Total/NA	Water	Field Sampling	
180-104498-10	ARGWC-15	Total/NA	Water	Field Sampling	
180-104498-11	ARGWC-16	Total/NA	Water	Field Sampling	
180-104498-12	ARGWC-17	Total/NA	Water	Field Sampling	
180-104498-13	ARGWC-18	Total/NA	Water	Field Sampling	

Eurofins TestAmerica, Pittsburgh

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, Thallium, Radium

Client Information	Sampler Rubiller	VETON.CO.	a Borto	Carrier Tracking No(s)	No(s): COC No: 400-73521-29028.1	
Client Contact:	10	E-Mail:	-		Page	
Joju Abraham	204457	Verenca, trick	- 3	telterese moun	rage	
Company. Southern Company			An	Analysis Requested	Job #.	
Address: PO BOX 2641 GSC8	Due Date Requested:		_		Preservation Codes:	
Chy. Birmingham	TAT Requested (days):			·w		
State, Zip: AL, 35291				uine8 ,		
Phone:	PO#. SCS10347656	(0)		pinsen	180-104498 Chain of Custody	- Apo
Emai: JAbraham@scuthemco.com	WO #:	-	Houli .	228 pony, A	1	-
Project Name: CCR Piant Arkwright - Ash Pond 3 - 1st 2020 SA GWM	Project #: 40007712	_	ephole	226 &	K-EDTA L-EDA	W - pH 4-5 2 - other (specity)
Sae: Georgia	SSOVAR	-	D - G8	mulba (320) (320) (asia)	ot co	
	Sample	Matrix (170-water, 50-water) S-solic, Childrened (elid Elitered)	etals - App III 00_ORGFM_2 20	(muinele (muinele A :-PA betzete PA :-PA :-PA betzete PA :-PA :-PA :-PA :-PA :-PA :-PA :-PA :-	edmuM lsto	
Sample Identification	Sample Date IIITE G-grau) In-heum, A-Presarvation Code	X	E T	8 0	> Special Instructions/Note	Ctions/Note:
4 RGW4-3	4-7-20 1045 G	Water MN	1	1	3 PH=5,90	
48 CUA-5	0 9HI 02-7-H	Water N N	11	1	3 PH= 5 86	
4-1	4-7-20 1346 G	Water NN	1	/ / /	3PH=5.9	
ARGU4-13	4-7-20 1532 G	Water NN	11	7	3 pH = 5,84	
-	4-6-20 1557 G	Water NN	1	7	3 PH = 5,90	
ARGUC-7	4-8-20 0955 G	Water ∭ N	>	>	4 PH=575 F	Extra Ra
ARGWC-8	4-4-20 1235 G	Water N S	>	2		
ARGWC-9	4-9-20 1025 G	Water M N	1	>	$\overline{}$	
ARGUC-10	4-8-20 1700 c	Water NN	2	<i>> > > ></i>	304=5,95	
ARGUC-15	4-8-20 1615 6	Water WN	>	7	304=6.26	
ARGWC-16	4-8-20 1115 6	Water N N	>	>	\neg	
Possible Hazard Identification	Daison B Alabanam Destination	es]	Sample Disposal (A	fee may be assessed if	are retained longer than 1 mo	with)
ested I, II, III, IV, Other (specify)		ďS	Special Instructions/QC	Requirements:	S. Danson	COLOR
Empty Kit Relinquished by:	. Date:	Time:		Method	Method of Shipment:	
Relincuished by: Office (John)	20 1503	Sompany	Received by:	J	251 02-6-54 May 13 800	yragany S
Relinquished by:	Date(Time: 1504)	Company	Received by	/	Date/finds: 05	CTNN W
	Date/Time:	Company	Received by:		Date/Time: Co	ompany
Custody Seals Infact Custody Seal No.:			Cooler Temperature(I	Cooler Temperature(s) °C and Other Remarks:		
					N.	Ver: 08/04/2016

TestAmerica

Chain of Gustody Record

681-Atlanta

TestAmerica

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, Thallium, Radium

Client Information	Sampler: 12.18	2.11.16c	Lab PM:	Conilia	Betat	14	3	Carrier Tracking No(s):		COC No: 400-73521-2902	1.89
Client Contact	Phone		E-Mai	E-Mail:	1	100	T			Page:	
Joju Abraham	770-59	94-5998	Meto	ca, bo	14 8 Lot	Wetca ca, Sorter & restancia ite	Mon			Page	
Company: Southern Company						Analys	Analysis Requested	sted		Job #:	
Address: DO BOX 28.41 CSCs	Due Date Requested:				_	pui	F			Preservation Codes:	des:
Chy Court Court	TAT Requested (days):				940C	lver, a				A - HCL B - NaOH	M - Hexane N - None
Summingriam State Zpc AL 36291	T				ulfate, 2	g 'pvə7				D - Naric Acid E - NariSO4	P - Na2O4S Q - Na2SO3
Phone:	PO#: SCS10347656			(0)	g y op	'աոլա				G - Amchlor H - Asontic Acid	R - Na2S203 S - H2SO4 T - TSP Dodecahidrate
Email: JAbraham@southemco.com	WO#:					n, Gad	822	lum, C			U - Acetone V - MCAA
Project Name: CCR Plant Arkwright - Ash Pond 3 - 1st 2020 SA GWM	Project #. 40007712					inhe8	526 &	СРгот	enieżn	K-EDTA L-EDA	W - pH 4-5 Z - other (specify)
Site: Georgia	SSOW#:					, sinear		'unju	ot co	Other:	
Samule Identification	Sample Date Time	Sample Type C=comp, Time G=crab)	Matrix (newster, Septiel, Owesterfold,	Field Filtered Perform MS/N	Metals - App III 800_008 801	A) slateM etat8 (muinele8	F : PA betseled 6/81ce abs-WS	M : bA beleeted PA: M Beryllium, Cadr B ,munebdyloM	Total Number		Special Instructions/Note:
		1	Preservation Code:		1900			-	X		
ARCUC-17	4-8-70 H	430 G	Water	S	>	>	7	>	M	PH= 5,03	
ARGUC-18		0 0440	Water	5	>	>	>	>	100	3 PH= 5.93	n. N
E8-1-4-9-20	4-9-20 10	1040	Water	2	>	>	>	>	ls.	3 PH=	
-		1600 6	Water	2	>	>	>	>	M	= Hd	
D.0-1		9	Water	2	1.	>	>	\ \	3	= Hd	
		O	Water						9000	= Hd	
	Je.	9	Water							= Hd	
		9	Water						2000	= Hd	
		9	Water							= Hd	
		9	Water						2000	= Hd	
		O	Water							= Hd	
Possible Hazard Identification Non-Hazard	Poison B KUnknown	Radiological	-	Sam	Pietum To	al (A fee m Client	Any be ass	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client Archive For	are retain	ned longer than hive For	f month) Months
/, Other (specify)				Spec	cial Instructi	Special Instructions/QC Requirements	quirements				
Empty Kit Relinquished by:	Date			Time:				Method of Shipment			
Relinquished by: New (Un-	Date Time	8051) Heromon	J	Received by:	1	V	, DateПте В разептие	5-hou	02-	1882
Relinquished by:	02-6-Bea	150	Company		Received	3	1	Date	10/2	300	COMPANY N. W
	Date/Time:	,	Company		Received by:			Date/Tr	ne:		Company
Custody Seals Intact: Custody Seal No.:					Cooler Tempe	Cooler Temperature(s) ¹ C and Other Remarks	d Other Rem	arks:			
											Ver. 08/04/2016

TestAmerica

Chain of Custody Record

681-Attanta

TestAmerica

TestAmeric



PITTSBURGH PA 15238

(412) 963 - 7058

DRIGIN ID-LIYA (678) 966-9991 GEGRGE TAYLOR EUROFINS TESTAMERICA 6500 HCDONOUGH DRIVE SUITE C.10 NITED STATES US

SAMPLE RECIEVING

301 ALPHA DR.

RIDC PARK

PA-US PIT

THE THREE PROPERTY OF THE PERSON AND

O Initials PT-WII-SR-001 effective 7/26/13 Uncorrected temp Thermometer ID

PT-WI-SR-001 effective 7/26/13 Uncorrected temp Thermometer ID

Initials

0

180-104498 Waybill



PITTSBURGH PA 15238

Page 39 of 42

301 ALPHA L **EUROFINS 1**

RIDC PARK

VING

SAMPLE RE

CELOFIN D'LIYE GEORGE AFUOR EUROFINS TESTAM ESOO HCDONOUGH D NUTE C-10 NORCROSS, GA 3001 UNITED STATES US

FRI - 10 APR 3:00P

STANDARD OVERNIGHT

TRK# 1516 9323 3428 ## MASTER ##

1 of 4

75238 PA-W PIT

O Initials Uncorrected temp Thermometer ID

PT-WI-SR-001 effective 7/26/13

S

NA AGCA

Uncorrected temp Thermometer ID

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Phone: 412-963-7058 Fax; 412-963-2468

ETA BIL

51:60

4/14/2020

od of Shipmen

FED EX

ceived by.

200

20

dole. Since abbraitory accordisations are subject to change. Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently managed to acceptation status should be brought to Eurofins TestAmerica alterition in anti-order in an equested accreditations are current to date, return the signed Chain of Custody attesting to naid complicance to Eurofins TestAmerica. Months Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Archive For Disposal By Lab Special Instructions/QC Requirements: Return To Client Primary Deliverable Rank: 2 verable Requested: I, II, III, IV, Other (specify) Possible Hazard Identification

coler Temperature(s) °C and Other Remarks уперту Date/Time:

seped by: quished by:

Custody Seal No.

Custody Seals Intact: A Yes A No

FED EY

npty Kit Relinquished by

TRUTE: 412-300-1000 Lax. 412-300-2400											
Client Information (Sub Contract Lab)	Sempler			Bortot	Lab PM Bortol, Veronica	63		Carrier Tracking No(s)		COC No. 180-390690.2	
Creat Contact Shipping/Receiving	Phone			E-Mari veron	nica bort	ot@test	E-Mail veronica bortot@testamericainc.com	State of Origin Georgia		Page Page 2 of 2	
Company TestAmerica Laboratories, Inc.					Accredist	ons Regu	ured (See note):		100	Job # 180-104498.1	
Address: 13715 Rider Trail North,	Due Date Requested: 4/22/2020	.pu					Analysis	Analysis Requested	PP	Preservation Codes	lest
Copy Earth City	TAT Requested (days):	395):							< & C	A - HCL B - NaOH C - Zh Acetate	M - Haxane N - None O - AsNaO2
State, Zp: MO, 63045									0 11		P - Na204S Q - Na2503
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	# Od					_			. 0 3	3	R - Na2S203 S - H2S04
Email	WO#:				(0)				_	8	U - Acetone U - Acetone V - MCAA
Project Name. CCR - Plant Arkwright Ash Pond 3	Project #: 18020201				as or h					K-EDTA L-EDA	W - pH 4-5 Z - other (specify)
Sac. Arkwright	SSOW#				A) as		Odd		_	Other:	
Sample Identification - Client ID (Lab ID)	Sample Date	Sample	Sample Type (C=comp, G=grab)	Matrix (Wowater, Swoote, Ownesteiot, BTSTREOM, AvAtr)	Fleld Filtered MS/M mnohed	9326_RazzaHere	\$*\$55@B*\$558~CE		redmuM letoT	Special	Special Instructions/Note:
	\ \	No		-	X						
ARGWC-15 (180-104498-10)	4/8/20	16:15 Fastern		Water		×	×		-		
ARGWC-16 (180-104498-11)	4/8/20	11:15 Eastern		Water		×	×		-		
ARGWC-17 (180-104498-12)	4/8/20	14:30 Eastern		Water		×	×		-		
ARGWC-18 (180-104498-13)	4/9/20	09:40 Eastern		Water		×	×		-		
EB-1-4-9:20 (180-104498-14)	4/9/20	10:40 Eastern		Water		×	×		-		
FB-1-4-7-20 (180-104498-15)	4/7/20	16:00 Fastern		Water		×	×		-		
DUP-1 (180-104498-16)	4/8/20	Eastern		Water	3238	×	×		(+)		
Note: Since iaboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory	dAmerica places the ownership	of method, an	alyte & accred	Station complian	no uodn ao	il subcont	act laboratories. This	sample shipment is	forwarded under chain-of-cust	stody if the labo	
Possible Hazard Identification					Samp	ole Disp	osal (A fee may	i passasse ac	Sample Disposal (A fee may be assessed if samples are retained longer than 1	longer than 1	month)
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	ble Rank: 2			Speci	Return al Instru	Special Instructions/QC Requirements	Disposal By Lab ments:	Lab Archive For	For	Months
Empty Kit Relinquished by:	1	Date:			Time:			Method	Method of Shipment:		
Relinquished by	1900 mary 3/2	017	20	D (James	+	Received by:	FEDE		Date/Time		Company
Reimquished by: FED EX	Date/Time: Date/Time:			Company	* 18	X	2 M	2	Ulyloco Highoro Date/Time	61:50	Company STL
(2)					8	oler Tem	Cooler Temperature(s) °C and Other Remarks.	r Remarks.			
A Yes A No					1						

eurofins Environment Testing TestAmerica

Client: Southern Company

Job Number: 180-104498-1

Login Number: 104498 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Creator. Say, monias C		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-104498-2

Client Project/Site: CCR - Plant Arkwright Ash Pond 3

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham

Authorized for release by: 5/11/2020 1:53:40 PM

Shali Brown, Project Manager II (615)301-5031

shali.brown@testamericainc.com

LINKS

Review your project results through

Have a Question?



Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	
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Sample Summary	7
Method Summary	8
Lab Chronicle	9
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QC Sample Results	24
QC Association Summary	26
Chain of Custody	27
Receint Checklists	31

Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Job ID: 180-104498-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-104498-2

Receipt

The samples were received on 4/10/2020 8:15 AM; the samples arrived in good condition, properly preserved, and where required, on ice. The temperatures of the 4 coolers at receipt time were 1.2°C, 1.3°C, 2.3°C and 3.3°C

Department Gas Flow Proportional Counter

Method 9315 Ra226: Radium 226 Prep Batch 160-467819:

Insufficient sample volume was available to perform a sample duplicate for the following samples: ARGWA-3 (180-104498-1), ARGWA-5 (180-104498-2), ARGWA-12 (180-104498-3), ARGWA-13 (180-104498-4), ARGWA-14 (180-104498-5), ARGWC-7 (180-104498-6), ARGWC-8 (180-104498-7), ARGWC-9 (180-104498-8), ARGWC-10 (180-104498-9), ARGWC-15 (180-104498-10), ARGWC-16 (180-104498-11), ARGWC-17 (180-104498-12), ARGWC-18 (180-104498-13), EB-1-4-9-20 (180-104498-14), FB-1-4-7-20 (180-104498-15) and DUP-1 (180-104498-16). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision

Method 9315 Ra226: Ra-226 Prep Batch 160-467819

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. ARGWA-3 (180-104498-1), ARGWA-5 (180-104498-2), ARGWA-12 (180-104498-3), ARGWA-13 (180-104498-4), ARGWA-14 (180-104498-5), ARGWC-7 (180-104498-6), ARGWC-8 (180-104498-7), ARGWC-9 (180-104498-8), ARGWC-10 (180-104498-9), ARGWC-15 (180-104498-10), ARGWC-16 (180-104498-11), ARGWC-17 (180-104498-12), ARGWC-18 (180-104498-13), EB-1-4-9-20 (180-104498-14), FB-1-4-7-20 (180-104498-15), DUP-1 (180-104498-16), (LCS 160-467819/1-A), (LCSD 160-467819/2-A) and (MB 160-467819/23-

Method 9320 Ra228: Radium 228 Prep Batch 160-467826:

Insufficient sample volume was available to perform a sample duplicate for the following samples: ARGWA-3 (180-104498-1), ARGWA-5 (180-104498-2), ARGWA-12 (180-104498-3), ARGWA-13 (180-104498-4), ARGWA-14 (180-104498-5), ARGWC-7 (180-104498-6), ARGWC-8 (180-104498-7), ARGWC-9 (180-104498-8), ARGWC-10 (180-104498-9), ARGWC-15 (180-104498-10), ARGWC-16 (180-104498-11), ARGWC-17 (180-104498-12), ARGWC-18 (180-104498-13), EB-1-4-9-20 (180-104498-14), FB-1-4-7-20 (180-104498-15) and DUP-1 (180-104498-16). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision

Method 9320 Ra228: Ra-228 Prep Batch 160-467826

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. ARGWA-3 (180-104498-1), ARGWA-5 (180-104498-2), ARGWA-12 (180-104498-3), ARGWA-13 (180-104498-4), ARGWA-14 (180-104498-5), ARGWC-7 (180-104498-6), ARGWC-8 (180-104498-7), ARGWC-9 (180-104498-8), ARGWC-10 (180-104498-9), ARGWC-15 (180-104498-10), ARGWC-16 (180-104498-11), ARGWC-17 (180-104498-12), ARGWC-18 (180-104498-13), EB-1-4-9-20 (180-104498-14), FB-1-4-7-20 (180-104498-15), DUP-1 (180-104498-16), (LCS 160-467826/1-A), (LCSD 160-467826/2-A) and (MB 160-467826/23-

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Department Rad

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 180-104498-2

Definitions/Glossary

Client: Southern Company Job ID: 180-104498-2

Project/Site: CCR - Plant Arkwright Ash Pond 3

Qualifiers

Rad

U Result is less than the sample detection limit.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MDA Minimum Detectable Activity (Radiochemistry)
MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

3

4

5

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10

11

12

Accreditation/Certification Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Job ID: 180-104498-2

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20 *
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20 *
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-20 *
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-20 *
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-20 *
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

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^{*} Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Accreditation/Certification Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Job ID: 180-104498-2

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-20
lowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

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Sample Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright Ash Pond 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset II
180-104498-1	ARGWA-3	Water	04/07/20 10:45	04/10/20 08:15	
180-104498-2	ARGWA-5	Water	04/07/20 11:46	04/10/20 08:15	
180-104498-3	ARGWA-12	Ground Water	04/07/20 13:46	04/10/20 08:15	
180-104498-4	ARGWA-13	Water	04/07/20 15:32	04/10/20 08:15	
180-104498-5	ARGWA-14	Water	04/06/20 15:57	04/10/20 08:15	
180-104498-6	ARGWC-7	Water	04/08/20 09:55	04/10/20 08:15	
180-104498-7	ARGWC-8	Water	04/09/20 12:35	04/10/20 08:15	
180-104498-8	ARGWC-9	Water	04/09/20 10:25	04/10/20 08:15	
180-104498-9	ARGWC-10	Water	04/08/20 17:09	04/10/20 08:15	
180-104498-10	ARGWC-15	Water	04/08/20 16:15	04/10/20 08:15	
180-104498-11	ARGWC-16	Water	04/08/20 11:15	04/10/20 08:15	
180-104498-12	ARGWC-17	Water	04/08/20 14:30	04/10/20 08:15	
180-104498-13	ARGWC-18	Water	04/09/20 09:40	04/10/20 08:15	
180-104498-14	EB-1-4-9-20	Water	04/09/20 10:40	04/10/20 08:15	
180-104498-15	FB-1-4-7-20	Water	04/07/20 16:00	04/10/20 08:15	
180-104498-16	DUP-1	Water	04/08/20 00:00	04/10/20 08:15	

Job ID: 180-104498-2

Method Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Job ID: 180-104498-2

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Lab Sample ID: 180-104498-1 **Client Sample ID: ARGWA-3**

Date Collected: 04/07/20 10:45 Date Received: 04/10/20 08:15

Matrix: Water

Job ID: 180-104498-2

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.68 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			469780	05/07/20 04:26	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			1000.68 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLI	E	1			469050	04/28/20 18:41	KLS	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: ARGWA-5 Lab Sample ID: 180-104498-2

Date Collected: 04/07/20 11:46 **Matrix: Water**

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.39 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			469780	05/07/20 04:27	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			1000.39 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			469050	04/28/20 18:41	KLS	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: ARGWA-12 Lab Sample ID: 180-104498-3 Date Collected: 04/07/20 13:46 **Matrix: Ground Water**

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.31 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			469780	05/07/20 04:27	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			1000.31 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			469050	04/28/20 18:41	KLS	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: ARGWA-13 Lab Sample ID: 180-104498-4 Date Collected: 04/07/20 15:32 **Matrix: Water**

Date Received: 04/10/20 08:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.36 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis	9315		1			469780	05/07/20 04:27	CJQ	TAL SL
	Instrumer	t ID: GFPCBLUE								

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Job ID: 180-104498-2

Client Sample ID: ARGWA-13

Date Collected: 04/07/20 15:32 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-4

Matrix: Water

Matrix: Water

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			1000.36 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCPURPLE	Ē	1			469050	04/28/20 18:41	KLS	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: ARGWA-14 Lab Sample ID: 180-104498-5

Date Collected: 04/06/20 15:57 Date Received: 04/10/20 08:15

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Method Factor Amount Amount Number or Analyzed Type Run Analyst Lab Total/NA PrecSep-21 467819 04/15/20 08:55 RBR TAL SL Prep 1000.53 mL 1.0 g Total/NA Analysis 9315 469780 05/07/20 04:27 CJQ TAL SL 1 Instrument ID: GFPCBLUE PrecSep_0 Total/NA 1000.53 mL 04/15/20 09:44 RBR TAL SL Prep 1.0 g 467826 Total/NA TAL SL Analysis 9320 469050 04/28/20 18:42 KLS Instrument ID: GFPCPURPLE Total/NA Analysis Ra226_Ra228 05/07/20 09:36 SMP TAL SL 469790 Instrument ID: NOEQUIP

Client Sample ID: ARGWC-7 Lab Sample ID: 180-104498-6

Date Collected: 04/08/20 09:55 Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.61 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis	9315		1			469780	05/07/20 04:27	CJQ	TAL SL
	Instrument	ID: GFPCBLUE								
Total/NA	Prep	PrecSep_0			1000.61 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis	9320		1			469050	04/28/20 18:42	KLS	TAL SL
	Instrument	ID: GFPCPURPLE								
Total/NA	Analysis	Ra226_Ra228		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: ARGWC-8 Lab Sample ID: 180-104498-7

Date Collected: 04/09/20 12:35 Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.99 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis	9315		1			469780	05/07/20 04:27	CJQ	TAL SL
	Instrumen	t ID: GFPCBLUE								
Total/NA	Prep	PrecSep_0			1000.99 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis	9320		1			469050	04/28/20 18:42	KLS	TAL SL
	Instrumen	t ID: GFPCPURPLE	<u> </u>							

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5/11/2020

Matrix: Water

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Lab Sample ID: 180-104498-7 **Client Sample ID: ARGWC-8 Matrix: Water**

Date Collected: 04/09/20 12:35 Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226 Ra228		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: ARGWC-9

Date Collected: 04/09/20 10:25 Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.89 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis	9315		1			469780	05/07/20 04:27	CJQ	TAL SL
	Instrumen	t ID: GFPCBLUE								
Total/NA	Prep	PrecSep_0			1000.89 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis	9320		1			469050	04/28/20 18:42	KLS	TAL SL
	Instrumen	t ID: GFPCPURPLE								
Total/NA	Analysis	Ra226_Ra228		1			469790	05/07/20 09:36	SMP	TAL SL
	Instrumen	t ID: NOFQUIP								

Client Sample ID: ARGWC-10

Date Collected: 04/08/20 17:09 Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21	-		1000.66 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis Instrumen	9315 nt ID: GFPCBLUE		1			469780	05/07/20 04:27	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			1000.66 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumen	9320 nt ID: GFPCPURPLE		1			469050	04/28/20 18:42	KLS	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: ARGWC-15

Date Collected: 04/08/20 16:15

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.62 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1			469780	05/07/20 04:27	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			1000.62 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCPURPLE		1			469050	04/28/20 18:42	KLS	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			469790	05/07/20 09:36	SMP	TAL SL

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Job ID: 180-104498-2

Matrix: Water

Matrix: Water

Matrix: Water

Lab Sample ID: 180-104498-8

Lab Sample ID: 180-104498-9

Lab Sample ID: 180-104498-10

5/11/2020

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-16

Date Collected: 04/08/20 11:15 Date Received: 04/10/20 08:15

Client: Southern Company

Lab Sample ID: 180-104498-11

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.33 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis Instrumer	9315 t ID: GFPCBLUE		1			469780	05/07/20 04:27	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			1000.33 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumer	9320 t ID: GFPCPURPLE		1			469050	04/28/20 18:43	KLS	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: ARGWC-17 Lab Sample ID: 180-104498-12

Date Collected: 04/08/20 14:30 **Matrix: Water**

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.24 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			469780	05/07/20 06:13	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			1000.24 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			469050	04/28/20 18:43	KLS	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: ARGWC-18 Lab Sample ID: 180-104498-13 Date Collected: 04/09/20 09:40

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.29 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			469780	05/07/20 06:13	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			1000.29 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			469050	04/28/20 18:43	KLS	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: EB-1-4-9-20 Lab Sample ID: 180-104498-14

Date Collected: 04/09/20 10:40 Date Received: 04/10/20 08:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.47 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis	9315		1			469780	05/07/20 06:13	CJQ	TAL SL
	Instrumen	t ID: GFPCBLUE								

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Matrix: Water

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Matrix: Water

Lab Chronicle

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: EB-1-4-9-20 Lab Sample ID: 180-104498-14

Date Collected: 04/09/20 10:40 Date Received: 04/10/20 08:15

Matrix: Water

Job ID: 180-104498-2

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			1000.47 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCPROTE	EAN	1			469049	04/28/20 18:49	KLS	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			469790	05/07/20 09:36	SMP	TAL SL

Lab Sample ID: 180-104498-15 Client Sample ID: FB-1-4-7-20

Date Collected: 04/07/20 16:00 **Matrix: Water**

Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.00 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			469780	05/07/20 06:13	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			1000.00 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPROTEA	۸N	1			469049	04/28/20 18:49	KLS	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			469790	05/07/20 09:36	SMP	TAL SL

Client Sample ID: DUP-1 Lab Sample ID: 180-104498-16

Date Collected: 04/08/20 00:00 Date Received: 04/10/20 08:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.60 mL	1.0 g	467819	04/15/20 08:55	RBR	TAL SL
Total/NA	Analysis	9315		1			469780	05/07/20 06:13	CJQ	TAL SL
	Instrumer	t ID: GFPCBLUE								
Total/NA	Prep	PrecSep_0			1000.60 mL	1.0 g	467826	04/15/20 09:44	RBR	TAL SL
Total/NA	Analysis	9320		1			469049	04/28/20 18:49	KLS	TAL SL
	Instrumer	t ID: GFPCPROTE	λN							
Total/NA	Analysis	Ra226_Ra228		1			469790	05/07/20 09:36	SMP	TAL SL
	Instrumer	t ID: NOEQUIP								

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Prep

RBR = Rachael Ratcliff

Batch Type: Analysis

CJQ = Caleb Quinn

KLS = Kody Saulters

SMP = Siobhan Perry

Eurofins TestAmerica, Pittsburgh

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Matrix: Water

5/11/2020

Client Sample ID: ARGWA-3

Date Collected: 04/07/20 10:45 Date Received: 04/10/20 08:15

Lab Sample ID: 180-104498-1

Matrix: Water

Job ID: 180-104498-2

Method: 9315 -	Radium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0495	U	0.0626	0.0628	1.00	0.104	pCi/L	04/15/20 08:55	05/07/20 04:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier			40 - 110					04/15/20 08:55	05/07/20 04:26	1

Method: 9320 - I	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0141	U	0.227	0.227	1.00	0.405	pCi/L	04/15/20 09:44	04/28/20 18:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/15/20 09:44	04/28/20 18:41	1
Y Carrier	89.0		40 - 110					04/15/20 09:44	04/28/20 18:41	1

Method: Ra226_Ra2	28 - Con	nbined Ra	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0354	U	0.235	0.236	2.00	0.405	pCi/L		05/07/20 09:36	1

Lab Sample ID: 180-104498-2 **Client Sample ID: ARGWA-5** Date Collected: 04/07/20 11:46 **Matrix: Water** Date Received: 04/10/20 08:15

Method: 9315 -	Radium-226 ((GFPC)								
	·		Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00670	U	0.0516	0.0516	1.00	0.104	pCi/L	04/15/20 08:55	05/07/20 04:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					04/15/20 08:55	05/07/20 04:27	1

Method: 9320 -	Radium-228 ((GFPC)								
		•	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.191	U	0.236	0.236	1.00	0.390	pCi/L	04/15/20 09:44	04/28/20 18:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					04/15/20 09:44	04/28/20 18:41	1
Y Carrier	84 9		40 110					04/15/20 09:44	04/28/20 18:41	1

Client Sample ID: ARGWA-5

Date Collected: 04/07/20 11:46 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-2

Matrix: Water

Job ID: 180-104498-2

Method: Ra226_	Ra228 - Combined Radium-226 and Radium-228
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Method. Nazzo_Naz	20 - CO II	ibilieu ita	ululli-220 a	iiu itauiuii	1-220					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.198	U	0.242	0.242	2.00	0.390	pCi/L		05/07/20 09:36	1
+ 228										

Client Sample ID: ARGWA-12

Date Collected: 04/07/20 13:46 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-3

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0124	U	0.0484	0.0484	1.00	0.0961	pCi/L	04/15/20 08:55	05/07/20 04:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					04/15/20 08:55	05/07/20 04:27	

Method: 9320 - Radium-228 (GFPC)

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.609		0.297	0.302	1.00	0.431	pCi/L	04/15/20 09:44	04/28/20 18:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					04/15/20 09:44	04/28/20 18:41	1
Y Carrier	81.9		40 - 110					04/15/20 09:44	04/28/20 18:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

_			Count	Total					
			Uncert.	Uncert.					
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.622		0.301	0.306	2.00	0.431 pCi/L		05/07/20 09:36	1

Client Sample ID: ARGWA-13

Date Collected: 04/07/20 15:32 Date Received: 04/10/20 08:15

Lab	Sample	ID: 18	0-104498-4
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Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00762	U	0.0449	0.0449	1.00	0.0924	pCi/L	04/15/20 08:55	05/07/20 04:27	1
Carrier	%Yield	Qualifier	Limits 40 110					Prepared	Analyzed	Dil Fac

85.2

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWA-13

Date Collected: 04/07/20 15:32 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-4

04/15/20 09:44 04/28/20 18:41

Lab Sample ID: 180-104498-5

Matrix: Water

Matrix: Water

Job ID: 180-104498-2

Method: 9320 - I	Radium-228 ((GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0490	Ū	0.234	0.234	1.00	0.429	pCi/L	04/15/20 09:44	04/28/20 18:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		40 - 110					04/15/20 09:44	04/28/20 18:41	

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228 Count Total Uncert. Uncert. Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ **MDC** Unit RL Prepared Analyzed -0.0414 U 0.238 0.238 2.00 0.429 pCi/L 05/07/20 09:36 Combined Radium 226 + 228

40 - 110

Client Sample ID: ARGWA-14

Date Collected: 04/06/20 15:57

Date Received: 04/10/20 08:15

Y Carrier

Method: 9315 - Ra	adium-226 (GFPC)								
	•	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00155	Ū	0.0692	0.0692	1.00	0.138	pCi/L	04/15/20 08:55	05/07/20 04:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.2		40 - 110					04/15/20 08:55	05/07/20 04:27	1

Method: 9320 - Ra	dium-228 (GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.288	U	0.261	0.263	1.00	0.420	pCi/L	04/15/20 09:44	04/28/20 18:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.2		40 - 110					04/15/20 09:44	04/28/20 18:42	1
Y Carrier	83.4		40 - 110					04/15/20 09:44	04/28/20 18:42	1

Method: Ra226_Ra2	228 - Con	nbined Ra	dium-226 a	nd Radium	-228					
_	_									
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.286	U	0.270	0.272	2.00	0.420	pCi/L		05/07/20 09:36	1

Client Sample ID: ARGWC-7

Date Collected: 04/08/20 09:55 Date Received: 04/10/20 08:15

Lab Sample ID: 180-104498-6

Matrix: Water

Job ID: 180-104498-2

Radium-226 ((GFPC)								
		Count	Total						
Posult	Qualifier			DI	MDC	Unit	Dronarod	Analyzod	Dil Fac
									DII Fac
0.0755	U	0.0634	0.0638	1.00	0.0926	pCI/L	04/15/20 08:55	05/07/20 04:27	1
%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
91.8		40 - 110					04/15/20 08:55	05/07/20 04:27	
	Result 0.0755 %Yield	Result Qualifier 0.0755 U %Yield Qualifier 91.8	Count Uncert.	Count Uncert. Uncert. Uncert.		Count Total Uncert. Uncert. Uncert. Uncert. Uncert. O.0755 U O.0634 O.0638 O.0638 O.0926 WYield Qualifier Limits Limits Limits Limits Count Total Uncert. Unc	Count Total Uncert. Uncert. Uncert. Result Qualifier (2σ+/-) (2σ+/-) RL MDC Unit O.0755 U O.0634 O.0638 1.00 O.0926 pCi/L %Yield Qualifier Limits	Count Total Uncert. Uncert. Uncert. Prepared	Count Total Uncert. Uncert. Uncert. Count Uncert. Uncert. Count Uncert. Uncert. Uncert. Uncert. Count Uncert. Count Unit Prepared Analyzed Analyzed O.0755 U O.0634 O.0638 O.0926 D.0926 D.0926 D.0926 O.04/15/20 08:55 O.07/20 04:27 O.0926

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.290	U	0.267	0.268	1.00	0.429	pCi/L	04/15/20 09:44	04/28/20 18:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		40 - 110					04/15/20 09:44	04/28/20 18:42	1
Y Carrier	83.7		40 - 110					04/15/20 09:44	04/28/20 18:42	1

Method: Ra226_Ra2	228 - Combined Rad	dium-226 a	nd Radium	1-228				
_		Count	Total					
		Uncert.	Uncert.					
Analyte	Result Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.366 U	0.274	0.275	2.00	0.429 pCi/L	-	05/07/20 09:36	1

Lab Sample ID: 180-104498-7 **Client Sample ID: ARGWC-8** Date Collected: 04/09/20 12:35 **Matrix: Water** Date Received: 04/10/20 08:15

Method: 9315 - I	Radium-226 ((GFPC)								
		()	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0197	U	0.0615	0.0615	1.00	0.116	pCi/L	04/15/20 08:55	05/07/20 04:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110					04/15/20 08:55	05/07/20 04:27	1

Method: 9320 - I	Radium-228 ((GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.236	U	0.260	0.261	1.00	0.427	pCi/L	04/15/20 09:44	04/28/20 18:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110					04/15/20 09:44	04/28/20 18:42	1
Y Carrier	84.5		40 - 110					04/15/20 09:44	04/28/20 18:42	1

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-8

Lab Sample ID: 180-104498-7 Date Collected: 04/09/20 12:35

Matrix: Water

Date Received: 04/10/20 08:15

Method: Ra226_Ra228 - Combined Radium-226 and Radium-	ım-228
Count Total	
Uncert. Uncert.	

		Oncort.	Oncort.					
Analyte	Result Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.255 U	0.267	0.268	2.00	0.427 pCi/L		05/07/20 09:36	1

+ 228

Lab Sample ID: 180-104498-8 Client Sample ID: ARGWC-9

Date Collected: 04/09/20 10:25 **Matrix: Water**

Date Received: 04/10/20 08:15

Method: 9315 -	Radium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00982	U	0.0590	0.0591	1.00	0.116	pCi/L	04/15/20 08:55	05/07/20 04:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		40 - 110					04/15/20 08:55	05/07/20 04:27	1

Method: 9320 - R	adium-228 ((GFPC)	Count	Tatal						
			Count Uncert.	Total Uncert.						5
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.324	U	0.242	0.244	1.00	0.379	pCi/L	04/15/20 09:44	04/28/20 18:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		40 - 110					04/15/20 09:44	04/28/20 18:42	1
Y Carrier	86.0		40 - 110					04/15/20 09:44	04/28/20 18:42	1

Method: Ra226_Ra2	228 - Con	nbined Ra	dium-226 a	nd Radiun	n-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.334	U	0.249	0.251	2.00	0.379	pCi/L		05/07/20 09:36	1

Client Sample ID: ARGWC-10 Lab Sample ID: 180-104498-9 **Matrix: Water**

Date Collected: 04/08/20 17:09 Date Received: 04/10/20 08:15

Method: 9315 - R	Radium-226 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0136	U	0.0616	0.0616	1.00	0.129	pCi/L	04/15/20 08:55	05/07/20 04:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.6		40 - 110					04/15/20 08:55	05/07/20 04:27	

85.2

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-10

Date Collected: 04/08/20 17:09 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-9

04/15/20 09:44 04/28/20 18:42

Lab Sample ID: 180-104498-10

Matrix: Water

Matrix: Water

Job ID: 180-104498-2

Method: 9320 - F	Radium-228 ((GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0265	U	0.238	0.238	1.00	0.432	pCi/L	04/15/20 09:44	04/28/20 18:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.6		40 - 110					04/15/20 09:44	04/28/20 18:42	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228 Total Count Uncert. Uncert. Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ **MDC** Unit Analyte RL Prepared Analyzed Dil Fac -0.0401 U 0.246 0.246 2.00 0.432 pCi/L 05/07/20 09:36 Combined Radium 226 + 228

40 - 110

Client Sample ID: ARGWC-15

Date Collected: 04/08/20 16:15

Date Received: 04/10/20 08:15

Y Carrier

	Radium-226 (GFPC)								
	·		Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.131		0.0857	0.0865	1.00	0.116	pCi/L	04/15/20 08:55	05/07/20 04:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.2		40 - 110					04/15/20 08:55	05/07/20 04:27	1

Method: 9320	- Radium-228 ((GFPC)	•							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.178	U	0.280	0.281	1.00	0.472	pCi/L	04/15/20 09:44	04/28/20 18:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.2		40 - 110					04/15/20 09:44	04/28/20 18:42	1
Y Carrier	83.0		40 - 110					04/15/20 09:44	04/28/20 18:42	1

Method: Ra226_Ra2	228 - Con	nbined Ra	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.309	U	0.293	0.294	2.00	0.472	pCi/L		05/07/20 09:36	1

Client Sample ID: ARGWC-16

Lab Sample ID: 180-104498-11

Matrix: Water

Job ID: 180-104498-2

Date Collected: 04/08/20 11:15 Date Received: 04/10/20 08:15

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0992	U	0.0822	0.0827	1.00	0.124	pCi/L	04/15/20 08:55	05/07/20 04:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.4		40 - 110					04/15/20 08:55	05/07/20 04:27	1

Method: 9320 -	Radium-228 ((GFPC)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.181	U	0.218	0.218	1.00	0.360	pCi/L	04/15/20 09:44	04/28/20 18:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.4		40 - 110					04/15/20 09:44	04/28/20 18:43	1
Y Carrier	86.7		40 - 110					04/15/20 09:44	04/28/20 18:43	1

Method: Ra226_Ra2	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.280	Ū	0.233	0.233	2.00	0.360	pCi/L		05/07/20 09:36	1

Client Sample ID: ARGWC-17

Date Collected: 04/08/20 14:30

Date Received: 04/10/20 08:15

Lab Sample ID: 180-104498-12

Matrix: Water

	Radium-226 (GFPC)								
		, ,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.176		0.0864	0.0879	1.00	0.104	pCi/L	04/15/20 08:55	05/07/20 06:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					04/15/20 08:55	05/07/20 06:13	1

Method: 9320 - I	Radium-228 ((GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.227	U	0.259	0.259	1.00	0.425	pCi/L	04/15/20 09:44	04/28/20 18:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					04/15/20 09:44	04/28/20 18:43	1
Y Carrier	76.6		40 - 110					04/15/20 09:44	04/28/20 18:43	1

Job ID: 180-104498-2

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-17

Lab Sample ID: 180-104498-12 Date Collected: 04/08/20 14:30 **Matrix: Water**

Date Received: 04/10/20 08:15

Method: Ra226 Ra228 - Combined Radium-226 and Radium-228

ı	Method. Nazzo_Naz	220 - 0011	ibilieu ita	ululli-220 a	ilu itaului	11-220				
l				Count	Total					
l				Uncert.	Uncert.					
	Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	Prepared	Analyzed	Dil Fac
	Combined Radium 226	0.402	U	0.273	0.274	2.00	0.425 pCi/L		05/07/20 09:36	1
Į	+ 228									

Client Sample ID: ARGWC-18

Date Collected: 04/09/20 09:40 Date Received: 04/10/20 08:15

Lab Sample ID: 180-104498-13	
Matrice Water	

Matrix: Water

Method: 9315 -	Radium-226 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.109	U	0.0799	0.0805	1.00	0.115	pCi/L	04/15/20 08:55	05/07/20 06:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					04/15/20 08:55	05/07/20 06:13	1

Method: 9320 - F	Radium-228 ((GFPC)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.310	U	0.265	0.267	1.00	0.425	pCi/L	04/15/20 09:44	04/28/20 18:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					04/15/20 09:44	04/28/20 18:43	1
Y Carrier	86.4		40 - 110					04/15/20 09:44	04/28/20 18:43	1

Method: Ra226_Ra	228 - Con	nbined Ra	idium-226 a	ınd Radiur	n-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.419	U	0.277	0.279	2.00	0.425	pCi/L		05/07/20 09:36	1
+ 228										

Client Sample ID: EB-1-4-9-20 Lab Sample ID: 180-104498-14 Date Collected: 04/09/20 10:40 **Matrix: Water**

Date Received: 04/10/20 08:15

Method: 9315 - F	Radium-226 ((GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0687	U	0.0711	0.0713	1.00	0.112	pCi/L	04/15/20 08:55	05/07/20 06:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		40 - 110					04/15/20 08:55	05/07/20 06:13	

Client Sample ID: EB-1-4-9-20

Date Collected: 04/09/20 10:40 Date Received: 04/10/20 08:15 Lab Sample ID: 180-104498-14

Lab Sample ID: 180-104498-15

Matrix: Water

Matrix: Water

Job ID: 180-104498-2

Method: 9320 -	Radium-228 ((GFPC)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.418	U	0.330	0.332	1.00	0.527	pCi/L	04/15/20 09:44	04/28/20 18:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		40 - 110					04/15/20 09:44	04/28/20 18:49	1
Y Carrier	87.5		40 - 110					04/15/20 09:44	04/28/20 18:49	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228 Count Total Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac 0.486 U 0.338 0.340 2.00 0.527 pCi/L 05/07/20 09:36 Combined Radium 226 + 228

Client Sample ID: FB-1-4-7-20

Date Collected: 04/07/20 16:00

Date Received: 04/10/20 08:15

Method: 9315 - F	Radium-226 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0424	U	0.0593	0.0594	1.00	0.100	pCi/L	04/15/20 08:55	05/07/20 06:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		40 - 110					04/15/20 08:55	05/07/20 06:13	1

Method: 9320 - Ra	dium-228 ((GFPC)								
		,	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.391	U	0.267	0.269	1.00	0.416	pCi/L	04/15/20 09:44	04/28/20 18:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		40 - 110					04/15/20 09:44	04/28/20 18:49	1
Y Carrier	92.0		40 - 110					04/15/20 09:44	04/28/20 18:49	1

Method: Ra226_Ra	228 - Combi	ned Radium-226	and Radiu	m-228					
_		Count	Total						
		Uncert.	Uncert.						
Analyte	Result Qu	ualifier (2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.434	0.274	0.275	2.00	0.416	pCi/L		05/07/20 09:36	1

Client Sample Results

Client: Southern Company Job ID: 180-104498-2

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: DUP-1 Lab Sample ID: 180-104498-16

Date Collected: 04/08/20 00:00 Matrix: Water Date Received: 04/10/20 08:15

Method: 9315 - R	adium-226 ((GFPC)	Count Uncert.	Total Uncert.						
Analyte Radium-226	Result 0.153	Qualifier	(2σ+/-) 0.0773	(2σ+/-) 0.0785	1.00	MDC 0.0878	Unit pCi/L	Prepared 04/15/20 08:55	Analyzed 05/07/20 06:13	Dil Fac
Carrier Ba Carrier	97.3	Qualifier	Limits 40 - 110					Prepared 04/15/20 08:55	Analyzed 05/07/20 06:13	Dil Fac

Method: 9320 - I	Radium-228 ((GFPC)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.159	U	0.262	0.262	1.00	0.441	pCi/L	04/15/20 09:44	04/28/20 18:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3	-	40 - 110					04/15/20 09:44	04/28/20 18:49	1
Y Carrier	93.1		40 - 110					04/15/20 09:44	04/28/20 18:49	1

Method: Ra226 Ra2	228 - Con	nbined Ra	dium-226 a	nd Radiun	n-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.312	U	0.273	0.274	2.00	0.441	pCi/L		05/07/20 09:36	1

Job ID: 180-104498-2

Client: Southern Company Project/Site: CCR - Plant Arkwright Ash Pond 3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-467819/23-A

Matrix: Water

Analysis Batch: 469780

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 467819

	MB	MB	Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03121	U	0.0621	0.0621	1.00	0.111	pCi/L	04/15/20 08:55	05/07/20 06:14	1

Total

MB MB

Carrier **%Yield Qualifier** Limits Prepared Dil Fac Analyzed Ba Carrier 40 - 110 04/15/20 08:55 05/07/20 06:14 99.4

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 467819

10

Lab Sample ID: LCS 160-467819/1-A **Matrix: Water**

Analysis Batch: 469780

				i Otai					
	Spike	LCS	LCS	Uncert.				%Rec.	
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC Unit	%Rec	Limits	
Radium-226	11.3	9.899		1.04	1.00	0.105 pCi/L	87	75 - 125	

LCS LCS

Carrier %Yield Qualifier I imits 40 - 110 Ba Carrier 97.0

Lab Sample ID: LCSD 160-467819/2-A Client Sample ID: Lab Control Sample Dur

Matrix: Water

Y Carrier

Analysis Batch: 469780

Cheffic Sample ID. Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 467819

Total

40 - 110

Count

	Spike	LCSD	LCSD	Uncert.				%Rec.		RER
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC Uni	t %Rec	Limits	RER	Limit
Radium-226	11.3	9.803		1.03	1.00	0.116 pCi/	L 86	75 - 125	0.05	1

LCSD LCSD %Yield Qualifier Limits

91.2

Carrier Ba Carrier 95.7 40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-467826/23-A Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA Analysis Batch: 469049 **Prep Batch: 467826**

Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac

Radium-228 04/15/20 09:44 04/28/20 18:49 0.2776 Ū 0.268 0.270 1.00 0.436 pCi/L MB MB Dil Fac Carrier **%Yield Qualifier** Limits Prepared Analyzed Ba Carrier 99.4 40 - 110 04/15/20 09:44 04/28/20 18:49

5/11/2020

04/15/20 09:44 04/28/20 18:49

QC Sample Results

Client: Southern Company Job ID: 180-104498-2

Project/Site: CCR - Plant Arkwright Ash Pond 3

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-467826/1-A **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 469050 **Prep Batch: 467826** Total Spike LCS LCS Uncert. %Rec.

Analyte Added RL **MDC** Unit Limits Result Qual (2σ+/-) %Rec Radium-228 0.958 1.00 0.413 pCi/L 75 - 125 8.89 7.927 89

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 97.0 40 - 110 Y Carrier 88.6 40 - 110

Lab Sample ID: LCSD 160-467826/2-A **Client Sample ID: Lab Control Sample Dup**

Matrix: Water

Analysis Batch: 469050

Total LCSD LCSD Uncert. %Rec. **RER** Spike Analyte Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits RER Limit Radium-228 1.02 0.394 pCi/L 8.89 8.527 1.00 96 75 - 125 0.30

LCSD LCSD Carrier %Yield Qualifier Limits Ba Carrier 95.7 40 - 110 40 - 110 Y Carrier 87.5

Prep Type: Total/NA

Prep Batch: 467826

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Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright Ash Pond 3

Rad

Prep Batch: 467819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-1	ARGWA-3	Total/NA	Water	PrecSep-21	
180-104498-2	ARGWA-5	Total/NA	Water	PrecSep-21	
180-104498-3	ARGWA-12	Total/NA	Ground Water	PrecSep-21	
180-104498-4	ARGWA-13	Total/NA	Water	PrecSep-21	
180-104498-5	ARGWA-14	Total/NA	Water	PrecSep-21	
180-104498-6	ARGWC-7	Total/NA	Water	PrecSep-21	
180-104498-7	ARGWC-8	Total/NA	Water	PrecSep-21	
180-104498-8	ARGWC-9	Total/NA	Water	PrecSep-21	
180-104498-9	ARGWC-10	Total/NA	Water	PrecSep-21	
180-104498-10	ARGWC-15	Total/NA	Water	PrecSep-21	
180-104498-11	ARGWC-16	Total/NA	Water	PrecSep-21	
180-104498-12	ARGWC-17	Total/NA	Water	PrecSep-21	
180-104498-13	ARGWC-18	Total/NA	Water	PrecSep-21	
180-104498-14	EB-1-4-9-20	Total/NA	Water	PrecSep-21	
180-104498-15	FB-1-4-7-20	Total/NA	Water	PrecSep-21	
180-104498-16	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-467819/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-467819/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-467819/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 467826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104498-1	ARGWA-3	Total/NA	Water	PrecSep_0	
180-104498-2	ARGWA-5	Total/NA	Water	PrecSep_0	
180-104498-3	ARGWA-12	Total/NA	Ground Water	PrecSep_0	
180-104498-4	ARGWA-13	Total/NA	Water	PrecSep_0	
180-104498-5	ARGWA-14	Total/NA	Water	PrecSep_0	
180-104498-6	ARGWC-7	Total/NA	Water	PrecSep_0	
180-104498-7	ARGWC-8	Total/NA	Water	PrecSep_0	
180-104498-8	ARGWC-9	Total/NA	Water	PrecSep_0	
180-104498-9	ARGWC-10	Total/NA	Water	PrecSep_0	
180-104498-10	ARGWC-15	Total/NA	Water	PrecSep_0	
180-104498-11	ARGWC-16	Total/NA	Water	PrecSep_0	
180-104498-12	ARGWC-17	Total/NA	Water	PrecSep_0	
180-104498-13	ARGWC-18	Total/NA	Water	PrecSep_0	
180-104498-14	EB-1-4-9-20	Total/NA	Water	PrecSep_0	
180-104498-15	FB-1-4-7-20	Total/NA	Water	PrecSep_0	
180-104498-16	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-467826/23-A	Method Blank	Total/NA	Water	PrecSep_0	
_CS 160-467826/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-467826/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Page 26 of 32

Job ID: 180-104498-2

Chain of Custody Record



Client Information	T. Gable	1 R.	walker	Ve.	SOA	ico	Ba	to	1.	Ca	rrier Tracking No	0(8):	COC No: 400-73521-2902	8.1
Client Contact: Joju Abraham	Phone: Z. Za)	-594-3	7998	F-Mai	rit-		estate	- 0		Media			Page: Page	
Company:	170	317 5	3110	IVG	1		e e te te		. 7.				Job#:	
Southern Company Address:	Due Date Request	ad-								Reque	ested	100	Preservation Cod	des:
PO BOX 2641 GSC8	Due Date Request	eu.				1	;		and			1 10001	Freser vacion Co.	ues.
City: Birmingham	TAT Requested (d	ays):					. 25400		ead, Silver,		Cebiu			
State, Zip: AL, 35291						я.	l late		Lead		Barin ead,			
Phone:	PO#: SCS10347656				(0)		de & S		Iminm,		Arsenic, Barium, Cobalt, Lead, Lithium,	180-104	4498 Chain of C	Custody
Email: JAbraham@southernco.com	WO #:				0 0	(ON	Fluor		Cad	82	ium, C	I DES		
Project Name: CCR Plant Arkwright - Ash Pond 3 - 1st 2020 SA GWM	Project #: 40007712				100	5	n, Calcin		Barium	226 & 2	Metals (Antimony, A dmium, Chromium, C Selenium, Thallium)	container	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)
Site: Georgia	SSO/A#:				Sampl	MS/MSD (Yes	(Boro		reenic	adium 320)	Metals dmlum, Seleniu	5	Other:	
		Sample	Sample Type (C=comp,	Matrix (N-water, S-solic, O-wasterol,	Id Filt	Perform MS/N	Metals - App III (Boron, Calcium) 200_ORGFM_28D - Chloride, Fluoride & Sulfate, 2540C -	0	State Metals (Arsenic, Barium, Cadmium, Selenium)	Detected A4: Radium 226 & 228 (SW-846 9315/9320)	Detected A4: N Beryllium, Cad Molybdenum, S	Total Number		
Sample Identification	Sample Date	Time		BT-Tissue, A-Air)		2	30 Me	2	20 00	9 8	Mag	P ×	Special Ir	nstructions/Note:
10000	1172	-		tion Code:	TY.	7	1//	1000	1	11	1/		PH=5.90	
ARGWA-3	4-7-20	1045	G	Water	NA	-	VV		1	1	V	1000		
ARGUA-5	4-4-20	1146	G	Water	W	V	VV	_	V/	1	V	3		
ARGWA-12	4-7-20	1346	G	Water	M	N	1/		V	V	V		PH = 5.91	
ARGWA-13	4-7-20	1532	G	Water	M	N	11		V	V	V	3	PH= 5.84	
ARGWA-14	4-6-20	1557	G	Water	M	N	11		V	V	V	3	PH = 5.90	
ARGWC-7	4-8-20	0955	G	Water	N	N	11		1	1		4	PH = 5.75	Extra Rad
ARGWC-8	4-9-20		G	Water	N	N	1		V	V	V	3	PH = 6.42	
ARGW C-9	4-9-20	1025	G	Water	W	N	1/	1	1	V		3	PH = 5.90	
ARKUC-10	4-8-20	1709	G	Water	M	N	VV	1	1	/		3	PH=5,95	
ARGWC-15	4-8-20	1615	G	Water	M	N	1	/	1	1		3	PH=6.26	
ARGWC-16	4-8-20	1115	G	Water	N	N	VV	/	1	V			PH=507	
Possible Hazard Identification	1	_			-	Sam	ole Dispos	sal (A	fee ma	y be ass	essed if san	ples are retain	ed longer than t	month)
Non-Hazard Flammable Skin Irritant Poi	son B Winkin	nown -	Radiclogical									□ _{Arch}	ed longer than 1 live For	Months
Deliverable Requested: I, II, III, IV, Other (specify)						Spec	ial Instruct	ions/0	C Requ	uirements				
Empty Kit Relinquished by:		Date:			Tim	ne:					Method of S	hipment:		
Relincuished by: Om War	Date/Times - Z	0 1	503	Company	_		eceived by:	1	C	_		Date/Time: 9-	20 15	Company
Relinquished by:	Date/Time:	20 1	1504	Company		R	eceived by	~				Date/Time: U/10/25	815	Company
Relinquished by:	Date/Time:			Company		R	eceived by:					Date/Time:		Company
Custody Seals Intact: Custody Seal No.:						0	coler Tempe	rature(s) °C and	Other Rem	arks:		Alan A	

5/11/2020

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Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, Thallium, Radium

Ver: 08/04/2016

681-Atlanta

Chain of Custody Record



Client Information	Sampler: T. Goble	1 R. Wa	1 Ker	Lab Pi	M: Son:	66	Bos	tot		Car	mer Tracking N	o(s):	COC N 400-7	la: 3521-2902	8.1	
Client Contact: Joju Abraham	Phone 7 70 -	594-1	5998	E-Mai	t		ter @ lest		: 25.5	. ~			Page: Page			
Company:	, ,	011	7 ()	INC.	2.6423	JU	TEN BY NEST			Reque	etad		Job #:			
Southern Company Address:	Due Date Request	ed:			0 100		Т		ÍΠ	reque	Steu		Prese	ervation Cod	des:	
PO BOX 2641 GSC8	TAT Requested (d.	non-le				1	9	r, an	11		É		A-HO		M - Hexane	
City: Birmingham	I A I Requested (d.	ayoj.				ı	1 284	2 N	11		£ =		B - Na C - Zn	n.Acetate	N - None O - AsNaO2	
State, Zip: AL, 35291						1	Metals - App III (Boron, Calclum) 100_ORGFM_28D - Chloride, Fluoride & Sulfate, 2640C	State Metals (Arsenic, Barium, Cadmium, Lead, Silver, and			(Antimony, Arsenio, Barium, Chromium, Cobalt, Lead, Lithium, m, Thallium)			tric Acid sHSO4	P - Na2O4S Q - Na2SO3 R - Na2S2O3	
Phone:	PO#: SCS10347656				(oN		45 op	l line			rsenio obalt,		G-Ar	mchlor scorbic Acid	S-H2SO4	frate
Email: JAbraham@southemco.com	WO#:						um)	, Cad		28	lum, C		I - loe		U - Acetone V - MCAA	
JAbraham@southernco.com Project Name: CCR Plant Arkwright - Ash Pond 3 - 1st 2020 SA GMM	Project #: 40007712				(Yes		Calci oride,	Barlum		26 & 2	Antimo hromi , Thai		L-ED Other		W - pH 4-5 Z - other (specify)	
CCR Plant Arkwright - Ash Pond 3 - 1st 2020 SA GWM Sha: Georgia	SSOW#:				Field Filtered Sample (Yes or Perform MS/MSD (Yes or No)		Boron.	enic, i		Detected A4: Radium 226 & 228 (SW-846 9315/9320)	Detected A4: Metals (Ant Beryllium, Cadmium, Chro Molybdenum, Selenium, T		Other	:		
Georgia			Sample	Matrix	s per	ı	A_28D	Ars		15/932	f: Me Dadmi m, Sel					
			Type	(W-water, S-solid,	Field Filtered Perform MS/N		- Ap	Metal	Ē	ted A.	lum, G		Total Number			
Sample Identification	Sample Date	Sample Time	(C=Comp,	Orwastefoli, BT+Tissue, A+Air)	Perfo		details 000_0	State	Jelen	SW-8	Jetec Jeryll Aolyb		Lota	Special I	nstructions/Note	
Sample Identification	Semple bate	><		ation Code:	W									Ореснати	istructions i vote	
ARGUC-17	4-8-20	1430	G	Water	NN	_	VV	1	/	V			3 PH =	5.02		
ARGUC-18	4-9-20	0940	G	Water	NN)	VV	1		1			0.00	5.98		
EB-1-4-9-20	4-9-20	1040	G	Water	NN	1	VV	1 0		V	/		3 pH =			
FB-1-4-7-20	47-20	1600	G	Water	NN	J	VV			1	/		3 pH =			
Dup-1	4-8-20	-	G	Water	NA	V	1	-		1	/		3 PH =			
1			G	Water	П	Τ		П					pH =			
- 5			G	Water	П			П					pH =			
			G	Water	П								pH =			
			G	Water	П								pH =			
			G	Water	П								pH =			
			G	Water	П								pH =			
Possible Hazard Identification	ıλί				S				e may	be ass	essed if sar	nples are reta	ined lon	nger than 1		
Non-Hazard Flammable Skin Imitant Pois Deliverable Requested: I, III, III, IV, Other (specify)	son B Unkn	OWN -/	Radiologica		Si	_	Return To al Instructi				posal By Lab	Ar	chive Fo	r	Months	
Empty Kit Relinquished by:		Date:			Time	_					Method of 3	Shipment:				
Relinquished by: V	Date/Time:		503	Compagy			eceived by:	-					9-20	0	1800 T	_
Relinquished by:			100	Company	C	Ri	eceived by	_		-		Date(Time:			Company	
Relinquisted by:	Date/Time:	20	150	Company			eceived by:	m	_			Ulfol1	1	205	Company Company	/
	Juli III.			Junipany								Data inite.			Company	
Custody Seals Intact: Custody Seal No.: A Yes A No						0	ooler Temper	rature(s) °(C and Ot	her Rem	arks:					

Ver: 08/04/2016









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TestAmeric

DRIGIN ID-LIYA (678) 966-9991 GEGRGE TAYLOR EUROFINS TESTAMERICA 6500 HCDONOUGH DRIVE SUITE C.10 NITED STATES US

BILL REC

EUROFINS TESTAMERICA PITTSE PITTSBURGH PA 15238 SAMPLE RECIEVING 301 ALPHA DR. RIDC PARK

(412) 963 - 7058



STANDAF

4 of 4

O Initials Uncorrected temp Thermometer ID

PT-WII-SR-001 effective 7/26/13

SHIP DATE: 09APR20 ... STUDIES 125 LB ACTUGT: 81.75 LB CAP: 859116/CAFE3313 EUROFINS TESTAMERICA PITTSBURGH BILL RECIPIENT PITTSBURGH PA 15238 ORIGIN ID:LIYA (678) 966-9991 EEDRGE TAT-DAMERICA EEDRG TESTARERICA ESOO MODONGUGH DRIVE ESOO MODONGUGH DRIVE TO SAMPLE RECIEVING 301 ALPHA DR. RIDC PARK MORCROSS, GA 30083 (412) 963-7068

FRI - 10 APR 3:00P

PA-US PIT STANDARD OVERNIGHT

THE THREE PROPERTY OF THE PERSON AND

Initials Uncorrected temp Thermometer ID

PT-WI-SR-001 effective 7/26/13 0

180-104498 Waybill



FRI - 10 APR 3:00P

STANDARD OVERNIGHT

TRK# 1516 9323 3428 ## MASTER ##

1 of 4

Uncorrected temp Thermometer ID

O Initials

S

PT-WI-SR-001 effective 7/26/13

75238 PA-W PIT **NA AGCA**

Uncorrected temp

Thermometer ID

PITTSBURGH PA 15238

301 ALPHA L **EUROFINS 1**

RIDC PARK

VING

SAMPLE RE

CELOFIN D'LIYE GEORGE AFUOR EUROFINS TESTAM ESOO HCDONOUGH D NUTE C-10 NORCROSS, GA 3001 UNITED STATES US

Client: Southern Company Job Number: 180-104498-2

Login Number: 104498 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

oroator: cay, moniac c		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is 6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-104498-2 Client: Southern Company

Login Number: 104498 List Number: 2

Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica. St. Louis

31 Oour ce	Luionna realAmenca, ol. Louis	
	List Creation: 04/14/20 01:19 PM	

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Test Date / Time: 4/7/2020 9:27:42 AM **Project:** Plant Arkwright - Ash Pond 3 **Operator Name:** Ryan Walker

Location Name: ARGWA-3

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 32 ft Total Depth: 42.29 ft

Initial Depth to Water: 33.98 ft

Pump Type: QED Bladder

Tubing Type: Poly

Pump Intake From TOC: 37 ft Estimated Total Volume Pumped:

15516.667 ml

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.22 ft Instrument Used: Aqua TROLL 400

Serial Number: 714293

Test Notes:

Weather Conditions:

Cloudy 60 s

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.3	+/- 10	+/- 10	+/- 5	
4/7/2020 9:27 AM	00:00	5.95 pH	19.44 °C	67.25 μS/cm	6.75 mg/L		99.9 mV	33.98 ft	200.00 ml/min
4/7/2020 9:32 AM	05:00	5.87 pH	19.28 °C	64.21 µS/cm	6.63 mg/L		94.9 mV	33.98 ft	200.00 ml/min
4/7/2020 9:34 AM	07:07	5.87 pH	19.28 °C	63.75 µS/cm	6.62 mg/L		94.9 mV	33.98 ft	200.00 ml/min
4/7/2020 9:35 AM	07:35	5.86 pH	19.27 °C	64.49 µS/cm	6.61 mg/L	3.87 NTU	106.3 mV	34.20 ft	200.00 ml/min
4/7/2020 9:40 AM	12:35	5.87 pH	19.31 °C	64.72 µS/cm	6.63 mg/L	4.04 NTU	109.7 mV	34.20 ft	200.00 ml/min
4/7/2020 9:45 AM	17:35	5.87 pH	19.34 °C	65.81 µS/cm	6.60 mg/L	5.50 NTU	111.7 mV	34.20 ft	200.00 ml/min
4/7/2020 9:50 AM	22:35	5.87 pH	19.35 °C	65.87 µS/cm	6.56 mg/L	5.15 NTU	113.5 mV	34.20 ft	200.00 ml/min
4/7/2020 9:55 AM	27:35	5.88 pH	19.41 °C	66.28 µS/cm	6.52 mg/L	4.99 NTU	115.0 mV	34.20 ft	200.00 ml/min
4/7/2020 10:00 AM	32:35	5.89 pH	19.44 °C	66.52 µS/cm	6.51 mg/L	4.78 NTU	116.7 mV	34.20 ft	200.00 ml/min
4/7/2020 10:05 AM	37:35	5.89 pH	19.48 °C	66.70 µS/cm	6.51 mg/L	4.61 NTU	118.6 mV	34.20 ft	200.00 ml/min
4/7/2020 10:10 AM	42:35	5.89 pH	19.47 °C	66.33 µS/cm	6.51 mg/L	4.60 NTU	105.0 mV	34.20 ft	200.00 ml/min
4/7/2020 10:15 AM	47:35	5.89 pH	19.55 °C	66.61 µS/cm	6.49 mg/L	4.22 NTU	105.9 mV	34.20 ft	200.00 ml/min
4/7/2020 10:20 AM	52:35	5.89 pH	19.54 °C	67.34 µS/cm	6.48 mg/L	3.88 NTU	122.2 mV	34.20 ft	200.00 ml/min

4/7/2020	57:35	5.90 pH	19.58 °C	67.48 µS/cm	6.48 mg/L	3.49 NTU	123.6 mV	34.20 ft	200.00 ml/min
10:25 AM	37.33	5.90 pm	19.50 C	07.40 μο/οπ	0.40 mg/L	3.49 1110	123.0 111	34.20 It	200.00 111/111111
4/7/2020	01:02:35	5.90 pH	19.60 °C	66.90 µS/cm	6.48 mg/L	3.37 NTU	108.5 mV	34.20 ft	200.00 ml/min
10:30 AM	01.02.33	3.90 pm	19.00 C	00.90 μ3/cm	0.46 mg/L	3.37 1110	100.5 1110	34.20 II	200.00 111/111111
4/7/2020	01:07:25	5.90 pH	19.55 °C	67.56 µS/cm	6.47 mg/L	3.09 NTU	126.0 mV	34.20 ft	200.00 ml/min
10:35 AM	01:07:35	3.90 pm	19.55 C	07.30 μ3/cm	0.47 Hig/L	3.09 1410	120.0 1110	34.20 II	200.00 111/111111
4/7/2020	01:12:35	5.90 pH	19.55 °C	67.69 µS/cm	6.47 mg/L	2.88 NTU	127.3 mV	34.20 ft	200.00 ml/min
10:40 AM	01.12.33	3.90 pm	19.55 C	07.09 μ3/cm	0.47 Hig/L	2.00 1110	127.31110	34.20 II	200.00 111/111111
4/7/2020	01:17:35	5.90 pH	19.52 °C	67.77 µS/cm	6.48 mg/L	2.31 NTU	128.5 mV	34.20 ft	200.00 ml/min
10:45 AM	01.17.33	3.90 pri	19.52 C	07.77 μ3/6/11	0.40 Hig/L	2.51 N10	120.51110	34.20 It	200.00 111/111111

Samples

Sample ID:	Description:
ARGWA-3	Sampled at 10:45. Cloudy, 60 s.

Created using VuSitu from In-Situ, Inc.

Test Date / Time: 4/7/2020 11:16:11 AM Project: Plant Arkwright - Ash Pond 3 Operator Name: Ryan Walker

Location Name: ARGWA-5

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 23 ft Total Depth: 33.11 ft

Initial Depth to Water: 21.72 ft

Pump Type: QED Bladder

Tubing Type: Poly

Pump Intake From TOC: 28 ft Estimated Total Volume Pumped:

8400 ml

Flow Cell Volume: 90 ml Final Flow Rate: 280 ml/min Final Draw Down: 0.18 ft Instrument Used: Aqua TROLL 400

Serial Number: 714293

Test Notes:

Weather Conditions:

Cloudy 60 s

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.3	+/- 10	+/- 25	+/- 5	
4/7/2020 11:16 AM	00:00	5.89 pH	19.33 °C	54.73 µS/cm	4.93 mg/L		110.5 mV	21.72 ft	280.00 ml/min
4/7/2020 11:21 AM	05:00	5.86 pH	18.92 °C	54.71 μS/cm	4.57 mg/L	2.12 NTU	110.6 mV	21.90 ft	280.00 ml/min
4/7/2020 11:26 AM	10:00	5.86 pH	18.97 °C	55.11 μS/cm	4.49 mg/L	1.75 NTU	111.1 mV	21.90 ft	280.00 ml/min
4/7/2020 11:31 AM	15:00	5.86 pH	18.93 °C	55.39 µS/cm	4.36 mg/L	1.49 NTU	111.7 mV	21.90 ft	280.00 ml/min
4/7/2020 11:36 AM	20:00	5.86 pH	18.97 °C	55.86 µS/cm	4.29 mg/L	1.47 NTU	112.1 mV	21.90 ft	280.00 ml/min
4/7/2020 11:41 AM	25:00	5.86 pH	18.96 °C	56.76 µS/cm	4.38 mg/L	1.21 NTU	111.7 mV	21.90 ft	280.00 ml/min
4/7/2020 11:46 AM	30:00	5.86 pH	18.96 °C	57.65 µS/cm	4.40 mg/L	1.30 NTU	111.9 mV	21.90 ft	280.00 ml/min

Samples

Sample ID:	Description:
ARGWA-5	Sampled at 11:46. Cloudy, 70 s.

Test Date / Time: 4/7/2020 1:16:23 PM **Project:** Plant Arkwright - Ash Pond 3 **Operator Name:** Ryan Walker

Location Name: ARGWA-12

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 22 ft Total Depth: 32.35 ft

Initial Depth to Water: 13.89 ft

Pump Type: QED Bladder

Tubing Type: Poly

Pump Intake From TOC: 27 ft Estimated Total Volume Pumped:

6600 ml

Flow Cell Volume: 90 ml Final Flow Rate: 220 ml/min Final Draw Down: 0.81 ft Instrument Used: Aqua TROLL 400

Serial Number: 714293

Test Notes:

Weather Conditions:

Sunny, 70 s

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.3	+/- 10	+/- 25	+/- 5	
4/7/2020 1:16 PM	00:00	6.02 pH	19.55 °C	143.20 μS/cm	4.00 mg/L		115.1 mV	13.89 ft	220.00 ml/min
4/7/2020 1:21 PM	05:00	5.97 pH	18.62 °C	141.96 μS/cm	2.94 mg/L	1.30 NTU	129.8 mV	14.70 ft	220.00 ml/min
4/7/2020 1:26 PM	10:00	5.95 pH	18.54 °C	138.36 μS/cm	2.74 mg/L	4.13 NTU	114.5 mV	14.70 ft	220.00 ml/min
4/7/2020 1:31 PM	15:00	5.93 pH	18.57 °C	137.43 μS/cm	2.79 mg/L	4.16 NTU	114.2 mV	14.70 ft	220.00 ml/min
4/7/2020 1:36 PM	20:00	5.93 pH	18.54 °C	136.67 μS/cm	2.74 mg/L	4.17 NTU	113.5 mV	14.70 ft	220.00 ml/min
4/7/2020 1:41 PM	25:00	5.92 pH	18.48 °C	136.43 μS/cm	2.72 mg/L	3.89 NTU	113.4 mV	14.70 ft	220.00 ml/min
4/7/2020 1:46 PM	30:00	5.91 pH	18.53 °C	136.20 μS/cm	2.77 mg/L	3.49 NTU	129.0 mV	14.70 ft	220.00 ml/min

Samples

Sample ID:	Description:
ARGWA-12	Sampled at 13:46. Cloudy, 70 s.

Test Date / Time: 4/7/2020 2:37:20 PM **Project:** Plant Arkwright - Ash Pond 3 **Operator Name:** Ryan Walker

Location Name: ARGWA-13

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33 ft Total Depth: 43.25 ft

Initial Depth to Water: 21.26 ft

Pump Type: QED Bladder

Tubing Type: Poly

Pump Intake From TOC: 38 ft Estimated Total Volume Pumped:

7 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.44 ft Instrument Used: Aqua TROLL 400

Serial Number: 714293

Test Notes:

Weather Conditions:

Cloudy 70 s

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.3	+/- 10	+/- 25	+/- 5	
4/7/2020 2:37 PM	00:00	6.31 pH	20.81 °C	1,272.3 μS/cm	5.41 mg/L		122.6 mV	21.26 ft	200.00 ml/min
4/7/2020 2:42 PM	05:00	5.97 pH	19.19 °C	1,222.1 µS/cm	2.16 mg/L	1.11 NTU	123.2 mV	21.70 ft	200.00 ml/min
4/7/2020 2:47 PM	10:00	5.91 pH	18.88 °C	779.58 μS/cm	3.02 mg/L	1.65 NTU	135.1 mV	21.70 ft	200.00 ml/min
4/7/2020 2:52 PM	15:00	5.89 pH	18.79 °C	686.68 μS/cm	3.36 mg/L	1.83 NTU	133.6 mV	21.70 ft	200.00 ml/min
4/7/2020 2:57 PM	20:00	5.88 pH	18.79 °C	632.24 μS/cm	3.46 mg/L	1.76 NTU	114.8 mV	21.70 ft	200.00 ml/min
4/7/2020 3:02 PM	25:00	5.87 pH	18.71 °C	605.57 μS/cm	3.45 mg/L	1.76 NTU	113.7 mV	21.70 ft	200.00 ml/min
4/7/2020 3:07 PM	30:00	5.86 pH	18.71 °C	590.52 μS/cm	3.40 mg/L	1.62 NTU	113.3 mV	21.70 ft	200.00 ml/min
4/7/2020 3:12 PM	35:00	5.85 pH	18.64 °C	573.07 μS/cm	3.37 mg/L	1.59 NTU	112.6 mV	21.70 ft	200.00 ml/min
4/7/2020 3:17 PM	40:00	5.85 pH	18.66 °C	557.87 μS/cm	3.35 mg/L	1.38 NTU	112.2 mV	21.70 ft	200.00 ml/min
4/7/2020 3:22 PM	45:00	5.84 pH	18.66 °C	550.73 μS/cm	3.37 mg/L	1.27 NTU	128.1 mV	21.70 ft	200.00 ml/min
4/7/2020 3:27 PM	50:00	5.84 pH	18.66 °C	543.40 μS/cm	3.37 mg/L	1.24 NTU	112.2 mV	21.70 ft	200.00 ml/min
4/7/2020 3:32 PM	55:00	5.84 pH	18.63 °C	541.75 μS/cm	3.40 mg/L	1.15 NTU	111.7 mV	21.70 ft	200.00 ml/min

Samples

Sample ID:	Description:
ARGWA-13	Sampled at 15:32. Cloudy, 70 s.

Created using VuSitu from In-Situ, Inc.

Test Date / Time: 4/6/2020 2:47:46 PM **Project:** Plant Arkwright - Ash Pond 3 **Operator Name:** Ryan Walker

Location Name: ARGWA-14

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 48 ft Total Depth: 58.18 ft

Initial Depth to Water: 41.1 ft

Pump Type: QED Bladder

Tubing Type: Poly

Pump Intake From TOC: 53 ft Estimated Total Volume Pumped:

3500 ml

Flow Cell Volume: 90 ml Final Flow Rate: 50 ml/min Final Draw Down: 4.3 ft Instrument Used: Aqua TROLL 400

Serial Number: 714293

Test Notes:

Weather Conditions:

Sunny, 70 s

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.3	+/- 10	+/- 10	+/- 5	
4/6/2020 2:47 PM	00:00	7.49 pH	22.09 °C	233.78 μS/cm	8.71 mg/L		103.6 mV	41.10 ft	50.00 ml/min
4/6/2020 2:52 PM	05:00	6.63 pH	21.52 °C	379.28 μS/cm	4.62 mg/L	2.94 NTU	98.2 mV	42.30 ft	50.00 ml/min
4/6/2020 2:57 PM	10:00	6.67 pH	21.33 °C	471.38 μS/cm	3.00 mg/L	2.43 NTU	107.1 mV	42.70 ft	50.00 ml/min
4/6/2020 3:02 PM	15:00	6.68 pH	21.78 °C	482.57 μS/cm	3.10 mg/L	0.95 NTU	97.4 mV	43.10 ft	50.00 ml/min
4/6/2020 3:07 PM	20:00	6.67 pH	22.00 °C	485.87 μS/cm	3.23 mg/L	0.94 NTU	97.2 mV	43.40 ft	50.00 ml/min
4/6/2020 3:12 PM	25:00	6.67 pH	21.82 °C	486.59 μS/cm	3.35 mg/L	0.99 NTU	97.1 mV	43.80 ft	50.00 ml/min
4/6/2020 3:17 PM	30:00	6.66 pH	21.86 °C	481.32 μS/cm	3.38 mg/L	0.98 NTU	97.2 mV	44.20 ft	50.00 ml/min
4/6/2020 3:22 PM	35:00	6.65 pH	22.18 °C	479.28 μS/cm	3.41 mg/L	1.55 NTU	97.2 mV	44.40 ft	50.00 ml/min
4/6/2020 3:27 PM	40:00	6.65 pH	22.10 °C	475.97 μS/cm	3.46 mg/L	1.61 NTU	97.2 mV	44.50 ft	50.00 ml/min
4/6/2020 3:32 PM	45:00	6.65 pH	21.85 °C	476.32 μS/cm	3.44 mg/L	0.98 NTU	97.2 mV	44.70 ft	50.00 ml/min
4/6/2020 3:37 PM	50:00	6.65 pH	21.58 °C	475.32 μS/cm	3.42 mg/L	0.65 NTU	97.1 mV	44.90 ft	50.00 ml/min
4/6/2020 3:42 PM	55:00	6.65 pH	21.50 °C	474.67 μS/cm	3.40 mg/L	1.35 NTU	96.9 mV	45.10 ft	50.00 ml/min
4/6/2020 3:47 PM	01:00:00	6.66 pH	21.52 °C	471.50 μS/cm	3.38 mg/L	0.73 NTU	96.5 mV	45.20 ft	50.00 ml/min

4/6/2020 3:52 PM	01:05:00	6.66 pH	21.33 °C	468.94 μS/cm	3.39 mg/L	0.68 NTU	96.2 mV	45.30 ft	50.00 ml/min
4/6/2020 3:57 PM	01:10:00	6.65 pH	21.42 °C	463.13 μS/cm	3.42 mg/L	0.73 NTU	101.7 mV	45.40 ft	50.00 ml/min

Samples

Sample ID:	Description:
ARGWA-14	Sunny, 80 s

Created using VuSitu from In-Situ, Inc.

Product Name: Low-Flow System

Date: 2020-04-08 09:55:49

Pump Information:

Pump Model/Type

Project Information:
Operator Name Taylor Goble

Company Name ACC Tubing Type
Project Name Plant Arkwright Ash Pond 3 Tubing Diameter
Site Name Plant Arkwright Ash Pond 3 Tubing Length

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model HACH

Pump placement from TOC 43 ft

QED Bladder Pump

poly

.17 in

48 ft

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWC-7 Well diameter Total System Volume 0.3042443 L 2 in Calculated Sample Rate Well Total Depth 48.32 ft 300 sec Stabilization Drawdown Screen Length 10 ft 4 in Depth to Water 6 L 20.20 ft **Total Volume Pumped**

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25
Last 5	09:35:04	900.01	18.65	6.02	154.27	2.69	20.44	4.22	135.74
Last 5	09:40:04	1200.01	18.70	5.88	153.94	2.14	20.50	4.13	132.25
Last 5	09:45:04	1500.00	18.71	5.80	153.97	1.88	20.56	3.74	131.17
Last 5	09:50:04	1800.00	18.68	5.78	153.89	1.74	20.62	4.09	129.44
Last 5	09:55:04	2099.99	18.71	5.75	153.97	1.32	20.68	3.90	129.00
Variance 0			0.01	-0.07	0.03			-0.39	-1.08
Variance 1			-0.03	-0.03	-0.08			0.34	-1.73
Variance 2			0.03	-0.02	0.08			-0.19	-0.44

Notes

Sampled at 0955. Cloudy 68 degrees

Grab Samples

Product Name: Low-Flow System

Date: 2020-04-09 12:36:42

Pump Information:

Project Information:
Operator Name Taylor Goble

Operator NameTaylor GoblePump Model/TypeQED Bladder PumpCompany NameACCTubing TypepolyProject NamePlant Arkwright Ash Pond 3Tubing Diameter.17 inSite NamePlant Arkwright Ash Pond 3Tubing Length43 ft

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 369807

Turbidity Make/Model HACH

Pump placement from TOC 38 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID ARGWC-8 150 mL/min Well diameter Total System Volume 0.2819272 L 2 in Calculated Sample Rate Well Total Depth 43.22 ft 300 sec Stabilization Drawdown Screen Length 10 ft 2 in Depth to Water 22 L 24.76 ft **Total Volume Pumped**

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	า		+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25
Last 5	12:15:13	7509.91	23.88	6.45	407.80	6.60	24.92	0.21	529.73
Last 5	12:20:13	7809.91	24.15	6.45	409.06	6.00	24.92	0.23	536.07
Last 5	12:25:13	8109.90	24.60	6.45	407.60	5.30	24.92	0.24	538.74
Last 5	12:30:13	8409.90	24.81	6.45	407.42	5.00	24.92	0.25	533.92
Last 5	12:35:13	8709.89	23.97	6.42	405.64	4.80	24.92	0.29	532.86
Variance 0			0.45	0.00	-1.46			0.01	2.68
Variance 1			0.21	0.00	-0.19			0.01	-4.82
Variance 2			-0.84	-0.03	-1.78			0.04	-1.06

Notes

Sampled at 1235. Sunny 76 degrees

Grab Samples

Test Date / Time: 4/9/2020 8:40:05 AM **Project:** Plant Arkwright - Ash Pond 3 **Operator Name:** Ryan Walker

Location Name: ARGWC-9

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28 ft Total Depth: 38.07 ft

Initial Depth to Water: 18.68 ft

Pump Type: QED Bladder

Tubing Type: Poly

Pump Intake From TOC: 33 ft Estimated Total Volume Pumped:

39 liter

Flow Cell Volume: 90 ml Final Flow Rate: 400 ml/min Final Draw Down: 0.32 ft Instrument Used: Aqua TROLL 400

Serial Number: 714293

Test Notes:

Weather Conditions:

Sunny, 70 s.

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.3	+/- 10	+/- 25	+/- 0.3	
4/9/2020 8:40 AM	00:00	6.03 pH	19.35 °C	66.04 μS/cm	6.91 mg/L		103.2 mV	18.68 ft	200.00 ml/min
4/9/2020 8:45 AM	05:00	5.92 pH	19.68 °C	62.77 µS/cm	6.51 mg/L	3.82 NTU	97.5 mV	18.80 ft	200.00 ml/min
4/9/2020 8:50 AM	10:00	5.91 pH	19.78 °C	62.29 µS/cm	6.33 mg/L	17.70 NTU	98.0 mV	18.80 ft	200.00 ml/min
4/9/2020 8:55 AM	15:00	5.90 pH	19.74 °C	62.25 µS/cm	6.31 mg/L	22.10 NTU	99.3 mV	18.80 ft	400.00 ml/min
4/9/2020 9:00 AM	20:00	5.90 pH	19.76 °C	62.30 µS/cm	6.26 mg/L	20.70 NTU	100.4 mV	19.00 ft	400.00 ml/min
4/9/2020 9:05 AM	25:00	5.90 pH	19.73 °C	62.83 µS/cm	6.25 mg/L	24.10 NTU	112.4 mV	19.00 ft	400.00 ml/min
4/9/2020 9:10 AM	30:00	5.90 pH	19.82 °C	62.91 µS/cm	6.25 mg/L	16.20 NTU	114.2 mV	19.00 ft	400.00 ml/min
4/9/2020 9:15 AM	35:00	5.90 pH	19.88 °C	62.85 µS/cm	6.22 mg/L	13.20 NTU	115.8 mV	19.00 ft	400.00 ml/min
4/9/2020 9:20 AM	40:00	5.90 pH	19.86 °C	62.82 µS/cm	6.21 mg/L	15.70 NTU	117.0 mV	19.00 ft	400.00 ml/min
4/9/2020 9:25 AM	45:00	5.90 pH	19.94 °C	62.83 µS/cm	6.21 mg/L	12.90 NTU	118.3 mV	19.00 ft	400.00 ml/min
4/9/2020 9:30 AM	50:00	5.90 pH	19.97 °C	62.84 µS/cm	6.23 mg/L	10.60 NTU	119.3 mV	19.00 ft	400.00 ml/min
4/9/2020 9:35 AM	55:00	5.90 pH	20.04 °C	62.86 µS/cm	6.21 mg/L	10.40 NTU	120.1 mV	19.00 ft	400.00 ml/min
4/9/2020 9:40 AM	01:00:00	5.89 pH	20.04 °C	62.75 µS/cm	6.18 mg/L	7.96 NTU	121.4 mV	19.00 ft	400.00 ml/min

4/9/2020 9:45 AM	01:05:00	5.90 pH	20.09 °C	62.79 µS/cm	6.17 mg/L	11.10 NTU	122.3 mV	19.00 ft	400.00 ml/min
4/9/2020 9:50 AM	01:10:00	5.90 pH	20.14 °C	62.73 µS/cm	6.16 mg/L	6.91 NTU	123.0 mV	19.00 ft	400.00 ml/min
4/9/2020 9:55 AM	01:15:00	5.90 pH	20.04 °C	62.81 µS/cm	6.17 mg/L	5.60 NTU	124.1 mV	19.00 ft	400.00 ml/min
4/9/2020 10:00 AM	01:20:00	5.90 pH	20.15 °C	62.75 µS/cm	6.14 mg/L	6.13 NTU	124.9 mV	19.00 ft	400.00 ml/min
4/9/2020 10:05 AM	01:25:00	5.90 pH	20.13 °C	62.69 µS/cm	6.13 mg/L	8.29 NTU	125.8 mV	19.00 ft	400.00 ml/min
4/9/2020 10:10 AM	01:30:00	5.90 pH	20.20 °C	62.70 µS/cm	6.13 mg/L	7.04 NTU	126.5 mV	19.00 ft	400.00 ml/min
4/9/2020 10:15 AM	01:35:00	5.90 pH	20.18 °C	62.69 µS/cm	6.12 mg/L	6.94 NTU	127.2 mV	19.00 ft	400.00 ml/min
4/9/2020 10:20 AM	01:40:00	5.90 pH	20.17 °C	62.75 µS/cm	6.12 mg/L	6.33 NTU	128.0 mV	19.00 ft	400.00 ml/min
4/9/2020 10:25 AM	01:45:00 5.90 pH		20.23 °C	62.65 µS/cm	6.10 mg/L	4.75 NTU	128.6 mV	19.00 ft	400.00 ml/min

Samples

Sample ID:	Description:
ARGWC-9	Sampled at 10:25. Sunny, 80 s.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 4/8/2020 2:12:43 PM **Project:** Plant Arkwright - Ash Pond 3 **Operator Name:** Ryan Walker

Location Name: ARGWC-10

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28 ft Total Depth: 38.35 ft

Initial Depth to Water: 19.24 ft

Pump Type: QED Bladder

Tubing Type: Poly

Pump Intake From TOC: 33 ft Estimated Total Volume Pumped:

38.5 liter

Flow Cell Volume: 90 ml Final Flow Rate: 220 ml/min Final Draw Down: 0.16 ft Instrument Used: Aqua TROLL 400

Serial Number: 714293

Test Notes:

Weather Conditions:

Sunny, 80 s.

Low-Flow Readings:

				Specific	RDO			Depth To	
Date Time	Elapsed Time	pН	Temperature	Conductivity	Concentration	Turbidity	ORP	Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.3	+/- 10	+/- 10	+/- 0.3	
4/8/2020 2:12 PM	00:00	6.12 pH	22.54 °C	76.06 μS/cm	5.58 mg/L		87.6 mV	19.24 ft	220.00 ml/min
4/8/2020 2:17 PM	05:00	6.01 pH	20.31 °C	78.74 μS/cm	4.93 mg/L	6.84 NTU	88.2 mV	19.40 ft	220.00 ml/min
4/8/2020 2:22 PM	10:00	5.99 pH	20.12 °C	78.90 µS/cm	4.65 mg/L	11.70 NTU	89.9 mV	19.40 ft	220.00 ml/min
4/8/2020 2:27 PM	15:00	5.98 pH	20.09 °C	79.42 µS/cm	4.58 mg/L	11.80 NTU	101.7 mV	19.40 ft	220.00 ml/min
4/8/2020 2:32 PM	20:00 5.98 pH		19.95 °C	79.40 µS/cm	4.60 mg/L	13.00 NTU	103.6 mV	19.40 ft	220.00 ml/min
4/8/2020 2:37 PM	25:00 5.97 pH		20.22 °C	79.37 µS/cm	4.57 mg/L	14.90 NTU	105.3 mV	19.40 ft	220.00 ml/min
4/8/2020 2:42 PM	30:00	5.97 pH	20.22 °C	79.41 µS/cm	4.54 mg/L	14.80 NTU	107.1 mV	19.40 ft	220.00 ml/min
4/8/2020 2:47 PM	35:00	5.97 pH	20.24 °C	78.61 µS/cm	4.56 mg/L	11.50 NTU	96.1 mV	19.40 ft	220.00 ml/min
4/8/2020 2:52 PM	40:00	5.96 pH	20.16 °C	78.10 µS/cm	4.57 mg/L	11.63 NTU	96.8 mV	19.40 ft	220.00 ml/min
4/8/2020 2:57 PM	45:00	5.96 pH	20.28 °C	78.81 µS/cm	4.57 mg/L	10.21 NTU	109.1 mV	19.40 ft	220.00 ml/min
4/8/2020 3:02 PM	50:00	5.96 pH	20.22 °C	78.67 µS/cm	4.62 mg/L	9.97 NTU	110.7 mV	19.40 ft	220.00 ml/min
4/8/2020 3:07 PM	55:00	5.95 pH	20.12 °C	78.63 µS/cm	4.61 mg/L	13.60 NTU	112.0 mV	19.40 ft	220.00 ml/min
4/8/2020 3:12 PM	01:00:00	5.95 pH	20.13 °C	78.96 µS/cm	4.63 mg/L	12.90 NTU	113.0 mV	19.40 ft	220.00 ml/min

4/8/2020 3:17 PM	01:05:00	5.95 pH	20.17 °C	78.77 µS/cm	4.59 mg/L	9.98 NTU	114.0 mV	19.40 ft	220.00 ml/min	
4/8/2020 3:22 PM	01:10:00	5.95 pH	20.17 °C	78.82 µS/cm	4.61 mg/L	11.10 NTU	115.1 mV	19.40 ft	220.00 ml/min	
4/8/2020 3:27 PM	01:15:00	5.95 pH	20.27 °C	78.59 µS/cm	4.60 mg/L	12.60 NTU	101.9 mV	19.40 ft	220.00 ml/min	
4/8/2020 3:32 PM	01:20:00	5.95 pH	20.44 °C	78.15 µS/cm	4.57 mg/L	13.80 NTU	102.0 mV	19.40 ft	220.00 ml/min	
4/8/2020 3:37 PM	01:25:00	5.95 pH	20.40 °C	78.40 µS/cm	4.58 mg/L	10.10 NTU	102.2 mV	19.40 ft	220.00 ml/min	
4/8/2020 3:42 PM	01:30:00	5.95 pH	20.25 °C	78.25 µS/cm	4.58 mg/L	12.30 NTU	102.4 mV	19.40 ft	220.00 ml/min	
4/8/2020 3:47 PM	01:35:00	5.95 pH	20.17 °C	78.38 µS/cm	4.59 mg/L	11.70 NTU	102.6 mV	19.40 ft	220.00 ml/min	
4/8/2020 3:52 PM	01:40:00	5.95 pH	20.13 °C	78.31 µS/cm	4.57 mg/L	11.00 NTU	102.7 mV	19.40 ft	220.00 ml/min	
4/8/2020 3:57 PM	01:45:00	5.95 pH	20.15 °C	78.36 µS/cm	4.59 mg/L	8.43 NTU	102.9 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:02 PM	01:50:00	5.95 pH	20.16 °C	78.23 µS/cm	4.57 mg/L	9.41 NTU	103.1 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:07 PM	01:55:00	5.95 pH	20.09 °C	78.42 µS/cm	4.56 mg/L	12.90 NTU	103.4 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:12 PM	02:00:00	5.95 pH	19.77 °C	79.31 µS/cm	4.62 mg/L	9.89 NTU	118.4 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:17 PM	02:05:00	5.95 pH	19.75 °C	78.83 µS/cm	4.52 mg/L	12.10 NTU	119.4 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:22 PM	02:10:00	5.95 pH	19.73 °C	78.29 µS/cm	4.54 mg/L	11.00 NTU	104.5 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:27 PM	02:15:00	5.95 pH	19.73 °C	78.29 µS/cm	4.51 mg/L	9.81 NTU	104.2 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:32 PM	02:20:00	5.95 pH	19.68 °C	78.33 µS/cm	4.51 mg/L	8.40 NTU	104.2 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:37 PM	02:25:00	5.94 pH	19.65 °C	78.16 µS/cm	4.50 mg/L	7.73 NTU	104.5 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:42 PM	02:30:00	5.95 pH	19.60 °C	79.02 µS/cm	4.50 mg/L	8.37 NTU	120.0 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:47 PM	02:35:00	5.95 pH	19.53 °C	78.98 µS/cm	4.48 mg/L	6.89 NTU	120.9 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:52 PM	02:40:00	5.95 pH	19.54 °C	79.27 µS/cm	4.51 mg/L	8.11 NTU	121.5 mV	19.40 ft	220.00 ml/min	
4/8/2020 4:57 PM	02:45:00	5.95 pH	19.49 °C	78.92 µS/cm	4.46 mg/L	6.14 NTU	122.0 mV	19.40 ft	220.00 ml/min	
4/8/2020 5:02 PM	02:50:00	5.95 pH	19.51 °C	78.24 µS/cm	4.45 mg/L	5.58 NTU	106.0 mV	19.40 ft	220.00 ml/min	
4/8/2020 5:07 PM	02:55:00	5.95 pH	19.50 °C	78.27 µS/cm	4.46 mg/L	4.51 NTU	105.4 mV	19.40 ft	220.00 ml/min	

Samples

Sample ID:	Description:
ARGWC-10	Sampled at 17:09. Cloudy, 70 s.

Date: 2020-04-08 16:16:10

Project Information:

Operator Name **Taylor Goble**

Company Name ACC Project Name Plant Arkwright Ash Pond 3 Plant Arkwright Ash Pond 3 Site Name

0° 0' 0" Latitude 0° 0' 0" Longitude Sonde SN 369807 Turbidity Make/Model HACH

Pump Information:

Pump Model/Type **QED Bladder Pump**

Tubing Type poly Tubing Diameter .17 in Tubing Length 42 ft

Pump placement from TOC

37 ft

Well Information:

Well ID ARGWC-15 Well diameter 2 in Well Total Depth 42.35 ft Screen Length 10 ft Depth to Water 27.15 ft

Pumping Information:

Final Pumping Rate 50 mL/min Total System Volume 0.2774638 L Calculated Sample Rate 300 sec Stabilization Drawdown 12 in **Total Volume Pumped** 2 L

Low-Flow Sampling Stabilization Summary

Time		Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25
Last 5	15:55:03	900.01	20.36	6.37	209.40	1.91	27.76	1.07	102.79
Last 5	16:00:03	1200.01	20.33	6.34	198.94	1.62	27.83	1.22	96.86
Last 5	16:05:03	1500.01	20.26	6.29	189.42	1.55	27.91	1.52	95.17
Last 5	16:10:03	1800.00	20.19	6.27	187.42	1.37	28.01	1.63	94.70
Last 5	16:15:03	2100.00	20.32	6.26	188.34	1.25	28.11	1.71	93.76
Variance 0			-0.08	-0.05	-9.52			0.30	-1.69
Variance 1			-0.06	-0.02	-2.00			0.11	-0.47
Variance 2			0.13	-0.01	0.91			0.07	-0.94

Notes

Sampled at 1615. Cloudy 82 degrees

Date: 2020-04-08 11:15:49

Project Information:

Operator Name **Taylor Goble**

Company Name ACC Project Name Plant Arkwright Ash Pond 3 Plant Arkwright Ash Pond 3 Site Name

0° 0' 0" Latitude 0° 0' 0" Longitude Sonde SN 369807 HACH

Turbidity Make/Model

Pump Information:

Pump Model/Type **QED Bladder Pump**

Tubing Type poly Tubing Diameter .17 in Tubing Length 35 ft

Pump placement from TOC

30 ft

Well Information:

Well ID ARGWC-16 Well diameter 2 in Well Total Depth 34.52 ft Screen Length 10 ft Depth to Water 19.19 ft

Pumping Information:

Final Pumping Rate 200 mL/min Total System Volume 0.2462198 L Calculated Sample Rate 300 sec Stabilization Drawdown 1 in **Total Volume Pumped** 6 L

Low-Flow Sampling Stabilization Summary

Time		Elapsed	Temp C	рН	SpCond µS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV	
Stabilization	n		+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25	
Last 5	10:55:11	600.01	18.92	5.23	506.95	1.26	19.21	2.22	139.57	
Last 5	11:00:11	900.01	18.96	5.07	504.90	1.11	19.22	2.01	133.99	
Last 5	11:05:11	1200.01	18.97	5.07	501.24	1.45	19.24	2.01	131.85	
Last 5	11:10:11	1500.00	19.05	5.07	494.94	1.17	19.25	2.05	130.57	
Last 5	11:15:11	1799.99	19.18	5.07	489.28	1.55	19.26	2.08	130.01	
Variance 0			0.00	-0.01	-3.66			-0.01	-2.14	
Variance 1			0.09	0.00	-6.31			0.04	-1.29	
Variance 2			0.13	0.00	-5.66			0.04	-0.56	

Notes

Sampled at 1115. Cloudy 71 degrees

Date: 2020-04-08 14:31:28

Pump Information:

Project Information:

Operator Name Taylor Goble Pump Model/Type QED Bladder Pump

Company NameACCTubing TypepolyProject NamePlant Arkwright Ash Pond 3Tubing Diameter.17 inSite NamePlant Arkwright Ash Pond 3Tubing Length49 ft

 Latitude
 0° 0' 0"

 Longitude
 0° 0' 0"

 Sonde SN
 369807

Turbidity Make/Model HACH Pump placement from TOC 44 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID ARGWC-17 100 mL/min Well diameter Total System Volume 0.3087077 L 2 in Calculated Sample Rate Well Total Depth 48.32 ft 300 sec Stabilization Drawdown Screen Length 10 ft 0 in Depth to Water 6 L 20.87 ft **Total Volume Pumped**

Low-Flow Sampling Stabilization Summary

Time		Elapsed	Temp C	рН	SpCond µS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV	
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25	
Last 5	14:10:07	2699.99	21.02	5.05	145.32	16.30	21.20	1.81	115.66	
Last 5	14:15:07	2999.98	21.19	5.05	144.91	12.90	21.20	1.73	114.56	
Last 5	14:20:07	3299.98	21.24	5.03	143.84	9.98	21.20	1.58	113.63	
Last 5	14:25:07	3599.98	21.56	5.03	143.41	7.30	21.20	1.57	113.23	
Last 5	14:30:07	3899.97	21.93	5.02	143.21	4.76	21.20	1.61	115.07	
Variance 0			0.04	-0.02	-1.08			-0.15	-0.93	
Variance 1			0.33	0.00	-0.43			-0.01	-0.40	
Variance 2			0.36	-0.01	-0.20			0.04	1.85	

Notes

Sampled at 1430. Mostly cloudy 79 degrees

Date: 2020-04-09 09:41:17

Project Information:

Operator Name Taylor Goble

Company Name ACC
Project Name Plant Arkwright Ash Pond 3
Site Name Plant Arkwright Ash Pond 3

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED Bladder Pump

Tubing TypepolyTubing Diameter.17 inTubing Length51 ft

Pump placement from TOC 46 ft

Well Information:

Well IDARGWC-18Well diameter2 inWell Total Depth50.65 ftScreen Length10 ftDepth to Water27.29 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3176346 L
Calculated Sample Rate 300 sec
Stabilization Drawdown
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

Time		Elapsed	Temp C	рН	SpCond μS	/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25
Last 5	09:20:08	600.01	19.79	6.53	419.55	4.23	27.71	0.79	-40.89
Last 5	09:25:08	900.00	19.86	6.22	493.60	3.17	27.75	0.42	21.62
Last 5	09:30:08	1200.00	19.90	6.08	513.48	3.37	27.79	0.25	35.93
Last 5	09:35:08	1500.00	19.99	6.01	520.62	3.99	27.84	0.20	43.32
Last 5	09:40:08	1799.99	20.04	5.98	523.38	4.13	27.89	0.19	46.94
Variance 0			0.04	-0.14	19.88			-0.18	14.31
Variance 1			0.09	-0.07	7.14			-0.04	7.39
Variance 2			0.05	-0.03	2.77			-0.01	3.62

Notes

Sampled at 0940. Sunny 67 degrees

Name : Plant Arkwrig			Date: 4/6 - 4/9/20
Well ID	Sample Date	Sample Time	Additional Comments
	W=	AS	SH POND #3
ARGWA-3	4-7-20	1045	pH=5 90
ARGWA-5	4-7-20	1146	pH=5,86
ARGWA-12	4-7-20	1346	pH= 5,91
ARGWA-13	4-7-20	1532	pH=5.84 FB-1 here
ARGWA-14	4-6-20	1557	pH= 5,90
ARGWC-7	4-8-20	0955	pH= 5, 75 Extra Rad here
ARGWC-8	21-9-20		pH= 6.42
ARGWC-9	4-9-20	1025	pH=5.90 EB-1 here
ARGWC-10	4-8-20	709	pH= 5,95
ARGWC-15	4-8-20	1615	pH= 6.26
ARGWC-16	4-8-20	1115	pH= 507
ARGWC-17	4-8-20	1430	pH= 5.02
ARGWC-18	4-9-20	0940	pH= 5.98
EB-1-4-9-10	4-9-20	1040	Equipment type: しし
Dup-1	4-8-20	1115	Parent Sample: ARGWC-16
FB-1-4-7-20	4-7-20	1600	Poured at: ARAWA-13
	170	The state of the s	SH POND #2
ARGWA-19	4-7-20	1008	pH= 5.72
ARGWA-20	4-6-20	1622	pH= 5.53
ARGWC-21	4-7-20	1619	pH= 5.96
ARGWC-22	4-7-20	1418	pH= 5.84
ARGWC-23	4-7-20	1200	pH= 6.40
EB-2-4-7-10	4-7-20	1445	Equipment type: Per: Pump
Dup-2	4-7-20	1008	Parent Sample: ARGWA-19
FB-2-46-20	4-6-20	1520	Poured at: ARGUM-20
ional comments :			the desired of the second

WELL CONDITION SUMMARY

Site: Plant Arkwright

Date(s): 4/6 - 4/9/20

Personell: 12U/TG

Page: 1 of 3

ATLANTIC COAST CONSULTING, INC.

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Well ID			ARGWA-3		ARGWA-5		ARGWA-12		ARGWA-13		ARGWA-14		ARGWC-7		ARGWC-8		ARGWC-9		ARGWC-10		ARGWC-15

WELL CONDITION SUMMARY

Site: Plant Arkwright

Date(s): 4/6 - 4/9/20

Personell: RU/TG

Page:

ATLANTIC COAST CONSULTING, INC.

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	Well ID		ARGWC-16		ARGWC-17		ARGWC-18		ARGWA-19		ARGWA-20		ARGWC-21		ARAMW-22		ARAMW-23		ARAMW-1		ARAMW-2

WELL CONDITION SUMMARY

Site: Plant Arkwright

16/h - 9/h Date(s):

Personell:

ō

Page:

ATLANTIC COAST CONSULTING, INC.

Notes Vent Hole Z Kes Ž □ Ž ₹ ☐ Yes □ 8 8 8 □ Yes ☐ Yes □ □ % % § □ Weep Hole Yes □ □ ☐ Xes Д № 8 Z Æ ____ N N □ Yes ☐ Yes ₽ □ **ջ** □ Well Pad ☐ Oxmaged П ОК П Damaged Damaged Damaged Damaged Damaged □ Dатадеd Damaged Damaged š Š | Š ŏ □ Ž Š <u>≽</u> ŏ **8** □ Lock ☐ Yes ☐ Yes ☐ № ∏ Yes ∏ Yes S Ses \(\angle \) \(\bar{\angle} \) ☐ Yes ☐ Yes ☐ № Bollards OK Deficient ☐ Deficient ☑ OK □ Deficient OK Deficient OK Deficient ☐ OK ☐ Deficient OK Deficient OK Deficient OK Deficient OK Deficient Label ☐ **※** ☐ Deficient ☐ **©K** ☐ Deficient ☑**Ş** □ Deficient ☑ **&** □ Deficient ☐ **0%** ☐ Deficient ☐ **0K** ☐ Deficient ☐ **○** ☐ Deficient ☐ **ØK** ☐ Deficient ☐ **©K** ☐ Deficient Well Casing Damaged ☐ OK ☐ Damaged Damaged Damaged 🗌 Dатадеd □ Dатаged Damaged Damaged Damaged **8** □ Ż š Ż š ¥ ŏ □ □ ĕ Protective Casing Damaged Damaged Damaged Damaged Damaged Damaged Damaged Damaged Damaged abla ok ĕ □ š Ż χок š 8 Š Well ID ARAMW-3 **ARAMW-6 ARAMW-4**

Damaged

Damaged

Damaged

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-106373-3

Client Project/Site: CCR - Plant Arkwright Ash Pond 3

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham

Authorized for release by: 6/12/2020 10:38:32 AM

Shali Brown, Project Manager II (615)301-5031

shali.brown@testamericainc.com

LINKS

Review your project results through

Have a Question?



Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

Client: Southern Company Project/Site: CCR - Plant Arkwright Ash Pond 3 Laboratory Job ID: 180-106373-3

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Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Job ID: 180-106373-3

Job ID: 180-106373-3

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-106373-3

Comments

No additional comments.

Receipt

The samples were received on 5/29/2020 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company Job ID: 180-106373-3

Project/Site: CCR - Plant Arkwright Ash Pond 3

Qualifiers

Metals

Qualifier Qualifier Description

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MDA Minimum Detectable Activity (Radiochemistry)
MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

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Accreditation/Certification Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Job ID: 180-106373-3

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	05-23-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20 *
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

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^{*} Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

 Lab Sample ID
 Client Sample ID
 Matrix
 Collected
 Received
 Asset ID

 180-106373-5
 ARGWC-10
 Water
 05/27/20 19:10
 05/29/20 08:45

Job ID: 180-106373-3

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Method Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright Ash Pond 3

Method	Method Description	Protocol	Laboratory
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Job ID: 180-106373-3

Lab Chronicle

Client: Southern Company Job ID: 180-106373-3

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-10 Lab Sample ID: 180-106373-5

Date Collected: 05/27/20 19:10 **Matrix: Water** Date Received: 05/29/20 08:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	317054	06/01/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: DORY		1			317672	06/05/20 22:56	RSK	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling at ID: NOEQUIP		1			317243	05/27/20 19:10	FDS	TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

KEM = Kimberly Mahoney

Batch Type: Analysis

FDS = Sampler Field

RSK = Robert Kurtz

Client Sample Results

Client: Southern Company Job ID: 180-106373-3

Project/Site: CCR - Plant Arkwright Ash Pond 3

Client Sample ID: ARGWC-10 Lab Sample ID: 180-106373-5

Date Collected: 05/27/20 19:10 Matrix: Water Date Received: 05/29/20 08:45

Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable										
Analyte	Result	Qualifier	RL	MDL	Unit)	Prepared	Analyzed	Dil Fac
Lead	0.00014	J	0.0010	0.00013	mg/L			06/01/20 09:01	06/05/20 22:56	1

Method: Field Sampling - Field Sampling										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	рН	5.98				SU			05/27/20 19:10	1

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QC Sample Results

Client: Southern Company Job ID: 180-106373-3

Project/Site: CCR - Plant Arkwright Ash Pond 3

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-317054/1-A

Lab Sample ID: LCS 180-317054/2-A

Matrix: Water

Matrix: Water

Analyte

Lead

Analysis Batch: 317672

Analysis Batch: 317672

MB MB

Analyte Result Qualifier Lead <0.00013

0.0010

Spike

Added

0.500

RL

MDL Unit 0.00013 mg/L

LCS LCS

0.496

Result Qualifier

Unit

mg/L

Prepared 06/01/20 08:43 06/05/20 20:44

99

Analyzed Dil Fac

Prep Batch: 317054

Prep Type: Total Recoverable Prep Batch: 317054

%Rec.

D %Rec

Client Sample ID: Lab Control Sample

Limits

80 - 120

Client Sample ID: Method Blank

Prep Type: Total Recoverable

QC Association Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright Ash Pond 3

Job ID: 180-106373-3

Metals

Prep Batch: 317054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-106373-5	ARGWC-10	Total Recoverable	Water	3005A	
MB 180-317054/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-317054/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 317672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-106373-5	ARGWC-10	Total Recoverable	Water	EPA 6020B	317054
MB 180-317054/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	317054
LCS 180-317054/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	317054

Field Service / Mobile Lab

Analysis Batch: 317243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-106373-5	ARGWC-10	Total/NA	Water	Field Sampling	

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Chain of Custody Record

681-Atlanta

eurofins | Environment Testing

Pitsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468	Chain of Custody	Record		America
Client Information	D. Howard IN. McMillage	PM: own, Shali	Carrier Tracking No(s):	COC No. 180-60862-12387.1
lient Contact loju Abraham	Phone: E-M shi	tait ali.brown@testamericainc.com		Page Page 1 of 1
Company: Southern Company		Analysis Re	equested	Job #:
ddress: M1 Ralph McGill Blvd SE B10185	Due Date Requested:			Preservation Codes:
zty: dianta tate, Zip.	TAI Requested (days):	710		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2
ate, Zip. A, 30308		9 6		D - Nitric Acid P - Na2O4S E - NaHSO4 O - Na2SO3
hone:	PO # SC\$10382606	od (TD		F - MeOH R - Na2S208 G - Amphior S - H2SO4
mait Abraham@southernco.com	NO#	No) No) Fluorid		H - Assorbic Acid T - TSP Dodecahydrale I - Ice U - Acatone J - DI Water V - MCAA
roject Name: CR - Plant Arkwright, App II/IV	Project #: 18020201	- [원] [원		K-EDTA V-inter (specify) Other:
te:	SSOW#.	1 Sample (Y MSD (Yee of GFPC - Ra Z Radium 228 Radium 228		
Georgia	Samala Matrix	8 GF77 8 G G F77 8 G G F77 9 G G F F R R G G F F R G G F F G G G F F G G G F F G G G F F G		perod
	Type (re-water	Field Filtered Sam Perform MS/MSD 9316_Ra226 - Radiu Ra226Ra222 - Radiu 300_ORGFM_20D - (92008, 7470A		Special Instructions/Note:
sample Identification	Sample Date Time G=grab) s1-frame, A-A			Special Instructions/Note:
49.6.410	Preservation Code			
ARGWC-23 ARGWC-22 DUP EB	5/27/20 1623 G W	XXXXXX	+	pH=6.30 pH=5.69
AKGWC-ZZ	1852 G W	XXXXXX	+	pH=5.69
<u> Dur</u>	- G W	XXXXXX	+	
E B	1440 G W	XXXXXX		1) 10
ARGWC-10 Temp Blank	1910 G W			1 pH=5,98
1emp Blank				
		++++++		_
		++++++	+++	- 10000000000
		++++++	+++ 1000111	
		++++++++++++++++++++++++++++++++++++	180-106373	Chain of Custody
Possible Hazard Identification		Sample Disposal (A fee may be	assessed if samples are reta	ained longer than 1 month)
Non-Hazard Flammable Skin Imitant Deliverable Requested: I, II, III, IV, Other (specify)	Poison B Unknown Radiological	Sample Disposal (A fee may be Petum To Client	Disposal By Lab As	chive For Months
		Special Instructions/QC Requiren		
impty Kit Relinquished by:	Date: Company	Time:	Method of Shipment.	00 00 0000
Danul K Howard	Date Time Company Company Date Time Company Co	Received by Selle U	Date Time	AT OO TIAH
leinquished by:	Dale/Time: Company	Received by:	Date/Time.	Company
Custody Seals Intact Custody Seal No		Cooler Temperature(s) ⁵ C and Other		
A Yes A No		Carolina de Santa de Carolina	mend to	Ver. 01/16/2019















Page 13 of 14

6/12/2020

Client: Southern Company

Job Number: 180-106373-3

Login Number: 106373

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Answer	Comment
N/A	
True	
True	
True	
True	
True	
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N/A	
	N/A True True True True True True True True

Date: 2020-05-27 19:12:34

Project Information:

Operator Name

Daniel Howard

Company Name Wood E&IS
Project Name Plant Arkwright Ash Pond 3 - CCR

Site Name ARGWC-10
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 459710
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Micropurge

Tubing TypeHDPETubing Diameter.25 inTubing Length38.35 ft

Pump placement from TOC 33.35 ft

Well Information:

Well IDARGWC-10Well diameter2 inWell Total Depth38.35 ftScreen Length10 ftDepth to Water19.75 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.8501822 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.14 in
Total Volume Pumped 31 L

Low-Flow Sampling Stabilization Summary

Time		Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	18:48:02	8099.79	18.53	5.98	108.41	5.96	19.89	4.66	91.28
Last 5	18:53:02	8399.79	18.53	5.98	108.47	5.32	19.89	4.65	91.12
Last 5	18:58:02	8699.79	18.51	5.98	108.21	5.13	19.89	4.66	91.22
Last 5	19:03:02	8999.79	18.54	5.98	108.18	4.62	19.89	4.65	91.26
Last 5	19:08:03	9299.87	18.57	5.98	108.34	4.70	19.89	4.64	91.20
Variance 0			-0.01	-0.00	-0.26			0.01	0.10
Variance 1			0.03	-0.00	-0.02			-0.00	0.04
Variance 2			0.02	0.00	0.16			-0.02	-0.06

Notes

GWC-10 sample time 1910.



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-107414-1

Client Project/Site: Plant Arkwright AP3 Alternate Source

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by: 7/1/2020 9:57:54 PM

Shali Brown, Project Manager II (615)301-5031

shali.brown@testamericainc.com

LINKS

Review your project results through

Have a Question?



Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Job ID: 180-107414-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-107414-1

Comments

No additional comments.

Receipt

The samples were received on 6/24/2020 8:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.9° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 180-107414-1

Definitions/Glossary

Client: Southern Company Job ID: 180-107414-1

Project/Site: Plant Arkwright AP3 Alternate Source

Qualifiers

	_		_		_
ш	О		г.	/1	_
п	_	_		•	

Qualifier Qualifier Description

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier Qualifier Description

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)
LOD Limit of Detection (DoD/DOE)
LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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Accreditation/Certification Summary

Client: Southern Company Job ID: 180-107414-1

Project/Site: Plant Arkwright AP3 Alternate Source

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	05-23-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20 *
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

^{*} Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company Project/Site: Plant Arkwright AP3 Alternate Source

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-107414-1	ARGWC-8	Water	06/23/20 13:15	06/24/20 08:30	
180-107414-2	ARGWC-10	Water	06/23/20 15:15	06/24/20 08:30	

Job ID: 180-107414-1

Method Summary

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatgraphy	EPA	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
EPA 9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Job ID: 180-107414-1

7/1/2020

Lab Chronicle

Client: Southern Company Job ID: 180-107414-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-8

Lab Sample ID: 180-107414-1 Date Collected: 06/23/20 13:15 **Matrix: Water**

Date Received: 06/24/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 300.0 R2.1 ID: CHIC2100A		1	1 mL	1.0 mL	319291	06/24/20 23:25	MJH	TAL PIT
Dissolved Dissolved	Prep Analysis Instrument	3005A EPA 6020B		1	50 mL	50 mL	319408 320064	06/24/20 14:32 06/30/20 12:32		TAL PIT TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrument	3005A EPA 6020B		1	50 mL	50 mL	319408 320064	06/24/20 14:32 06/30/20 11:33		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrument	3005A EPA 6020B ID: A		1	50 mL	50 mL	319408 320103	06/24/20 14:32 06/30/20 18:29		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrument	9030B EPA 9034 ID: NOEQUIP		1	50 mL	50 mL	319999 320056	06/30/20 11:00 06/30/20 13:35	•	TAL PIT TAL PIT
Total/NA	Analysis Instrument	SM2320 B ID: PCTITRATOR		1			319992	06/26/20 10:29	AVS	TAL PIT
Total/NA	Analysis Instrument	Field Sampling ID: NOEQUIP		1			320074	06/23/20 13:15	NJD	TAL PIT

Client Sample ID: ARGWC-10

Lab Sample ID: 180-107414-2 Date Collected: 06/23/20 15:15 **Matrix: Water**

Date Received: 06/24/20 08:30

Prep Type Total/NA	Batch Type Analysis Instrumen	Batch Method EPA 300.0 R2.1 t ID: CHIC2100A	Run	Factor	Initial Amount	Final Amount	Batch Number 319291	Prepared or Analyzed 06/24/20 20:58	Analyst MJH	Lab TAL PIT
Dissolved Dissolved	Prep Analysis Instrumen	3005A EPA 6020B		1	50 mL	50 mL	319408 320064	06/24/20 14:32 06/30/20 12:36		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020B t ID: A		1	50 mL	50 mL	319408 320064	06/24/20 14:32 06/30/20 11:51		TAL PIT TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020B t ID: A		1	50 mL	50 mL	319408 320103	06/24/20 14:32 06/30/20 18:47		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	9030B EPA 9034 t ID: NOEQUIP		1	50 mL	50 mL	319999 320056	06/30/20 11:00 06/30/20 13:37		TAL PIT
Total/NA	Analysis Instrumen	SM2320 B t ID: PCTITRATOR		1			319992	06/26/20 10:35	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			320074	06/23/20 15:15	NJD	TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Eurofins TestAmerica, Pittsburgh

7/1/2020

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Lab Chronicle

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Analyst References:

Lab: TAL PIT

Batch Type: Prep

CMR = Carl Reagle

JL = James Lyu

Batch Type: Analysis

AVS = Abbey Smith

CMR = Carl Reagle

MJH = Matthew Hartman

NJD = Nicholas DiNardo

RSK = Robert Kurtz

Job ID: 180-107414-1

Eurofins TestAmerica, Pittsburgh

Job ID: 180-107414-1

Client: Southern Company Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-8

Date Collected: 06/23/20 13:15 Date Received: 06/24/20 08:30

Lab Sample ID: 180-107414-1

Matrix: Water

Analyte	Result Qualifi	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.0	1.0	0.32	mg/L			06/24/20 23:25	1
Fluoride	0.12	0.10	0.026	mg/L			06/24/20 23:25	1
Nitrate as N	<0.023	0.10	0.023	mg/L			06/24/20 23:25	1
Nitrite as N	<0.029	0.050	0.029	mg/L			06/24/20 23:25	1
Sulfate	62	1.0	0.38	mg/L			06/24/20 23:25	1

Method: EPA 6020B -	Metals (ICP/MS) - T	otal Recov	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.080	0.039	mg/L		06/24/20 14:32	06/30/20 11:33	1
Calcium	52		0.50	0.13	mg/L		06/24/20 14:32	06/30/20 11:33	1
Cobalt	0.00017	J	0.0025	0.00013	mg/L		06/24/20 14:32	06/30/20 11:33	1
Lithium	0.0042	J	0.0050	0.0034	mg/L		06/24/20 14:32	06/30/20 18:29	1
Magnesium	23		0.50	0.083	mg/L		06/24/20 14:32	06/30/20 11:33	1
Molybdenum	0.043		0.015	0.00061	mg/L		06/24/20 14:32	06/30/20 11:33	1
Potassium	1.7		0.50	0.16	mg/L		06/24/20 14:32	06/30/20 11:33	1
Sodium	14		0.50	0.35	mg/L		06/24/20 14:32	06/30/20 11:33	1

	Analyte	Result Qualifier	RL	MDL U	Unit	D	Prepared	Analyzed	Dil Fac
	Iron	<0.020	0.050	0.020 n	mg/L	_	06/24/20 14:32	06/30/20 12:32	1
	Manganese	0.41	0.0050	0.00087 n	mg/L		06/24/20 14:32	06/30/20 12:32	1

General Chemistry Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1	3.0	2.1	mg/L		06/30/20 11:00	06/30/20 13:35	1
Total Alkalinity as CaCO3 to pH 4.!	170	5.0	5.0	mg/L			06/26/20 10:29	1
Bicarbonate Alkalinity as CaCO3	170	5.0	5.0	mg/L			06/26/20 10:29	1
Carbonate Alkalinity as CaCO3	<5.0	5.0	5.0	mg/L			06/26/20 10:29	1

Method: Field Sampling - Field	Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.37				SU			06/23/20 13:15	1

Lab Sample ID: 180-107414-2 **Client Sample ID: ARGWC-10** Date Collected: 06/23/20 15:15 **Matrix: Water**

Date Received: 06/24/20 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.2		1.0	0.32	mg/L			06/24/20 20:58	1
Fluoride	0.040	J	0.10	0.026	mg/L			06/24/20 20:58	1
Nitrate as N	0.048	J	0.10	0.023	mg/L			06/24/20 20:58	1
Nitrite as N	<0.029		0.050	0.029	mg/L			06/24/20 20:58	1
Sulfate	<0.38		1.0	0.38	mg/L			06/24/20 20:58	1

Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Boron	0.053	J	0.080	0.039	mg/L		06/24/20 14:32	06/30/20 11:51	1	
Calcium	7.7		0.50	0.13	mg/L		06/24/20 14:32	06/30/20 11:51	1	
Cobalt	0.00013	J	0.0025	0.00013	mg/L		06/24/20 14:32	06/30/20 11:51	1	
Lithium	<0.0034		0.0050	0.0034	mg/L		06/24/20 14:32	06/30/20 18:47	1	

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Client: Southern Company Job ID: 180-107414-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-10

Date Collected: 06/23/20 15:15 Date Received: 06/24/20 08:30 Lab Sample ID: 180-107414-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	3.8		0.50	0.083	mg/L		06/24/20 14:32	06/30/20 11:51	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/24/20 14:32	06/30/20 11:51	1
Potassium	0.73		0.50	0.16	mg/L		06/24/20 14:32	06/30/20 11:51	1
Sodium	9.7		0.50	0.35	mg/L		06/24/20 14:32	06/30/20 11:51	1
Method: EPA 6020B - Metals (IC	P/MS) - D	issolved							
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.020		0.050	0.020	mg/L		06/24/20 14:32	06/30/20 12:36	1
Manganese	<0.00087		0.0050	0.00087	mg/L		06/24/20 14:32	06/30/20 12:36	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1		3.0	2.1	mg/L		06/30/20 11:00	06/30/20 13:37	1
Total Alkalinity as CaCO3 to pH 4.!	48		5.0	5.0	mg/L			06/26/20 10:35	1
Bicarbonate Alkalinity as CaCO3	48		5.0	5.0	mg/L			06/26/20 10:35	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			06/26/20 10:35	1
Method: Field Sampling - Field	Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH —	5.95				SU			06/23/20 15:15	

7/1/2020

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Job ID: 180-107414-1

Project/Site: Plant Arkwright AP3 Alternate Source

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Lab Sample ID: MB 180-319291/6

Matrix: Water

Analysis Batch: 319291

Client: Southern Company

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32		1.0	0.32	mg/L			06/24/20 04:59	1
Fluoride	<0.026		0.10	0.026	mg/L			06/24/20 04:59	1
Nitrate as N	<0.023		0.10	0.023	mg/L			06/24/20 04:59	1
Nitrite as N	<0.029		0.050	0.029	mg/L			06/24/20 04:59	1
Sulfate	<0.38		1.0	0.38	mg/L			06/24/20 04:59	1

Lab Sample ID: LCS 180-319291/5

Matrix: Water

Analysis Batch: 319291

Client Sample ID: Lab Control Sample Prep Type: Total/NA

%Rec.

Analyte	Added	Result	Qualifier	Unit	D %Rec	Limits	
Chloride	50.0	50.7		mg/L		90 - 110	
Fluoride	2.50	2.57		mg/L	103	90 - 110	
Nitrate as N	2.50	2.53		mg/L	101	90 - 110	
Nitrite as N	2.50	2.49		mg/L	100	90 - 110	
Sulfate	50.0	49.7		mg/L	99	90 - 110	

Spike

LCS LCS

Lab Sample ID: 180-107414-2 MS

Matrix: Water

Analysis Batch: 319291

Client Sample ID: ARGWC-10 Prep Type: Total/NA

_	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	4.2		50.0	56.1	-	mg/L		104	90 - 110	
Fluoride	0.040	J	2.50	2.53		mg/L		100	90 - 110	
Nitrate as N	0.048	J	2.50	2.59		mg/L		102	90 - 110	
Nitrite as N	<0.029		2.50	2.45		mg/L		98	90 - 110	
Sulfate	<0.38		50.0	50.4		ma/L		101	90 - 110	

Lab Sample ID: 180-107414-2 MSD

Matrix: Water

Analysis Batch: 319291

Client Sample ID: ARGWC-10 Prep Type: Total/NA

_	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4.2		50.0	54.2		mg/L		100	90 - 110	3	20
Fluoride	0.040	J	2.50	2.48		mg/L		98	90 - 110	2	20
Nitrate as N	0.048	J	2.50	2.50		mg/L		98	90 - 110	4	20
Nitrite as N	<0.029		2.50	2.38		mg/L		95	90 - 110	3	20
Sulfate	<0.38		50.0	48.8		mg/L		98	90 - 110	3	20

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-319408/1-A

Matrix: Water

Analysis Batch: 320064

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 319408

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.039		0.080	0.039	mg/L		06/24/20 14:32	06/30/20 11:26	1
Iron	<0.020		0.050	0.020	mg/L		06/24/20 14:32	06/30/20 11:26	1
Calcium	<0.13		0.50	0.13	mg/L		06/24/20 14:32	06/30/20 11:26	1
Manganese	<0.00087		0.0050	0.00087	mg/L		06/24/20 14:32	06/30/20 11:26	1
	Boron Iron Calcium	Analyte Result Boron <0.039	Boron <0.039	Analyte Result Boron Qualifier RL Qualifier Iron <0.039	Analyte Result Boron Qualifier RL O.039 MDL O.080 0.039 Iron <0.020	Analyte Result Boron Qualifier RL O.039 MDL O.039 Unit MDL O.039 Unit MDL O.039 MDL O.039 Unit MDL O.039 MDL O.039 MDL O.039 MDL O.039 Mg/L O.039 Mg/L O.039 MG/L	Analyte Result Boron Qualifier RL O.039 MDL omega meg/L Unit omega meg/L D omega meg/L Iron <0.020	Analyte Result Boron Qualifier RL O.039 MDL O.080 Unit O.039 D O.06/24/20 14:32 Iron <0.020	Analyte Result Boron Qualifier RL O.039 MDL O.080 Unit O.039 D O6/24/20 14:32 Analyzed O6/30/20 11:26 Iron <0.020

MD MD

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Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Method: EPA 6020B - Metals (ICP/MS) (Continued)

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MD MD

Lab Sample ID: MB 180-319408/1-A

Matrix: Water

Analysis Batch: 320064

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 319408

Job ID: 180-107414-1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	<0.00013	0.0025	0.00013	mg/L		06/24/20 14:32	06/30/20 11:26	1
Magnesium	<0.083	0.50	0.083	mg/L		06/24/20 14:32	06/30/20 11:26	1
Molybdenum	<0.00061	0.015	0.00061	mg/L		06/24/20 14:32	06/30/20 11:26	1
Potassium	<0.16	0.50	0.16	mg/L		06/24/20 14:32	06/30/20 11:26	1
Sodium	<0.35	0.50	0.35	mg/L		06/24/20 14:32	06/30/20 11:26	1

Lab Sample ID: MB 180-319408/1-A

Matrix: Water

Analysis Batch: 320103

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 319408

	IVIB	IVIB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.039		0.080	0.039	mg/L		06/24/20 14:32	06/30/20 18:22	1
Calcium	<0.13		0.50	0.13	mg/L		06/24/20 14:32	06/30/20 18:22	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		06/24/20 14:32	06/30/20 18:22	1
Lithium	<0.0034		0.0050	0.0034	mg/L		06/24/20 14:32	06/30/20 18:22	1
Magnesium	<0.083		0.50	0.083	mg/L		06/24/20 14:32	06/30/20 18:22	1
Molybdenum	< 0.00061		0.015	0.00061	mg/L		06/24/20 14:32	06/30/20 18:22	1
Potassium	<0.16		0.50	0.16	mg/L		06/24/20 14:32	06/30/20 18:22	1
Sodium	<0.35		0.50	0.35	mg/L		06/24/20 14:32	06/30/20 18:22	1

Lab Sample ID: LCS 180-319408/2-A

Matrix: Water

Analysis Batch: 320064

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Prep Batch: 319408

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Boron	1.25	1.15		mg/L		92	80 - 120	
Iron	5.00	5.15		mg/L		103	80 - 120	
Calcium	25.0	27.5		mg/L		110	80 - 120	
Manganese	0.500	0.519		mg/L		104	80 - 120	
Cobalt	0.500	0.499		mg/L		100	80 - 120	
Magnesium	25.0	25.3		mg/L		101	80 - 120	
Molybdenum	0.500	0.518		mg/L		104	80 - 120	
Potassium	25.0	25.0		mg/L		100	80 - 120	
Sodium	25.0	25.7		mg/L		103	80 - 120	

Lab Sample ID: LCS 180-319408/2-A

Matrix: Water

Analysis Batch: 320103

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Prep Batch: 319408

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Boron	1.25	1.13		mg/L		90	80 - 120	
Calcium	25.0	27.0		mg/L		108	80 - 120	
Cobalt	0.500	0.519		mg/L		104	80 - 120	
Lithium	0.500	0.510		mg/L		102	80 - 120	
Magnesium	25.0	25.3		mg/L		101	80 - 120	
Molybdenum	0.500	0.529		mg/L		106	80 - 120	
Potassium	25.0	25.5		mg/L		102	80 - 120	
Sodium	25.0	25.8		mg/L		103	80 - 120	

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Client: Southern Company

Lab Sample ID: 180-107414-1 MS

Project/Site: Plant Arkwright AP3 Alternate Source

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Matrix: Water

Analysis Batch: 320064

Client Sample ID: ARGWC-8 Prep Type: Total Recoverable

Prep Batch: 319408

Job ID: 180-107414-1

Sample	Sample	Spike	MS	MS				%Rec.	
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1.1		1.25	2.29		mg/L		94	75 - 125	
0.15		5.00	5.37		mg/L		104	75 - 125	
52		25.0	79.0		mg/L		109	75 - 125	
0.42		0.500	0.956		mg/L		107	75 - 125	
0.00017	J	0.500	0.517		mg/L		103	75 - 125	
23		25.0	48.1		mg/L		101	75 - 125	
0.043		0.500	0.595		mg/L		110	75 - 125	
1.7		25.0	26.8		mg/L		101	75 - 125	
14		25.0	40.2		mg/L		105	75 - 125	
	Result 1.1 0.15 52 0.42 0.00017 23 0.043 1.7	0.15 52 0.42 0.00017 J 23 0.043 1.7	Result Qualifier Added 1.1 1.25 0.15 5.00 52 25.0 0.42 0.500 0.00017 J 0.500 23 25.0 0.043 0.500 1.7 25.0	Result Qualifier Added Result 1.1 1.25 2.29 0.15 5.00 5.37 52 25.0 79.0 0.42 0.500 0.956 0.00017 J 0.500 0.517 23 25.0 48.1 0.043 0.500 0.595 1.7 25.0 26.8	Result Qualifier Added Result Qualifier 1.1 1.25 2.29 0.15 5.00 5.37 52 25.0 79.0 0.42 0.500 0.956 0.00017 J 0.500 0.517 23 25.0 48.1 0.043 0.500 0.595 1.7 25.0 26.8	Result Qualifier Added Result Qualifier Unit 1.1 1.25 2.29 mg/L 0.15 5.00 5.37 mg/L 52 25.0 79.0 mg/L 0.42 0.500 0.956 mg/L 0.00017 J 0.500 0.517 mg/L 23 25.0 48.1 mg/L 0.043 0.500 0.595 mg/L 1.7 25.0 26.8 mg/L	Result Qualifier Added Result Qualifier Unit D 1.1 1.25 2.29 mg/L mg/L 0.15 5.00 5.37 mg/L mg/L 52 25.0 79.0 mg/L mg/L 0.42 0.500 0.956 mg/L mg/L 0.00017 J 0.500 0.517 mg/L 23 25.0 48.1 mg/L 0.043 0.500 0.595 mg/L 1.7 25.0 26.8 mg/L	Result Qualifier Added Result Qualifier Unit D %Rec 1.1 1.25 2.29 mg/L 94 0.15 5.00 5.37 mg/L 104 52 25.0 79.0 mg/L 109 0.42 0.500 0.956 mg/L 107 0.00017 J 0.500 0.517 mg/L 103 23 25.0 48.1 mg/L 101 0.043 0.500 0.595 mg/L 110 1.7 25.0 26.8 mg/L 101	Result Qualifier Added Result Qualifier Unit D %Rec Limits 1.1 1.25 2.29 mg/L 94 75-125 0.15 5.00 5.37 mg/L 104 75-125 52 25.0 79.0 mg/L 109 75-125 0.42 0.500 0.956 mg/L 107 75-125 0.00017 J 0.500 0.517 mg/L 103 75-125 23 25.0 48.1 mg/L 101 75-125 0.043 0.500 0.595 mg/L 110 75-125 1.7 25.0 26.8 mg/L 101 75-125

Lab Sample ID: 180-107414-1 MS

Matrix: Water

Analysis Batch: 320103

Client Sample ID: ARGWC-8 Prep Type: Total Recoverable Prep Batch: 319408

%Rec.

Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits Lithium 0.0042 J 0.500 0.517 mg/L 102 75 - 125

Spike

MS MS

Lab Sample ID: 180-107414-1 MSD

Matrix: Water

Client Sample ID: ARGWC-8 **Prep Type: Total Recoverable**

								Prep Ba	itch: 31	19408
Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1.1		1.25	2.22		mg/L		88	75 - 125	3	20
0.15		5.00	5.22		mg/L		101	75 - 125	3	20
52		25.0	76.0		mg/L		97	75 - 125	4	20
0.42		0.500	0.939		mg/L		104	75 - 125	2	20
0.00017	J	0.500	0.506		mg/L		101	75 - 125	2	20
23		25.0	46.6		mg/L		95	75 - 125	3	20
0.043		0.500	0.578		mg/L		107	75 - 125	3	20
1.7		25.0	25.8		mg/L		96	75 - 125	4	20
14		25.0	38.6		mg/L		98	75 - 125	4	20
	Result 1.1 0.15 52 0.42 0.00017 23 0.043 1.7	0.15 52 0.42 0.00017 J 23 0.043 1.7	Result Qualifier Added 1.1 1.25 0.15 5.00 52 25.0 0.42 0.500 0.00017 J 0.500 23 25.0 0.043 0.500 1.7 25.0	Result Qualifier Added Result 1.1 1.25 2.22 0.15 5.00 5.22 52 25.0 76.0 0.42 0.500 0.939 0.00017 J 0.500 0.506 23 25.0 46.6 0.043 0.500 0.578 1.7 25.0 25.8	Result Qualifier Added Result Qualifier 1.1 1.25 2.22 0.15 5.00 5.22 52 25.0 76.0 0.42 0.500 0.939 0.00017 J 0.500 0.506 23 25.0 46.6 0.043 0.500 0.578 1.7 25.0 25.8	Result Qualifier Added Result Qualifier Unit 1.1 1.25 2.22 mg/L 0.15 5.00 5.22 mg/L 52 25.0 76.0 mg/L 0.42 0.500 0.939 mg/L 0.00017 J 0.500 0.506 mg/L 23 25.0 46.6 mg/L 0.043 0.500 0.578 mg/L 1.7 25.0 25.8 mg/L	Result Qualifier Added Result Qualifier Unit D 1.1 1.25 2.22 mg/L mg/L 0.15 5.00 5.22 mg/L 52 25.0 76.0 mg/L 0.42 0.500 0.939 mg/L 0.00017 J 0.500 0.506 mg/L 23 25.0 46.6 mg/L 0.043 0.500 0.578 mg/L 1.7 25.0 25.8 mg/L	Result Qualifier Added Result Qualifier Unit D %Rec 1.1 1.25 2.22 mg/L 88 0.15 5.00 5.22 mg/L 101 52 25.0 76.0 mg/L 97 0.42 0.500 0.939 mg/L 104 0.00017 J 0.500 0.506 mg/L 101 23 25.0 46.6 mg/L 95 0.043 0.500 0.578 mg/L 107 1.7 25.0 25.8 mg/L 96	Sample Result Qualifier Added Added Result Result Qualifier Unit Unit Unit Unit Unit Unit Unit Unit	Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD 1.1 1.25 2.22 mg/L 88 75 - 125 3 0.15 5.00 5.22 mg/L 101 75 - 125 3 52 25.0 76.0 mg/L 97 75 - 125 4 0.42 0.500 0.939 mg/L 104 75 - 125 2 0.00017 J 0.500 0.506 mg/L 101 75 - 125 2 23 25.0 46.6 mg/L 95 75 - 125 3 0.043 0.500 0.578 mg/L 107 75 - 125 3 1.7 25.0 25.8 mg/L 96 75 - 125 4

Lab Sample ID: 180-107414-1 MSD

Matrix: Water

Analysis Batch: 320103

Client	Sample II	D: ARG	WC-8
Prep Ty	e: Total	Recove	rable
	Prep Ba	atch: 31	9408
	%Rec.		RPD
D 0/D	1.2		1.114

MSD MSD Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 0.0042 J 0.500 Lithium 0.505 mg/L 100 75 - 125 2 20

Method: EPA 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

MB MB

Sample Sample

Lab Sample ID: MB 180-319999/1-A

Matrix: Water

Analysis Batch: 320056

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 319999

Analyte Result Qualifier RL **MDL** Unit **Prepared** Analyzed 3.0 06/30/20 11:00 06/30/20 13:13 Sulfide <2.1 2.1 mg/L

Eurofins TestAmerica, Pittsburgh

10

7/1/2020

QC Sample Results

Client: Southern Company Job ID: 180-107414-1

Project/Site: Plant Arkwright AP3 Alternate Source

Method: EPA 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: LCS 180-319999/2-A **Client Sample ID: Lab Control Sample**

Matrix: Water Analysis Batch: 320056

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Sulfide 13.4 86 85 - 115 11.6 mg/L

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-319992/5 **Client Sample ID: Method Blank** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 319992

мв мв Result Qualifier RL MDL Unit **Prepared** Analyzed Dil Fac 5.0 Total Alkalinity as CaCO3 to pH 4.5 <5.0 5.0 mg/L 06/26/20 10:06 1 Bicarbonate Alkalinity as CaCO3 <5.0 5.0 5.0 mg/L 06/26/20 10:06 Carbonate Alkalinity as CaCO3 <5.0 5.0 5.0 mg/L 06/26/20 10:06

Lab Sample ID: LCS 180-319992/4 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 319992

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits

250 233 Total Alkalinity as CaCO3 to pH mg/L 93 90 - 110

4.5

7/1/2020

Prep Type: Total/NA

Prep Batch: 319999

QC Association Summary

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

HPLC/IC

Analysis Batch: 319291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107414-1	ARGWC-8	Total/NA	Water	EPA 300.0 R2.1	
180-107414-2	ARGWC-10	Total/NA	Water	EPA 300.0 R2.1	
MB 180-319291/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-319291/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-107414-2 MS	ARGWC-10	Total/NA	Water	EPA 300.0 R2.1	
180-107414-2 MSD	ARGWC-10	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 319408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107414-1	ARGWC-8	Dissolved	Water	3005A	
180-107414-1	ARGWC-8	Total Recoverable	Water	3005A	
180-107414-2	ARGWC-10	Dissolved	Water	3005A	
180-107414-2	ARGWC-10	Total Recoverable	Water	3005A	
MB 180-319408/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-319408/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-107414-1 MS	ARGWC-8	Total Recoverable	Water	3005A	
180-107414-1 MSD	ARGWC-8	Total Recoverable	Water	3005A	

Analysis Batch: 320064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107414-1	ARGWC-8	Dissolved	Water	EPA 6020B	319408
180-107414-1	ARGWC-8	Total Recoverable	Water	EPA 6020B	319408
180-107414-2	ARGWC-10	Dissolved	Water	EPA 6020B	319408
180-107414-2	ARGWC-10	Total Recoverable	Water	EPA 6020B	319408
MB 180-319408/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	319408
LCS 180-319408/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	319408
180-107414-1 MS	ARGWC-8	Total Recoverable	Water	EPA 6020B	319408
180-107414-1 MSD	ARGWC-8	Total Recoverable	Water	EPA 6020B	319408

Analysis Batch: 320103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107414-1	ARGWC-8	Total Recoverable	Water	EPA 6020B	319408
180-107414-2	ARGWC-10	Total Recoverable	Water	EPA 6020B	319408
MB 180-319408/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	319408
LCS 180-319408/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	319408
180-107414-1 MS	ARGWC-8	Total Recoverable	Water	EPA 6020B	319408
180-107414-1 MSD	ARGWC-8	Total Recoverable	Water	EPA 6020B	319408

General Chemistry

Analysis Batch: 319992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
180-107414-1	ARGWC-8	Total/NA	Water	SM2320 B
180-107414-2	ARGWC-10	Total/NA	Water	SM2320 B
MB 180-319992/5	Method Blank	Total/NA	Water	SM2320 B
LCS 180-319992/4	Lab Control Sample	Total/NA	Water	SM2320 B

Prep Batch: 319999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107414-1	ARGWC-8	Total/NA	Water	9030B	

Eurofins TestAmerica, Pittsburgh

Job ID: 180-107414-1

QC Association Summary

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Job ID: 180-107414-1

General Chemistry (Continued)

Prep Batch: 319999 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107414-2	ARGWC-10	Total/NA	Water	9030B	
MB 180-319999/1-A	Method Blank	Total/NA	Water	9030B	
LCS 180-319999/2-A	Lab Control Sample	Total/NA	Water	9030B	

Analysis Batch: 320056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107414-1	ARGWC-8	Total/NA	Water	EPA 9034	319999
180-107414-2	ARGWC-10	Total/NA	Water	EPA 9034	319999
MB 180-319999/1-A	Method Blank	Total/NA	Water	EPA 9034	319999
LCS 180-319999/2-A	Lab Control Sample	Total/NA	Water	EPA 9034	319999

Field Service / Mobile Lab

Analysis Batch: 320074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107414-1	ARGWC-8	Total/NA	Water	Field Sampling	
180-107414-2	ARGWC-10	Total/NA	Water	Field Sampling	

L ID. 400 407444

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Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468 Chain of Custody Record

681-Atlanta



Client Information	Sampler FGL	hen of	M Lyn	Lab P Brow	n, Sha	ali				Carrier T	lacking No(s)	COC No: 180-61584-1249	0.1
Client Contact:	Phone:	,	CI PL	C-603		0						Page	
Joju Abraham Company				shali	brown	r@lest	amen	cainc.c	com			Page 1 of 1	
Southern Company								A.	nallys	s Requeste	d		
Address 241 Ralph McGill Blvd SE B10185	Due Cate Requeste	ed:			100	I	Т	T	П	TIT		Preservation Con	des: M - Hexane
City: Atlanta	TAT Requested (da	rys):							Ш			B - NaOH C - Zn Acetate	N - None O - AsNaO2
State, 2p GA, 30306	1				100	1	<u>5</u> .	100				D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3
Phone.	PO#. SCS10382606				6	П	- (MOD) Custom 8 (CoMoLICaMgNaKJF)	(MOD) Dissolved Fe/Min Caled - Solids, Total Dissolved (TDS)	П			F - MeOH G - Amchlor H - Ascobic Acid	R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate
Emait JAbraham@southemco.com	WO#.				Sample (Yes or No)		MoLic	le fo	ш			I - Ibe	U - Acetone V - MCAA
Project Name:	Project#: 18020201				70		00) 8	otal	8		containers	K - EDTA L - EDA	W- pH 4.5 Z- other (specify)
Plant Arkwright AP3 Alternate Source Site	SSOW#.				MS/MSD (Yes or No)	W W	mot .	da. T	Meth		l	Other:	
Georgia	-				d Sa	36	000	Sol Sol	le oo				
		Sample	Sample Type (C=comp, G=grab) sr	Matrix (www.	d Filtere	2320B, 300_ORGFMS	GOW) - BC	60208 - (MOD) Dissolved Fe/Mn 2540C_Caled - Solids, Total Diss	9034_Calc - Local Method		Number		
Sample Identification	Sample Date	Time	G=grab) si	-Tosse Antr)	1 P			-	609		Total	Special II	structions/Note:
10	><	><	Preservation	on Code:	\times	N I	D E	N	CB				
ARGWC-8 ARGWC-10	6/23/20	1315	6	Water	X		X	X_	X		++++	pH = 6	37
ARGNC-10	6/23/20	1513	6	Water	XI.	X	X	Χ.	X		++++	PH=5	95
				Water	₩	+	-	-	\vdash		++++		
			_	Water	₩	\perp	-	_	+	+++	++++	-	
				Water	ш	\perp	4		Н		+		
			-	Water	11	1	_	_	\sqcup				
				Water	Ш			_			0.0000000000000000000000000000000000000	0.00000000	II
				Water	Ш	Ш	\perp	_	Ш		mann		L
				Water	Ш	\perp		_			TILBLE		
				Water	Ш			_			180-107414 Cha	ain of Custody	
											alasta I. I.	J	
Possible Hazard Identification Non-Hazard Flammable Skin Imitant . Pois	son B Unkn	oun D	Radiologica/		S	ample Re	Disp etum	osal (. To Clie	A fee s	Disposa	ed if samples are retained By Lab	ined longer than thive For	1 month) Months
Deliverable Requested: I, II, III, IV, Other (specify)										quirements.			
Empty Kit Relinquished by:		Date:		-	Time	E:				V.	lethod of Shipment.		
David Literary	6/23/20	/184	15	опралу			乳		/		6 24 20	830	Engin
meinquisned by:	Date Time.	,	°	опралу		Repe	eved by				Oats/Time		Company
Reinquished by	Date/Time:		0	ompany		Rece	med by	ŗ.			Oate/Time:		Company
Custody Seals Intact Custody Seal No:						Coole	ar Tam	perature	e(s) °C ar	d Other Ramarks:			















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15238 WED - 24 JUN 10:30A PRIORITY OVERNIGHT DSR AHS PA-US PIT SHIP DATE: 23JUN20 ACTMGT: 27.05 LB CAD: 6984493/SSFE2110 DIMS: 18x10x16 IN S BILL THIRD PARTY / Initials PITTSBURGH PA 15238 Uncorrected temp EUROFINS TEST AMERICA 301 ALPHA DR SR-001 effective 7/26/13 ■ Thermometer ID
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■ T ANTE HOLMEN (770) 421-3400 HAVE HOLMEN HEC (MODD E-15) 1075 BIG SHANTY RD NW STE 100 TO SAMPLE RECEIVING REST 8121 9394 5863 KENNESAM, GA 30144 UNITED STATES US 40 180-107414 Waybill ₽ 5863 06.24

Client: Southern Company

Job Number: 180-107414-1

Login Number: 107414 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-107490-1

Client Project/Site: Plant Arkwright AP3 Alternate Source

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham

Authorized for release by: 7/8/2020 3:51:23 PM

Shali Brown, Project Manager II (615)301-5031

shali.brown@testamericainc.com

LINKS

Review your project results through

Have a Question?



Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Job ID: 180-107490-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-107490-1

Comments

No additional comments.

Receipt

The samples were received on 6/25/2020 9:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.4° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 180-107490-1

Definitions/Glossary

Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Qualifiers

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Qualifier **Qualifier Description**

F1 MS and/or MSD recovery exceeds control limits.

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier **Qualifier Description**

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL Contains Free Liquid CFU Colony Forming Unit CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DΙ Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

Decision Level Concentration (Radiochemistry) DLC

EDL Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit MI Minimum Level (Dioxin) MPN Most Probable Number MQL Method Quantitation Limit

NC Not Calculated

Not Detected at the reporting limit (or MDL or EDL if shown) ND

Negative / Absent NEG POS Positive / Present

PQL **Practical Quantitation Limit**

PRES Presumptive Ω C **Quality Control**

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points **RPD**

TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) **TEQ**

TNTC Too Numerous To Count

Accreditation/Certification Summary

Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-20 *
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	08-01-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	05-23-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

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^{*} Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company Project/Site: Plant Arkwright AP3 Alternate Source

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-107490-1	EB#1	Water	06/24/20 09:25	06/25/20 09:00	
180-107490-2	ARGWC-16	Water	06/24/20 10:00	06/25/20 09:00	
180-107490-3	ARGWC-17	Water	06/24/20 12:35	06/25/20 09:00	
180-107490-4	ARAMW-6	Water	06/24/20 16:20	06/25/20 09:00	
180-107490-5	ARGWC-18	Water	06/24/20 13:20	06/25/20 09:00	
180-107490-6	ARAMW-4	Water	06/24/20 12:10	06/25/20 09:00	
180-107490-7	ARAMW-3	Water	06/24/20 13:45	06/25/20 09:00	

Job ID: 180-107490-1

Method Summary

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatgraphy	EPA	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
EPA 9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Job ID: 180-107490-1

Lab Chronicle

Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: EB#1

Lab Sample ID: 180-107490-1 Date Collected: 06/24/20 09:25 **Matrix: Water**

Date Received: 06/25/20 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			319460	06/25/20 23:26	MJH	TAL PIT
Dissolved Dissolved	Prep Analysis Instrumen	3005A EPA 6020B t ID: NEMO		1	50 mL	50 mL	319682 320364	06/26/20 08:36 07/02/20 08:33		TAL PIT TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020B t ID: NEMO		1	50 mL	50 mL	319682 320364	06/26/20 08:36 07/02/20 08:01		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	9030B EPA 9034 t ID: NOEQUIP		1	50 mL	50 mL	320115 320175	07/01/20 06:00 07/01/20 07:16		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	319696	06/26/20 10:14	AVS	TAL PIT
Total/NA	Analysis Instrumen	SM2320 B t ID: PCTITRATOR		1			319992	06/26/20 19:00	AVS	TAL PIT

Lab Sample ID: 180-107490-2 **Client Sample ID: ARGWC-16**

Date Collected: 06/24/20 10:00 **Matrix: Water** Date Received: 06/25/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 300.0 R2.1 t ID: CHIC2100A		1			319460	06/25/20 22:07	MJH	TAL PIT
Total/NA	Analysis Instrument	EPA 300.0 R2.1 t ID: CHICS2100B		5			319945	06/30/20 10:17	MJH	TAL PIT
Dissolved	Prep	3005A			50 mL	50 mL	319682	06/26/20 08:36	TJO	TAL PIT
Dissolved	Analysis Instrument	EPA 6020B t ID: NEMO		1			320364	07/02/20 08:36	RJR	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	319682	06/26/20 08:36	TJO	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020B t ID: NEMO		1			320364	07/02/20 08:04	RJR	TAL PIT
Total/NA	Prep	9030B			50 mL	50 mL	320115	07/01/20 06:00	CMR	TAL PIT
Total/NA	Analysis Instrument	EPA 9034 t ID: NOEQUIP		1			320175	07/01/20 07:17	CMR	TAL PIT
Total/NA	Analysis Instrument	SM2320 B t ID: PCTITRATOR		1			320519	06/30/20 14:34	AVS	TAL PIT
Total/NA	Analysis Instrument	Field Sampling		1			320074	06/24/20 10:00	NJD	TAL PIT

7/8/2020

Client Sample ID: ARGWC-17 Lab Sample ID: 180-107490-3

Date Collected: 06/24/20 12:35

Date Received: 06/25/20 09:00

Matrix: Water

Batch Batch Dil Initial Final **Batch** Prepared Method **Factor Prep Type** Type Run Amount Amount Number or Analyzed Analyst Lab Total/NA EPA 300.0 R2.1 319460 Analysis 06/25/20 23:42 MJH TAL PIT Instrument ID: CHIC2100A Dissolved Prep 3005A 50 mL 50 mL 319682 06/26/20 08:36 TJO TAL PIT 07/02/20 08:44 RJR Dissolved Analysis **EPA 6020B** 320364 TAL PIT 1 Instrument ID: NEMO Total Recoverable 3005A 50 ml 50 ml 06/26/20 08:36 TJO TAL PIT Prep 319682 Total Recoverable Analysis **EPA 6020B** 1 320364 07/02/20 08:12 RJR TAL PIT Instrument ID: NEMO Total/NA 9030B 50 mL 50 mL 07/01/20 06:00 CMR TAL PIT Prep 320115 Total/NA Analysis EPA 9034 320175 07/01/20 07:22 CMR TAL PIT 1 Instrument ID: NOEQUIP Total/NA Analysis SM2320 B 320519 06/30/20 14:46 AVS TAL PIT Instrument ID: PCTITRATOR Total/NA Analysis Field Sampling 320074 06/24/20 12:35 NJD TAL PIT Instrument ID: NOEQUIP

Client Sample ID: ARAMW-6 Lab Sample ID: 180-107490-4

Date Collected: 06/24/20 16:20 Matrix: Water Date Received: 06/25/20 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 t ID: CHIC2100A		1	Amount	Amount	319460	06/25/20 22:22	MJH	TAL PIT
Dissolved Dissolved	Prep Analysis Instrumen	3005A EPA 6020B t ID: NEMO		1	50 mL	50 mL	319682 320364	06/26/20 08:36 07/02/20 08:47		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020B t ID: NEMO		1	50 mL	50 mL	319682 320364	06/26/20 08:36 07/02/20 08:15		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	9030B EPA 9034 t ID: NOEQUIP		1	50 mL	50 mL	320115 320175	07/01/20 06:00 07/01/20 07:23		TAL PIT
Total/NA	Analysis Instrumen	SM2320 B t ID: PCTITRATOR		1			320519	06/30/20 14:53	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			320074	06/24/20 16:20	NJD	TAL PIT

Client Sample ID: ARGWC-18 Lab Sample ID: 180-107490-5

Date Collected: 06/24/20 13:20 Matrix: Water
Date Received: 06/25/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			319460	06/25/20 22:38	MJH	TAL PIT
	Instrumer	t ID: CHIC2100A								

Eurofins TestAmerica, Pittsburgh

Job ID: 180-107490-1

Client: Southern Company

Instrument ID: PCTITRATOR

Instrument ID: NOEQUIP

Field Sampling

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-18

Date Collected: 06/24/20 13:20 Date Received: 06/25/20 09:00 Lab Sample ID: 180-107490-5

Matrix: Water

Job ID: 180-107490-1

Batch Batch Dil Initial Final Batch Prepared Factor Amount Number Method **Prep Type** Type Run Amount or Analyzed Analyst Lab Dissolved 319682 Prep 3005A 50 mL 50 mL 06/26/20 08:36 TJO TAL PIT TAL PIT Dissolved Analysis **EPA 6020B** 320364 07/02/20 07:48 RJR 1 Instrument ID: NEMO Total Recoverable Prep 3005A 50 mL 50 mL 06/26/20 08:36 TJO TAL PIT 319682 Total Recoverable Analysis **EPA 6020B** 320364 07/02/20 08:17 RJR TAL PIT Instrument ID: NEMO Total/NA Prep 9030B 50 mL 50 mL 320115 07/01/20 06:00 CMR TAL PIT Total/NA Analysis EPA 9034 320175 07/01/20 07:25 CMR TAL PIT 1 Instrument ID: NOEQUIP Total/NA Analysis SM2320 B TAL PIT 320519 06/30/20 14:59 AVS

Client Sample ID: ARAMW-4

Analysis

Date Collected: 06/24/20 12:10

Total/NA

Date Received: 06/25/20 09:00

Lab Sample ID: 180-107490-6

06/24/20 13:20 NJD

320074

Matrix: Water

TAL PIT

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 300.0 R2.1 t ID: CHIC2100A		1			319460	06/26/20 00:29	MJH	TAL PIT
Total/NA	Analysis Instrument	EPA 300.0 R2.1 t ID: CHIC2100A		10			319460	06/26/20 00:45	MJH	TAL PIT
Dissolved	Prep	3005A			50 mL	50 mL	319682	06/26/20 08:36	TJO	TAL PIT
Dissolved	Analysis Instrument	EPA 6020B t ID: NEMO		1			320364	07/02/20 08:50	RJR	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	319682	06/26/20 08:36	TJO	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020B t ID: NEMO		1			320364	07/02/20 08:20	RJR	TAL PIT
Total/NA	Prep	9030B			50 mL	50 mL	320115	07/01/20 06:00	CMR	TAL PIT
Total/NA	Analysis Instrument	EPA 9034 t ID: NOEQUIP		1			320175	07/01/20 07:26	CMR	TAL PIT
Total/NA	Analysis Instrument	SM2320 B t ID: PCTITRATOR		1			320796	07/07/20 09:59	AVS	TAL PIT
Total/NA	Analysis Instrument	Field Sampling		1			320074	06/24/20 12:10	NJD	TAL PIT

Client Sample ID: ARAMW-3

Date Collected: 06/24/20 13:45

Date Received: 06/25/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			319460	06/26/20 01:01	MJH	TAL PIT
	Instrument	ID: CHIC2100A								

Eurofins TestAmerica, Pittsburgh

Lab Sample ID: 180-107490-7

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Matrix: Water

Lab Chronicle

Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARAMW-3

Date Received: 06/25/20 09:00

Lab Sample ID: 180-107490-7 Date Collected: 06/24/20 13:45

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A	- Kuii		50 mL	50 mL	319682	06/26/20 08:36		TAL PIT
Dissolved	Analysis	EPA 6020B t ID: NEMO		1	00 IIIL	00 III.	320364	07/02/20 08:52		TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	319682	06/26/20 08:36	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: NEMO		1			320364	07/02/20 08:23	RJR	TAL PIT
Total/NA	Prep	9030B			50 mL	50 mL	320115	07/01/20 06:00	CMR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9034 t ID: NOEQUIP		1			320175	07/01/20 07:31	CMR	TAL PIT
Total/NA	Analysis Instrumen	SM2320 B t ID: PCTITRATOR		1			320519	06/30/20 15:06	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			320074	06/24/20 13:45	NJD	TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

CMR = Carl Reagle

TJO = Tyler Oliver

Batch Type: Analysis

AVS = Abbey Smith

CMR = Carl Reagle

MJH = Matthew Hartman

NJD = Nicholas DiNardo

RJR = Ron Rosenbaum

7/8/2020

Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: EB#1

Lab Sample ID: 180-107490-1

Matrix: Water

Date Collected: 06/24/20 09:25 Date Received: 06/25/20 09:00

Analyte	Result Qualifi	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32	1.0	0.32	mg/L			06/25/20 23:26	1
Fluoride	<0.026	0.10	0.026	mg/L			06/25/20 23:26	1
Nitrate as N	<0.023	0.10	0.023	mg/L			06/25/20 23:26	1
Nitrite as N	<0.029	0.050	0.029	mg/L			06/25/20 23:26	1
Sulfate	<0.38	1.0	0.38	mg/L			06/25/20 23:26	1

Analyte	Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.11		0.080	0.039	mg/L		06/26/20 08:36	07/02/20 08:01	1
Calcium	<0.13		0.50	0.13	mg/L		06/26/20 08:36	07/02/20 08:01	1
Cobalt	< 0.00013		0.0025	0.00013	mg/L		06/26/20 08:36	07/02/20 08:01	1
Lithium	<0.0034		0.0050	0.0034	mg/L		06/26/20 08:36	07/02/20 08:01	1
Magnesium	<0.083		0.50	0.083	mg/L		06/26/20 08:36	07/02/20 08:01	1
Molybdenum	< 0.00061		0.015	0.00061	mg/L		06/26/20 08:36	07/02/20 08:01	1
Potassium	<0.16		0.50	0.16	mg/L		06/26/20 08:36	07/02/20 08:01	1
Sodium	<0.35		0.50	0.35	mg/L		06/26/20 08:36	07/02/20 08:01	1

Method: EPA 6020B - Metals (ICP/MS) - D	issolved							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.020		0.050	0.020	mg/L		06/26/20 08:36	07/02/20 08:33	1
Manganese	0.0010	J	0.0050	0.00087	mg/L		06/26/20 08:36	07/02/20 08:33	1

General Chemistry Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1	3.0	2.1	mg/L		07/01/20 06:00	07/01/20 07:16	1
Total Dissolved Solids	<10	10	10	mg/L			06/26/20 10:14	1
Total Alkalinity as CaCO3 to pH 4.5	<5.0	5.0	5.0	mg/L			06/26/20 19:00	1
Bicarbonate Alkalinity as CaCO3	<5.0	5.0	5.0	mg/L			06/26/20 19:00	1
Carbonate Alkalinity as CaCO3	<5.0	5.0	5.0	mg/L			06/26/20 19:00	1

Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-16

Date Collected: 06/24/20 10:00 Date Received: 06/25/20 09:00 Lab Sample ID: 180-107490-2

Matrix: Water

Method: EPA 300.0 R2.	.1 - Anions, Ion Ch	romatgraph	ıy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.9		1.0	0.32	mg/L			06/25/20 22:07	1
Fluoride	0.038	J	0.10	0.026	mg/L			06/25/20 22:07	1
Nitrate as N	0.48		0.10	0.023	mg/L			06/25/20 22:07	1
Nitrite as N	0.042	J	0.050	0.029	mg/L			06/25/20 22:07	1
Sulfate	310		5.0	1.9	mg/L			06/30/20 10:17	5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.11		0.080	0.039	mg/L		06/26/20 08:36	07/02/20 08:04	1
Calcium	47		0.50	0.13	mg/L		06/26/20 08:36	07/02/20 08:04	1
Cobalt	0.00013	J	0.0025	0.00013	mg/L		06/26/20 08:36	07/02/20 08:04	1
Lithium	<0.0034		0.0050	0.0034	mg/L		06/26/20 08:36	07/02/20 08:04	1
Magnesium	37		0.50	0.083	mg/L		06/26/20 08:36	07/02/20 08:04	1
Molybdenum	< 0.00061		0.015	0.00061	mg/L		06/26/20 08:36	07/02/20 08:04	1
Potassium	3.8		0.50	0.16	mg/L		06/26/20 08:36	07/02/20 08:04	1
Sodium	16		0.50	0.35	mg/L		06/26/20 08:36	07/02/20 08:04	1

Method: EPA 6020B - Metals (ICP/MS) - Dissolved											
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Iron	<0.020		0.050	0.020	mg/L		06/26/20 08:36	07/02/20 08:36	1	
	Manganese	0.20		0.0050	0.00087	mg/L		06/26/20 08:36	07/02/20 08:36	1	

General Chemistry Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1	3.0	2.1	mg/L		07/01/20 06:00	07/01/20 07:17	1
Total Alkalinity as CaCO3 to pH 4.!	37	5.0	5.0	mg/L			06/30/20 14:34	1
Bicarbonate Alkalinity as CaCO3	37	5.0	5.0	mg/L			06/30/20 14:34	1
Carbonate Alkalinity as CaCO3	<5.0	5.0	5.0	mg/L			06/30/20 14:34	1

Method: Field Sampling - Field	Sampling						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
рН	5.20		SU			06/24/20 10:00	1

7/8/2020

Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-17

Date Collected: 06/24/20 12:35 Date Received: 06/25/20 09:00

Lab Sample ID: 180-107490-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.0		1.0	0.32	mg/L			06/25/20 23:42	1
Fluoride	<0.026		0.10	0.026	mg/L			06/25/20 23:42	
Nitrate as N	0.51		0.10	0.023	mg/L			06/25/20 23:42	
Nitrite as N	0.045	J	0.050	0.029	mg/L			06/25/20 23:42	
Sulfate	67	F1	1.0	0.38	mg/L			06/25/20 23:42	
Method: EPA 6020B -	Metals (ICP/MS) - T	otal Recove	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Boron	0.059	J	0.080	0.039	mg/L		06/26/20 08:36	07/02/20 08:12	
Calcium	11		0.50	0.13	mg/L		06/26/20 08:36	07/02/20 08:12	
Cobalt	0.024		0.0025	0.00013	mg/L		06/26/20 08:36	07/02/20 08:12	
Lithium	<0.0034		0.0050	0.0034	mg/L		06/26/20 08:36	07/02/20 08:12	
Magnesium	11		0.50	0.083	mg/L		06/26/20 08:36	07/02/20 08:12	
Molybdenum	< 0.00061		0.015	0.00061	mg/L		06/26/20 08:36	07/02/20 08:12	
Potassium	1.1		0.50	0.16	mg/L		06/26/20 08:36	07/02/20 08:12	
Sodium	9.2		0.50	0.35	mg/L		06/26/20 08:36	07/02/20 08:12	
Method: EPA 6020B -	Metals (ICP/MS) - D	issolved							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Iron	0.057		0.050	0.020	mg/L		06/26/20 08:36	07/02/20 08:44	
Manganese	0.50		0.0050	0.00087	mg/L		06/26/20 08:36	07/02/20 08:44	

General Chemistry								
Analyte	Result Qualifier	RL	MDL U	Jnit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1	3.0	2.1 m	ng/L	_	07/01/20 06:00	07/01/20 07:22	1
Total Alkalinity as CaCO3 to pH 4.	12	5.0	5.0 m	ng/L			06/30/20 14:46	1
Bicarbonate Alkalinity as CaCO3	12	5.0	5.0 m	ng/L			06/30/20 14:46	1
Carbonate Alkalinity as CaCO3	<5.0	5.0	5.0 m	ng/L			06/30/20 14:46	1
_								

Method: Field Sampling - F Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
рН	5.11				SU			06/24/20 12:35	1

Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARAMW-6

Date Collected: 06/24/20 16:20

Lab Sample ID: 180-107490-4

Matrix: Water

Method: EPA 300.0 R2.1 - Anion Analyte		romatgraph Qualifier	iy RL	MDI	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.4	Qualifier	1.0		mg/L	=	Trepared	06/25/20 22:22	1
Fluoride	0.082	J	0.10	0.026	_			06/25/20 22:22	1
Nitrate as N	0.023		0.10	0.023	J			06/25/20 22:22	1
Nitrite as N	<0.029		0.050	0.029	mg/L			06/25/20 22:22	1
Sulfate	58		1.0	0.38	mg/L			06/25/20 22:22	1
Method: EPA 6020B - Metals (IC	P/MS) - T	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.0		0.080	0.039	mg/L		06/26/20 08:36	07/02/20 08:15	1
Calcium	33		0.50	0.13	mg/L		06/26/20 08:36	07/02/20 08:15	1
Cobalt	0.0049		0.0025	0.00013	mg/L		06/26/20 08:36	07/02/20 08:15	1
Lithium	<0.0034		0.0050	0.0034	mg/L		06/26/20 08:36	07/02/20 08:15	1
Magnesium	19		0.50	0.083	mg/L		06/26/20 08:36	07/02/20 08:15	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/26/20 08:36	07/02/20 08:15	1
Potassium	1.3		0.50	0.16	mg/L		06/26/20 08:36	07/02/20 08:15	1
Sodium	12		0.50	0.35	mg/L		06/26/20 08:36	07/02/20 08:15	1
Method: EPA 6020B - Metals (IC	P/MS) - D	issolved							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1.0		0.050	0.020	mg/L		06/26/20 08:36	07/02/20 08:47	1
Manganese	0.23		0.0050	0.00087	mg/L		06/26/20 08:36	07/02/20 08:47	1
General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1		3.0	2.1	mg/L		07/01/20 06:00	07/01/20 07:23	1
Total Alkalinity as CaCO3 to pH 4.	120		5.0	5.0	mg/L			06/30/20 14:53	1
Bicarbonate Alkalinity as CaCO3	120		5.0	5.0	mg/L			06/30/20 14:53	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			06/30/20 14:53	1
Method: Field Sampling - Field S									
Analyte		Qualifier	RL _	MDL		D	Prepared	Analyzed	Dil Fac
pH	6.33				SU			06/24/20 16:20	1

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7/8/2020

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-18

Date Collected: 06/24/20 13:20 Date Received: 06/25/20 09:00

рН

Lab Sample ID: 180-107490-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.2		1.0	0.32	mg/L			06/25/20 22:38	1
Fluoride	0.094	J	0.10	0.026	mg/L			06/25/20 22:38	1
Nitrate as N	<0.023		0.10	0.023	mg/L			06/25/20 22:38	1
Nitrite as N	0.048	J	0.050	0.029	mg/L			06/25/20 22:38	1
Sulfate	190		1.0	0.38	mg/L			06/25/20 22:38	1
Method: EPA 6020B - Metals (IC	P/MS) - T	otal Recove	rable						
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Boron	2.2		0.080	0.039	mg/L		06/26/20 08:36	07/02/20 08:17	1
Calcium	44		0.50	0.13	mg/L		06/26/20 08:36	07/02/20 08:17	1
Cobalt	0.0012	J	0.0025	0.00013	mg/L		06/26/20 08:36	07/02/20 08:17	1
Lithium	0.0047	J	0.0050	0.0034	mg/L		06/26/20 08:36	07/02/20 08:17	1
Magnesium	42		0.50	0.083	mg/L		06/26/20 08:36	07/02/20 08:17	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/26/20 08:36	07/02/20 08:17	1
Potassium	2.2		0.50	0.16	mg/L		06/26/20 08:36	07/02/20 08:17	1
Sodium	12		0.50	0.35	mg/L		06/26/20 08:36	07/02/20 08:17	1
Method: EPA 6020B - Metals (IC Analyte Iron	•	Qualifier	RL 0.050	MDL 0.020		D	Prepared 06/26/20 08:36	Analyzed 07/02/20 07:48	Dil Fac
				0.020	-				1
Manganese Cobalt	0.82 0.0011		0.0050 0.0025	0.00087	-				,
Sodium	12		0.0025		mg/L			07/02/20 07:48	
			0.50		_			07/02/20 07:48	,
Potassium	2.4				mg/L				1
Lithium	0.0053		0.0050	0.0034				07/02/20 07:48 07/02/20 07:48	1
Calcium	46		0.50		mg/L				
Molybdenum	0.00062	J	0.015	0.00061	Ū			07/02/20 07:48	1
Magnesium	44		0.50	0.083				07/02/20 07:48	1
Boron	2.3		0.080	0.039	mg/L		06/26/20 08:36	07/02/20 07:48	1
General Chemistry Analyte	Posult	Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1	Qualifier	3.0	2.1			07/01/20 06:00	07/01/20 07:25	Dii Fac
	110		5.0 5.0		mg/L		07701720 00.00	06/30/20 14:59	1
Total Alkalinity as CaCO3 to pH 4.			5.0 5.0		Ū			06/30/20 14:59	1
Bicarbonate Alkalinity as CaCO3	110				mg/L				
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			06/30/20 14:59	1
Method: Field Sampling - Field S		Qualifier	RL		Unit				

06/24/20 13:20

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Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARAMW-4

Date Collected: 06/24/20 12:10 Date Received: 06/25/20 09:00 Lab Sample ID: 180-107490-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.4		1.0	0.32	mg/L			06/26/20 00:29	1
Fluoride	0.041	J	0.10	0.026	mg/L			06/26/20 00:29	1
Nitrate as N	<0.023		0.10	0.023	mg/L			06/26/20 00:29	1
Nitrite as N	<0.029		0.050	0.029	mg/L			06/26/20 00:29	1
Sulfate	860		10	3.8	mg/L			06/26/20 00:45	10

Analyte	Result Qualif	fier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.40	0.080	0.039	mg/L		06/26/20 08:36	07/02/20 08:20	1
Calcium	170	0.50	0.13	mg/L		06/26/20 08:36	07/02/20 08:20	1
Cobalt	0.0049	0.0025	0.00013	mg/L		06/26/20 08:36	07/02/20 08:20	1
Lithium	0.013	0.0050	0.0034	mg/L		06/26/20 08:36	07/02/20 08:20	1
Magnesium	97	0.50	0.083	mg/L		06/26/20 08:36	07/02/20 08:20	1
Molybdenum	0.00079 J	0.015	0.00061	mg/L		06/26/20 08:36	07/02/20 08:20	1
Potassium	12	0.50	0.16	mg/L		06/26/20 08:36	07/02/20 08:20	1
Sodium	28	0.50	0.35	mg/L		06/26/20 08:36	07/02/20 08:20	1

Method: EPA 6020B - Metals (ICP/MS) - Dissolved							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	7.5	0.050	0.020	mg/L		06/26/20 08:36	07/02/20 08:50	1
Manganese	2.3	0.0050	0.00087	mg/L		06/26/20 08:36	07/02/20 08:50	1

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1		3.0	2.1	mg/L		07/01/20 06:00	07/01/20 07:26	1
Total Alkalinity as CaCO3 to pH 4.!	64		5.0	5.0	mg/L			07/07/20 09:59	1
Bicarbonate Alkalinity as CaCO3	64		5.0	5.0	mg/L			07/07/20 09:59	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			07/07/20 09:59	1

Method: Field Sampling - Field	Sampling								
Analyte	Result C	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
рН	5.78				SU			06/24/20 12:10	1

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Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARAMW-3

Date Collected: 06/24/20 13:45 Date Received: 06/25/20 09:00 Lab Sample ID: 180-107490-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.9		1.0	0.32	mg/L			06/26/20 01:01	
Fluoride	0.18		0.10	0.026	mg/L			06/26/20 01:01	
Nitrate as N	<0.023		0.10	0.023	mg/L			06/26/20 01:01	
Nitrite as N	<0.029		0.050	0.029	mg/L			06/26/20 01:01	
Sulfate	45		1.0	0.38	mg/L			06/26/20 01:01	
Method: EPA 6020B - N	Metals (ICP/MS) - T	otal Recove	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.99	· -	0.080	0.039	mg/L		06/26/20 08:36	07/02/20 08:23	
Calcium	33		0.50	0.13	mg/L		06/26/20 08:36	07/02/20 08:23	
Cobalt	0.00053	J	0.0025	0.00013	mg/L		06/26/20 08:36	07/02/20 08:23	
Lithium	0.0046	J	0.0050	0.0034	mg/L		06/26/20 08:36	07/02/20 08:23	
Magnesium	17		0.50	0.083	mg/L		06/26/20 08:36	07/02/20 08:23	
Molybdenum	0.0077	J	0.015	0.00061	mg/L		06/26/20 08:36	07/02/20 08:23	
Potassium	5.2		0.50	0.16	mg/L		06/26/20 08:36	07/02/20 08:23	
Sodium	15		0.50	0.35	mg/L		06/26/20 08:36	07/02/20 08:23	
Method: EPA 6020B - N	Metals (ICP/MS) - D	issolved							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Iron	6.3		0.050	0.020	mg/L		06/26/20 08:36	07/02/20 08:52	
Manganese	1.2		0.0050	0.00087	mg/L		06/26/20 08:36	07/02/20 08:52	

General Chemistry Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1	3.0	2.1	mg/L		07/01/20 06:00	07/01/20 07:31	1
Total Alkalinity as CaCO3 to pH 4.!	140	5.0	5.0	mg/L			06/30/20 15:06	1
Bicarbonate Alkalinity as CaCO3	140	5.0	5.0	mg/L			06/30/20 15:06	1
Carbonate Alkalinity as CaCO3	<5.0	5.0	5.0	mg/L			06/30/20 15:06	1
_								

Method: Field Sampling - Fie Analyte	ld Sampling Result Qualif	fier RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
рН	6.38		SU			06/24/20 13:45	1

7/8/2020

Job ID: 180-107490-1

Client: Southern Company Project/Site: Plant Arkwright AP3 Alternate Source

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Lab Sample ID: MB 180-319460/50

Matrix: Water

Analysis Batch: 319460

Client Sample ID: Method Blank

Prep Type: Total/NA

MB	MB							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<0.32		1.0	0.32	mg/L			06/25/20 19:12	1
<0.026		0.10	0.026	mg/L			06/25/20 19:12	1
<0.023		0.10	0.023	mg/L			06/25/20 19:12	1
<0.029		0.050	0.029	mg/L			06/25/20 19:12	1
<0.38		1.0	0.38	mg/L			06/25/20 19:12	1
	Result <0.32 <0.026 <0.023 <0.029	<0.026 <0.023 <0.029	Result Qualifier RL <0.32	Result Qualifier RL MDL <0.32	Result Qualifier RL MDL Unit <0.32	Result Qualifier RL MDL Unit D <0.32	Result Qualifier RL MDL unit D may/L <0.32	Result Qualifier RL MDL Unit D Prepared Analyzed <0.32

Lab Sample ID: LCS 180-319460/49

Matrix: Water

Analysis Batch: 319460

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Client Sample ID: ARGWC-17

Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	55.2		mg/L		110	90 - 110	
Fluoride	2.50	2.70		mg/L		108	90 - 110	
Nitrate as N	2.50	2.65		mg/L		106	90 - 110	
Nitrite as N	2.50	2.59		mg/L		104	90 - 110	
Sulfate	50.0	52.3		mg/L		105	90 - 110	

Lab Sample ID: 180-107490-3 MS

Matrix: Water

Analysis Ratch: 319460

Analysis balch: 319460										
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	4.0		25.0	29.6		mg/L		102	90 - 110	
Fluoride	<0.026		1.25	1.26		mg/L		101	90 - 110	
Nitrate as N	0.51		1.25	1.72		mg/L		97	90 - 110	
Nitrite as N	0.045	J	1.25	1.27		mg/L		98	90 - 110	
Sulfate	67	F1	25.0	87.6	F1	ma/L		83	90 - 110	

Lab Sample ID: 180-107490-3 MSD

watrix: water									Prep 1 y	pe: 10t	ai/NA	
Analysis Batch: 319460												
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	4.0		25.0	29.9		mg/L		104	90 - 110	1	20	
Fluoride	<0.026		1 25	1 26		ma/l		101	00 110	0	20	

Fluoride <0.026 1.25 1.26 mg/L 101 90 - 110 20 Nitrate as N 20 0.51 1.25 1.75 mg/L 90 - 110 99 2 Nitrite as N 0.045 J 1.25 1.27 mg/L 98 90 - 110 20 Sulfate 67 F1 25.0 88.6 F1 mg/L 87 90 - 110 20

Lab Sample ID: MB 180-319945/6

Matrix: Water

Analysis Batch: 319945

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Sulfate 1.0 0.38 mg/L 06/30/20 05:56 <0.38

Eurofins TestAmerica, Pittsburgh

Client Sample ID: Method Blank

Prep Type: Total/NA

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Client Sample ID: ARGWC-17

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Job ID: 180-107490-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy (Continued)

Lab Sample ID: LCS 180-319945/5

Matrix: Water

Client Sample ID: Lab Control Sample Prep Type: Total/NA Analysis Batch: 319945

Spike LCS LCS %Rec. Analyte Added Result Qualifier %Rec Limits Unit Sulfate 50.0 108 90 - 110 54.1 mg/L

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-319682/1-A

Matrix: Water

Analysis Batch: 320364

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 319682

мв мв Analyte Result Qualifier RLMDL Unit **Prepared** Analyzed Dil Fac Iron <0.020 0.050 0.020 mg/L 06/26/20 08:36 07/02/20 07:40 1 Manganese <0.00087 0.0050 0.00087 mg/L 06/26/20 08:36 07/02/20 07:40 Cobalt < 0.00013 0.0025 0.00013 mg/L 06/26/20 08:36 07/02/20 07:40 Sodium < 0.35 0.50 0.35 mg/L 06/26/20 08:36 07/02/20 07:40 Potassium <0.16 0.50 0.16 mg/L 06/26/20 08:36 07/02/20 07:40 Lithium 06/26/20 08:36 07/02/20 07:40 <0.0034 0.0050 0.0034 mg/L Calcium 0.50 0.13 mg/L 06/26/20 08:36 07/02/20 07:40 < 0.13 Molybdenum 0.015 0.00061 mg/L 06/26/20 08:36 07/02/20 07:40 <0.00061 0.50 0.083 mg/L 06/26/20 08:36 07/02/20 07:40 Magnesium < 0.083 06/26/20 08:36 07/02/20 07:40 Boron 0.039 mg/L < 0.039 0.080

Lab Sample ID: LCS 180-319682/2-A

Client Sample ID: Lab Control Sample **Matrix: Water Prep Type: Total Recoverable Analysis Batch: 320364 Prep Batch: 319682** Spike LCS LCS %Rec.

	opo						/0.100.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Īron	5.00	5.29		mg/L		106	80 - 120	
Manganese	1.00	0.983		mg/L		98	80 - 120	
Cobalt	1.00	1.03		mg/L		103	80 - 120	
Sodium	25.0	25.4		mg/L		102	80 - 120	
Potassium	25.0	25.5		mg/L		102	80 - 120	
Lithium	1.00	1.09		mg/L		109	80 - 120	
Calcium	25.0	26.0		mg/L		104	80 - 120	
Molybdenum	1.00	1.04		mg/L		104	80 - 120	
Magnesium	25.0	26.5		mg/L		106	80 - 120	
Boron	1.25	1.17		mg/L		93	80 - 120	

Lab Sample ID: 180-107490-5 MS

Matrix: Water

Analysis Batch: 320364

Client Sample ID: ARGWC-18 **Prep Type: Dissolved Prep Batch: 319682**

Analysis Baton. 020004	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Iron	0.86		5.00	5.87		mg/L		100	75 - 125
Manganese	0.82		0.500	1.27		mg/L		90	75 - 125
Cobalt	0.0011	J	0.500	0.484		mg/L		97	75 - 125
Sodium	12		25.0	36.4		mg/L		97	75 - 125
Potassium	2.4		25.0	26.6		mg/L		97	75 - 125
Lithium	0.0053		0.500	0.502		mg/L		99	75 - 125
Calcium	46		25.0	68.4		mg/L		89	75 - 125
Molybdenum	0.00062	J	0.500	0.514		mg/L		103	75 ₋ 125

Eurofins TestAmerica, Pittsburgh

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Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client: Southern Company

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Client Sample ID: ARGWC-18 Lab Sample ID: 180-107490-5 MS **Matrix: Water Prep Type: Dissolved** Analysis Batch: 320364 **Prep Batch: 319682** Comple Comple 0...:

	Sample	Sample	Spike	IVIO	IVIO				7οRec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Magnesium	44		25.0	68.0		mg/L		95	75 - 125	
Boron	2.3		1.25	3.51		mg/L		96	75 - 125	

Lab Sample ID: 180-107490-5 MSD Client Sample ID: ARGWC-18 **Matrix: Water Prep Type: Dissolved Prep Batch: 319682** Analysis Batch: 320364

Alialysis Datch. 320304									Lieb De	Jaicii. Jigot	
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Iron	0.86		5.00	6.13	-	mg/L		105	75 - 125	4	20
Manganese	0.82		0.500	1.28		mg/L		91	75 - 125	0	20
Cobalt	0.0011	J	0.500	0.488		mg/L		97	75 - 125	1	20
Sodium	12		25.0	36.2		mg/L		96	75 - 125	1	20
Potassium	2.4		25.0	26.5		mg/L		97	75 - 125	1	20
Lithium	0.0053		0.500	0.509		mg/L		101	75 - 125	1	20
Calcium	46		25.0	66.6		mg/L		82	75 - 125	3	20
Molybdenum	0.00062	J	0.500	0.522		mg/L		104	75 - 125	2	20
Magnesium	44		25.0	67.2		mg/L		92	75 - 125	1	20
Boron	2.3		1.25	3.53		mg/L		97	75 - 125	1	20

Method: EPA 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 180-320115/1-A Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA **Analysis Batch: 320175 Prep Batch: 320115**

MB MB RL Analyte Result Qualifier MDL Unit Prepared Analyzed Dil Fac 3.0 07/01/20 06:00 07/01/20 07:13 Sulfide <2.1 2.1 mg/L

Lab Sample ID: LCS 180-320115/2-A **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA **Analysis Batch: 320175 Prep Batch: 320115** Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits

Sulfide 11.9 89 85 - 115 10.5 mg/L Lab Sample ID: 180-107490-2 MS **Client Sample ID: ARGWC-16 Matrix: Water** Prep Type: Total/NA

Analysis Batch: 320175 Prep Batch: 320115 MS MS Sample Sample Spike %Rec. Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Sulfide <2 1 11.9 85 75 - 125 10.1 mg/L

Lab Sample ID: 180-107490-2 MSD Client Sample ID: ARGWC-16 **Matrix: Water** Prep Type: Total/NA Analysis Batch: 320175 **Prep Batch: 320115** Spike MSD MSD Sample Sample %Rec. **RPD** Added Limits Analyte Result Qualifier Result Qualifier Unit D %Rec RPD Limit 82 Sulfide <2.1 11.9 9.77 mg/L 75 - 125 3

7/8/2020

Prep Type: Total/NA

Prep Type: Total/NA

06/26/20 18:10

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

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Dil Fac

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-319696/2

Matrix: Water

Analysis Batch: 319696

MB MB

<5.0

Analyte Result Qualifier RL **MDL** Unit Analyzed Dil Fac Prepared Total Dissolved Solids 10 10 mg/L 06/26/20 10:14 <10

Lab Sample ID: LCS 180-319696/1

Matrix: Water

Analysis Batch: 319696

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits 567 **Total Dissolved Solids** 586 mg/L 103 80 - 120

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-319992/77

Matrix: Water

Analyte

Analysis Batch: 319992

Total Alkalinity as CaCO3 to pH 4.5

Bicarbonate Alkalinity as CaCO3

Carbonate Alkalinity as CaCO3

Client Sample ID: Method Blank Prep Type: Total/NA

MB MB **MDL** Unit Result Qualifier RL D Prepared Analyzed <5.0 5.0 5.0 mg/L 06/26/20 18:10 <5.0 5.0 5.0 mg/L 06/26/20 18:10

5.0 mg/L

Lab Sample ID: LCS 180-319992/76

Matrix: Water

Analysis Batch: 319992

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits 250 235 mg/L 94 90 - 110 Total Alkalinity as CaCO3 to pH

5.0

Lab Sample ID: MB 180-320519/5

Matrix: Water

Analysis Batch: 320519

	MB MB					
Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	<5.0	5.0	5.0 mg/L		06/30/20 13:11	1
Bicarbonate Alkalinity as CaCO3	<5.0	5.0	5.0 mg/L		06/30/20 13:11	1
Carbonate Alkalinity as CaCO3	<5.0	5.0	5.0 mg/L		06/30/20 13:11	1

Lab Sample ID: LCS 180-320519/4

Matrix: Water

Analysis Batch: 320519

Spike LCS LCS %Rec. Added Result Qualifier Unit Analyte %Rec Limits 250 233 93 90 - 110 Total Alkalinity as CaCO3 to pH mg/L

4.5

QC Sample Results

Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

Method: SM2320 B - Alkalinity, Total (Continued)

Lab Sample ID: 180-107490-2 DU

Matrix: Water

Analysis Batch: 320519

Client Sample ID: ARGWC-16 Prep Type: Total/NA

l	•	Sample	Sample	DU	DU				RPD
	Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
	Total Alkalinity as CaCO3 to pH 4.5	37		38.3		mg/L		 4	20
	Bicarbonate Alkalinity as CaCO3	37		38.3		mg/L		4	20
	Carbonate Alkalinity as CaCO3	<5.0		<5.0		mg/L		NC	20

Lab Sample ID: MB 180-320796/5

Matrix: Water

Analysis Batch: 320796

Client Sample ID: Method Blank

Prep Type: Total/NA

10

MB MB Analyte Result Qualifier RL MDL Unit Dil Fac Prepared Analyzed Total Alkalinity as CaCO3 to pH 4.5 5.0 <5.0 5.0 mg/L 07/07/20 08:32 07/07/20 08:32 Bicarbonate Alkalinity as CaCO3 <5.0 5.0 5.0 mg/L 1 Carbonate Alkalinity as CaCO3 <5.0 5.0 5.0 mg/L 07/07/20 08:32

Lab Sample ID: LCS 180-320796/4

Matrix: Water

Analysis Batch: 320796

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Total Alkalinity as CaCO3 to pH 250 235 mg/L 94 90 - 110

4.5

7/8/2020

QC Association Summary

Client: Southern Company

Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

HPLC/IC

Analysis Batch: 319460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-1	EB#1	Total/NA	Water	EPA 300.0 R2.1	
180-107490-2	ARGWC-16	Total/NA	Water	EPA 300.0 R2.1	
180-107490-3	ARGWC-17	Total/NA	Water	EPA 300.0 R2.1	
180-107490-4	ARAMW-6	Total/NA	Water	EPA 300.0 R2.1	
180-107490-5	ARGWC-18	Total/NA	Water	EPA 300.0 R2.1	
180-107490-6	ARAMW-4	Total/NA	Water	EPA 300.0 R2.1	
180-107490-6	ARAMW-4	Total/NA	Water	EPA 300.0 R2.1	
180-107490-7	ARAMW-3	Total/NA	Water	EPA 300.0 R2.1	
MB 180-319460/50	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-319460/49	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-107490-3 MS	ARGWC-17	Total/NA	Water	EPA 300.0 R2.1	
180-107490-3 MSD	ARGWC-17	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 319945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-2	ARGWC-16	Total/NA	Water	EPA 300.0 R2.1	
MB 180-319945/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-319945/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 319682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
180-107490-1	EB#1	Dissolved	Water	3005A	
180-107490-1	EB#1	Total Recoverable	Water	3005A	
180-107490-2	ARGWC-16	Dissolved	Water	3005A	
180-107490-2	ARGWC-16	Total Recoverable	Water	3005A	
180-107490-3	ARGWC-17	Dissolved	Water	3005A	
180-107490-3	ARGWC-17	Total Recoverable	Water	3005A	
180-107490-4	ARAMW-6	Dissolved	Water	3005A	
180-107490-4	ARAMW-6	Total Recoverable	Water	3005A	
180-107490-5	ARGWC-18	Dissolved	Water	3005A	
180-107490-5	ARGWC-18	Total Recoverable	Water	3005A	
180-107490-6	ARAMW-4	Dissolved	Water	3005A	
180-107490-6	ARAMW-4	Total Recoverable	Water	3005A	
180-107490-7	ARAMW-3	Dissolved	Water	3005A	
180-107490-7	ARAMW-3	Total Recoverable	Water	3005A	
MB 180-319682/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-319682/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-107490-5 MS	ARGWC-18	Dissolved	Water	3005A	
180-107490-5 MSD	ARGWC-18	Dissolved	Water	3005A	

Analysis Batch: 320364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-1	EB#1	Dissolved	Water	EPA 6020B	319682
180-107490-1	EB#1	Total Recoverable	Water	EPA 6020B	319682
180-107490-2	ARGWC-16	Dissolved	Water	EPA 6020B	319682
180-107490-2	ARGWC-16	Total Recoverable	Water	EPA 6020B	319682
180-107490-3	ARGWC-17	Dissolved	Water	EPA 6020B	319682
180-107490-3	ARGWC-17	Total Recoverable	Water	EPA 6020B	319682
180-107490-4	ARAMW-6	Dissolved	Water	EPA 6020B	319682

Eurofins TestAmerica, Pittsburgh

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Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Metals (Continued)

Analysis Batch: 320364 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-4	ARAMW-6	Total Recoverable	Water	EPA 6020B	319682
180-107490-5	ARGWC-18	Dissolved	Water	EPA 6020B	319682
180-107490-5	ARGWC-18	Total Recoverable	Water	EPA 6020B	319682
180-107490-6	ARAMW-4	Dissolved	Water	EPA 6020B	319682
180-107490-6	ARAMW-4	Total Recoverable	Water	EPA 6020B	319682
180-107490-7	ARAMW-3	Dissolved	Water	EPA 6020B	319682
180-107490-7	ARAMW-3	Total Recoverable	Water	EPA 6020B	319682
MB 180-319682/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	319682
LCS 180-319682/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	319682
180-107490-5 MS	ARGWC-18	Dissolved	Water	EPA 6020B	319682
180-107490-5 MSD	ARGWC-18	Dissolved	Water	EPA 6020B	319682

General Chemistry

Analysis Batch: 319696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-1	EB#1	Total/NA	Water	SM 2540C	
MB 180-319696/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-319696/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 319992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-1	EB#1	Total/NA	Water	SM2320 B	
MB 180-319992/77	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-319992/76	Lab Control Sample	Total/NA	Water	SM2320 B	

Prep Batch: 320115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-1	EB#1	Total/NA	Water	9030B	
180-107490-2	ARGWC-16	Total/NA	Water	9030B	
180-107490-3	ARGWC-17	Total/NA	Water	9030B	
180-107490-4	ARAMW-6	Total/NA	Water	9030B	
180-107490-5	ARGWC-18	Total/NA	Water	9030B	
180-107490-6	ARAMW-4	Total/NA	Water	9030B	
180-107490-7	ARAMW-3	Total/NA	Water	9030B	
MB 180-320115/1-A	Method Blank	Total/NA	Water	9030B	
LCS 180-320115/2-A	Lab Control Sample	Total/NA	Water	9030B	
180-107490-2 MS	ARGWC-16	Total/NA	Water	9030B	
180-107490-2 MSD	ARGWC-16	Total/NA	Water	9030B	

Analysis Batch: 320175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-1	EB#1	Total/NA	Water	EPA 9034	320115
180-107490-2	ARGWC-16	Total/NA	Water	EPA 9034	320115
180-107490-3	ARGWC-17	Total/NA	Water	EPA 9034	320115
180-107490-4	ARAMW-6	Total/NA	Water	EPA 9034	320115
180-107490-5	ARGWC-18	Total/NA	Water	EPA 9034	320115
180-107490-6	ARAMW-4	Total/NA	Water	EPA 9034	320115
180-107490-7	ARAMW-3	Total/NA	Water	EPA 9034	320115
MB 180-320115/1-A	Method Blank	Total/NA	Water	EPA 9034	320115
LCS 180-320115/2-A	Lab Control Sample	Total/NA	Water	EPA 9034	320115

Eurofins TestAmerica, Pittsburgh

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Job ID: 180-107490-1

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QC Association Summary

Client: Southern Company Job ID: 180-107490-1

Project/Site: Plant Arkwright AP3 Alternate Source

General Chemistry (Continued)

Analysis Batch: 320175 (Continued)

Lab Sa	ample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-10)7490-2 MS	ARGWC-16	Total/NA	Water	EPA 9034	320115
180-10)7490-2 MSD	ARGWC-16	Total/NA	Water	EPA 9034	320115

Analysis Batch: 320519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-2	ARGWC-16	Total/NA	Water	SM2320 B	_
180-107490-3	ARGWC-17	Total/NA	Water	SM2320 B	
180-107490-4	ARAMW-6	Total/NA	Water	SM2320 B	
180-107490-5	ARGWC-18	Total/NA	Water	SM2320 B	
180-107490-7	ARAMW-3	Total/NA	Water	SM2320 B	
MB 180-320519/5	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-320519/4	Lab Control Sample	Total/NA	Water	SM2320 B	
180-107490-2 DU	ARGWC-16	Total/NA	Water	SM2320 B	

Analysis Batch: 320796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-6	ARAMW-4	Total/NA	Water	SM2320 B	<u> </u>
MB 180-320796/5	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-320796/4	Lab Control Sample	Total/NA	Water	SM2320 B	

Field Service / Mobile Lab

Analysis Batch: 320074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107490-2	ARGWC-16	Total/NA	Water	Field Sampling	
180-107490-3	ARGWC-17	Total/NA	Water	Field Sampling	
180-107490-4	ARAMW-6	Total/NA	Water	Field Sampling	
180-107490-5	ARGWC-18	Total/NA	Water	Field Sampling	
180-107490-6	ARAMW-4	Total/NA	Water	Field Sampling	
180-107490-7	ARAMW-3	Total/NA	Water	Field Sampling	

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301 Alpha Drive RIDC Park

Chain of Custody Record

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Client Information	TDAKER	FMa	ila	Brow	m, Sha	ă.						180-61584-124	90.1
itent Contact oju Abraham	Phone:	,		200		@lesta	meric	ainc.o	om			Page 1 of 1	
ompany Southern Company								Ar	alvsis Re	equested		Job #:	
ótress.	Due Dale Request	ed:				П	T	T			TT	Preservation Co	odes:
241 Ralph McGill Blvd SE B10185	TAT Requested (da	145):				li		1 1	25			A - HCL B - NaOH	M - Haxane N - None
itlanta	- 5 days				1	2			25	11111		C - Zn Acetate	O - AsNa02
tate, Zip. 3A, 30308	/					4	la Val	(80	250			D - Nitric Acid E - NaHSO4	P - Na204S Q - Na2S03
hone	PO#: SC\$10382606					Hear de	N. C.	31) pe	D. YY			F - MeOH G - Amchlor	R - Na2S2O3 S - H2SO4
mail	WO#.				S S	1		solve	187			i - toe	T - TSP Dodecahydra U - Acetone
Abraham@southernoo.com	Project #:				0 80 N	IX:	SWIP S	N Dis	10		E	J - DI Water K - EDTA	V - MCAA W - pH 4-5
Plant Arkwright AP3 Alternate Source	18026201				000	1	a la la	Tot.	Cas		containers	L - EDA	Z - other (specify)
ite. Seorgia	SSOW#				Sample (Yes or No)	I SW	USTO Diesol	spilos	09 (g)		of co	Other:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp,	Matrix (riverse, Sessia, Owastelol, Sit-Toose, t-far)	Field Filtored Sample (Yes or Perform MS/MSD (Yes or No)	2320B, 300_ORGTMB	6020B - (MOD) Custom 6 (Conforcements)	2540C_Calcd - Solids, Total Dissolved (TDS)	602.6\$ (MOD) Caston Spen alica My No		Total Number of	Special	Instructions/Note:
sample identification	Sample Bate	>		tion Code:	XX	N O	D		CB D			эресіаі	mstroctions/wote.
EB#1	6/24/20	1925	G	Water	У	1	_	X	X		5		-: 10
ARGWC-16	9771120	1000	-	Water	V			X	X		4	-	
AD CILIO IS				Water		_					4	pH =5	050 - 1
ARGWC-17 ARAMW-6		1235	-		7			×-	X	+	1	pt -6	335.11
ARAMW-6		1620		Water	17	X		X	_	+++++	14	pH = 6	33
ARGWC-18		1320		Water	Ŋ		-	X	ΧX		5	pH = 5	.91
ARAMW-4	1	1210	G	Water	Y	X	X.	X_	X		L	PH = 5	78
ARGWC-18 ARAMW-4 ARAMW-3	- V	1345	G	Water	У	X	X)	(X		6	10H=6	
				Water								f	
				Water									
				Water									
						T	+	+			Ш		11 -
Possible Hazard Identification					1 5	ample l	Dispo	isal (A	l fee may b	e assesser	Ш		II -
X Man Manual Community Colin Instant Co	Poison B Unikn	ionn -	Radiological								7490 Cha	ain of Custody	
Deliverable Requested I, II, III, IV, Other (specify)					S	pecial Ir	nstruc	tions/0	QC Require	ments:			-
Empty Kit Relinquished by:		Date:			Time				_	Method of Shipmer	it.		
Daniel L Howard	6/24/2	0/12	315	Сотралу		Receiv		-	/		ine: 125 24	900	Company
Relinquished by.	Date/Time:			Company		Receiv	ed by			Date/Tir	na:		Company
	Date/Time:			Company		Receiv	ed by			Date/Tir	me:		Company
Relinquished by.	Caterrine.												

MENTAL 93(NA A)

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PT-WLSR-001 effective 7/26/13

Initials

SF

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Uncorrected temp Thermometer ID Client: Southern Company

Job Number: 180-107490-1

Login Number: 107490 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-107679-1

Client Project/Site: Plant Arkwright AP3 Alternate Source

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by: 7/9/2020 1:55:03 PM

Shali Brown, Project Manager II (615)301-5031

Shali.Brown@Eurofinset.com

LINKS

Review your project results through

Have a Question?



Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Job ID: 180-107679-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-107679-1

Comments

No additional comments.

Receipt

The samples were received on 6/29/2020 9:23 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 13.1° C.

Receipt Exceptions

The following samples were received outside of holding time for the nitrate analysis. ARGWC-15 (180-107679-1), ARGWA-14 (180-107679-2), ARGWA-3 (180-107679-3), ARGWA-5 (180-107679-4), ARGWC-7 (180-107679-5) and ARGWA-13 (180-107679-6).

The following samples were received at the laboratory outside the required temperature criteria of 13.1°C due to a fedex delay. ARGWC-15 (180-107679-1), ARGWA-14 (180-107679-2), ARGWA-3 (180-107679-3), ARGWA-5 (180-107679-4), ARGWC-7 (180-107679-5) and ARGWA-13 (180-107679-6). The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

GC Semi VOA

Methods 300.0: The following samples were received outside of holding time for Nitrate and/or Nitrite analysis: ARGWA-3 (180-107679-3), ARGWA-5 (180-107679-4), ARGWC-7 (180-107679-5) and ARGWA-13 (180-107679-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 180-107679-1

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Definitions/Glossary

Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

Qualifier Description

Qualifiers

HPI	LC/	IC
Qua	lifie	r

	The second secon
Н	Sample was prepped or analyzed beyond the specified holding time
H3	Sample was received and analyzed past holding time.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier **Qualifier Description**

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery **CFL** Contains Free Liquid CFU Colony Forming Unit **CNF** Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample DL, RA, RE, IN

Decision Level Concentration (Radiochemistry) DLC

EDL Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit ML Minimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

Not Detected at the reporting limit (or MDL or EDL if shown) ND

Negative / Absent NEG POS Positive / Present

PQL **Practical Quantitation Limit**

PRES Presumptive QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

RPD Relative Percent Difference, a measure of the relative difference between two points

Toxicity Equivalent Factor (Dioxin) **TEF** Toxicity Equivalent Quotient (Dioxin) **TEQ**

TNTC Too Numerous To Count

Eurofins TestAmerica, Pittsburgh

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Accreditation/Certification Summary

Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	08-01-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	05-23-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

Sample Summary

Client: Southern Company Project/Site: Plant Arkwright AP3 Alternate Source

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-107679-1	ARGWC-15	Water	06/25/20 11:10	06/29/20 09:23	
180-107679-2	ARGWA-14	Water	06/25/20 13:40	06/29/20 09:23	
180-107679-3	ARGWA-3	Water	06/25/20 16:20	06/29/20 09:23	
180-107679-4	ARGWA-5	Water	06/25/20 14:05	06/29/20 09:23	
180-107679-5	ARGWC-7	Water	06/25/20 16:15	06/29/20 09:23	
180-107679-6	ARGWA-13	Water	06/25/20 15:14	06/29/20 09:23	

Job ID: 180-107679-1

Method Summary

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatgraphy	EPA	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
EPA 9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Job ID: 180-107679-1

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1:

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-15

Date Collected: 06/25/20 11:10

Lab Sample ID: 180-107679-1

Lab Sample ID: 180-107679-2

Matrix: Water

Job ID: 180-107679-1

Date Received: 06/29/20 09:23

Prep Type Total/NA	Type Analysis Instrumen	Batch Method EPA 300.0 R2.1	Run	Factor 1	Initial Amount	Final Amount	Batch Number 319944	Prepared or Analyzed 06/30/20 18:15	Analyst MJH	Lab TAL PIT
Dissolved Dissolved	Prep Analysis	3005A EPA 6020B at ID: DORY		1	50 mL	50 mL	320069 320452	06/30/20 15:21 07/03/20 00:59		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020B at ID: DORY		1	50 mL	50 mL	320069 320452	06/30/20 15:21 07/03/20 01:37		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	9030B EPA 9034 at ID: NOEQUIP		1	50 mL	50 mL	320341 320374	07/02/20 11:40 07/02/20 13:06		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	SM2320 B at ID: PCTITRATOR		1			320796	07/07/20 10:18	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling at ID: NOEQUIP		1			320074	06/25/20 11:10	NJD	TAL PIT

Client Sample ID: ARGWA-14

Date Collected: 06/25/20 13:40

Date Received: 06/29/20 09:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1	= =====	1			319944	06/30/20 18:31	MJH	TAL PIT
	Instrumer	t ID: CHIC2100A								
Dissolved	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Dissolved	Analysis	EPA 6020B		1			320452	07/03/20 01:02	RSK	TAL PIT
	Instrumer	it ID: DORY								
Total Recoverable	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			320452	07/03/20 01:41	RSK	TAL PIT
	Instrumer	t ID: DORY								
Total/NA	Prep	9030B			50 mL	50 mL	320341	07/02/20 11:40	CMR	TAL PIT
Total/NA	Analysis	FPA 9034		1			320374	07/02/20 13:08	CMR	TAI PIT

Client Sample ID: ARGWA-3

Analysis

Analysis

Instrument ID: NOEQUIP

Instrument ID: NOEQUIP

SM2320 B

Field Sampling

Instrument ID: PCTITRATOR

Date Collected: 06/25/20 16:20

Date Received: 06/29/20 09:23

Total/NA

Total/NA

Lab	Sample	ID:	180-107679-3
			Matrix: Water

07/07/20 10:25 AVS

06/25/20 13:40 NJD

320796

320074

Matrix: Water

TAL PIT

TAL PIT

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			319944	06/30/20 19:20	MJH	TAL PIT
	Instrument	ID: CHIC2100A								

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Matrix: Water

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Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWA-3

Date Collected: 06/25/20 16:20 Date Received: 06/29/20 09:23

Lab Sample ID: 180-107679-3 **Matrix: Water**

Job ID: 180-107679-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Dissolved	Analysis Instrument	EPA 6020B ID: DORY		1			320452	07/03/20 01:13	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020B ID: DORY		1			320452	07/03/20 01:44	RSK	TAL PIT
Total/NA	Prep	9030B			50 mL	50 mL	320341	07/02/20 11:40	CMR	TAL PIT
Total/NA	Analysis Instrument	EPA 9034 ID: NOEQUIP		1			320374	07/02/20 13:13	CMR	TAL PIT
Total/NA	Analysis Instrument	SM2320 B ID: PCTITRATOR		1			320796	07/07/20 10:31	AVS	TAL PIT
Total/NA	Analysis Instrument	Field Sampling ID: NOEQUIP		1			320074	06/25/20 16:20	NJD	TAL PIT

Client Sample ID: ARGWA-5

Date Collected: 06/25/20 14:05 Date Received: 06/29/20 09:23

Lab Sample ID: 180-107679-4

Matrix: Water

Batch Batch Dil Initial Final **Batch** Prepared Method **Prep Type** Type **Factor Amount** Number or Analyzed Run Amount Analyst Lab Total/NA Analysis EPA 300.0 R2.1 319944 06/30/20 19:37 TAL PIT Instrument ID: CHIC2100A Dissolved Prep 3005A 50 mL 50 mL 320069 06/30/20 15:21 JL TAL PIT Dissolved 320452 07/03/20 01:16 RSK Analysis **EPA 6020B** TAL PIT 1 Instrument ID: DORY 3005A 06/30/20 15:21 JL TAL PIT Total Recoverable 50 mL 50 mL 320069 Prep Total Recoverable **EPA 6020B** TAL PIT Analysis 1 320452 07/03/20 01:55 RSK Instrument ID: DORY Total/NA 9030B TAL PIT Prep 50 mL 50 mL 320341 07/02/20 11:40 CMR Total/NA EPA 9034 320374 07/02/20 13:15 CMR TAL PIT Analysis Instrument ID: NOEQUIP Total/NA Analysis SM2320 B 320796 07/07/20 10:38 AVS TAL PIT Instrument ID: PCTITRATOR Total/NA Analysis 06/25/20 14:05 NJD Field Sampling 320074 TAL PIT Instrument ID: NOEQUIP

Client Sample ID: ARGWC-7

Date Collected: 06/25/20 16:15

Date Received: 06/29/20 09:23

Prep Type Total/NA	Batch Type Analysis Instrumer	Batch Method EPA 300.0 R2.1 at ID: CHIC2100A	Run	Pactor 1	Initial Amount	Final Amount	Batch Number 319944	Prepared or Analyzed 06/30/20 19:53	Analyst MJH	Lab TAL PIT
Dissolved	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Dissolved	Analysis Instrumer	EPA 6020B at ID: DORY		1			320452	07/03/20 01:20	RSK	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Sample ID: 180-107679-5

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Matrix: Water

Lab Chronicle

Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-7

Date Collected: 06/25/20 16:15 Date Received: 06/29/20 09:23 Lab Sample ID: 180-107679-5

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			320452	07/03/20 01:58	RSK	TAL PIT
	Instrumen	t ID: DORY								
Total/NA	Prep	9030B			50 mL	50 mL	320341	07/02/20 11:40	CMR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9034 t ID: NOEQUIP		1			320374	07/02/20 13:16	CMR	TAL PIT
Total/NA	Analysis Instrumen	SM2320 B t ID: PCTITRATOR		1			320796	07/07/20 10:44	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			320074	06/25/20 16:15	NJD	TAL PIT

Client Sample ID: ARGWA-13

Date Collected: 06/25/20 15:14 Date Received: 06/29/20 09:23 Lab Sample ID: 180-107679-6

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			319944	06/30/20 20:09	MJH	TAL PIT
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		10			320882	07/09/20 01:52	MJH	TAL PIT
Dissolved	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Dissolved	Analysis Instrumen	EPA 6020B t ID: DORY		1			320452	07/03/20 01:23	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: DORY		1			320452	07/03/20 02:02	RSK	TAL PIT
Total/NA	Prep	9030B			50 mL	50 mL	320341	07/02/20 11:40	CMR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9034 t ID: NOEQUIP		1			320374	07/02/20 13:18	CMR	TAL PIT
Total/NA	Analysis Instrumen	SM2320 B t ID: PCTITRATOR		1			320796	07/07/20 11:18	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling		1			320074	06/25/20 15:14	NJD	TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Eurofins TestAmerica, Pittsburgh

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Lab Chronicle

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Job ID: 180-107679-1

Analyst References:

Lab: TAL PIT

Batch Type: Prep

CMR = Carl Reagle

JL = James Lyu

Batch Type: Analysis

AVS = Abbey Smith

CMR = Carl Reagle

MJH = Matthew Hartman

NJD = Nicholas DiNardo

RSK = Robert Kurtz

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1:

Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-15

Date Collected: 06/25/20 11:10 Date Received: 06/29/20 09:23 Lab Sample ID: 180-107679-1

Matrix: Water

Method: EPA 300.0 R2.1 -	Anions, Ion Ch								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.9		1.0	0.32	mg/L			06/30/20 18:15	1
Fluoride	0.067	J	0.10	0.026	mg/L			06/30/20 18:15	1
Nitrate as N	0.21	H H3	0.10	0.023	mg/L			06/30/20 18:15	1
Nitrite as N	<0.029	H H3	0.050	0.029	mg/L			06/30/20 18:15	1
Sulfate	5.6		1.0	0.38	mg/L			06/30/20 18:15	1

Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recov	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.039		0.080	0.039	mg/L		06/30/20 15:21	07/03/20 01:37	1
Calcium	23		0.50	0.13	mg/L		06/30/20 15:21	07/03/20 01:37	1
Cobalt	0.00022	J	0.0025	0.00013	mg/L		06/30/20 15:21	07/03/20 01:37	1
Lithium	0.0040	J	0.0050	0.0034	mg/L		06/30/20 15:21	07/03/20 01:37	1
Magnesium	8.0		0.50	0.083	mg/L		06/30/20 15:21	07/03/20 01:37	1
Molybdenum	0.00086	J	0.015	0.00061	mg/L		06/30/20 15:21	07/03/20 01:37	1
Potassium	7.5		0.50	0.16	mg/L		06/30/20 15:21	07/03/20 01:37	1
Sodium	9.2		0.50	0.35	mg/L		06/30/20 15:21	07/03/20 01:37	1

Method: EPA 6020B - Metals (ICP/MS) - Dissolved										
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Iron	<0.020	0.050	0.020	mg/L		06/30/20 15:21	07/03/20 00:59	1		
Manganese	0.0091	0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 00:59	1		

General Chemistry Analyte	Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1		3.0	2.1	mg/L		07/02/20 11:40	07/02/20 13:06	1
Total Alkalinity as CaCO3 to pH 4.!	98		5.0	5.0	mg/L			07/07/20 10:18	1
Bicarbonate Alkalinity as CaCO3	98		5.0	5.0	mg/L			07/07/20 10:18	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			07/07/20 10:18	1

Method: Field Sampling - Fie Analyte	eld Sampling Result (Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
рН	6.32			SU			06/25/20 11:10	1

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Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWA-14

Date Collected: 06/25/20 13:40

Lab Sample ID: 180-107679-2

Matrix: Water

		00,10,10	
Date	Received:	06/29/20	09:23

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.0		1.0	0.32	mg/L			06/30/20 18:31	
Fluoride	0.17		0.10	0.026	mg/L			06/30/20 18:31	•
Nitrate as N	0.085	J H H3	0.10	0.023	mg/L			06/30/20 18:31	1
Nitrite as N	<0.029	H H3	0.050	0.029	mg/L			06/30/20 18:31	1
Sulfate	3.3		1.0	0.38	mg/L			06/30/20 18:31	,
Method: EPA 6020B - Metals (IC	P/MS) - T	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Boron	<0.039		0.080	0.039	mg/L		06/30/20 15:21	07/03/20 01:41	1
Calcium	27		0.50		mg/L		06/30/20 15:21	07/03/20 01:41	•
Cobalt	<0.00013		0.0025	0.00013	mg/L		06/30/20 15:21	07/03/20 01:41	
Lithium	0.0071		0.0050	0.0034	mg/L		06/30/20 15:21	07/03/20 01:41	•
Magnesium	5.0		0.50	0.083	mg/L		06/30/20 15:21	07/03/20 01:41	
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/30/20 15:21	07/03/20 01:41	
Potassium	2.2		0.50	0.16	mg/L		06/30/20 15:21	07/03/20 01:41	•
Sodium	43		0.50	0.35	mg/L		06/30/20 15:21	07/03/20 01:41	,
Method: EPA 6020B - Metals (IC	P/MS) - D	issolved							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Iron	0.023	J	0.050	0.020	mg/L		06/30/20 15:21	07/03/20 01:02	
Manganese	0.0078		0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 01:02	1
General Chemistry									
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1		3.0	2.1	mg/L		07/02/20 11:40	07/02/20 13:08	•
Total Alkalinity as CaCO3 to pH 4.	140		5.0	5.0	mg/L			07/07/20 10:25	•
Bicarbonate Alkalinity as CaCO3	140		5.0		mg/L			07/07/20 10:25	
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			07/07/20 10:25	,
Method: Field Sampling - Field S		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac

Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWA-3

Date Collected: 06/25/20 16:20 Date Received: 06/29/20 09:23 Lab Sample ID: 180-107679-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.8		1.0	0.32	mg/L			06/30/20 19:20	1
Fluoride	0.060	J	0.10	0.026	mg/L			06/30/20 19:20	1
Nitrate as N	<0.023	H H3	0.10	0.023	mg/L			06/30/20 19:20	1
Nitrite as N	<0.029	H H3	0.050	0.029	mg/L			06/30/20 19:20	1
Sulfate	1.6		1.0	0.38	mg/L			06/30/20 19:20	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.039		0.080	0.039	mg/L		06/30/20 15:21	07/03/20 01:44	1
Calcium	5.7		0.50	0.13	mg/L		06/30/20 15:21	07/03/20 01:44	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		06/30/20 15:21	07/03/20 01:44	1
Lithium	<0.0034		0.0050	0.0034	mg/L		06/30/20 15:21	07/03/20 01:44	1
Magnesium	2.8		0.50	0.083	mg/L		06/30/20 15:21	07/03/20 01:44	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/30/20 15:21	07/03/20 01:44	1
Potassium	1.3		0.50	0.16	mg/L		06/30/20 15:21	07/03/20 01:44	1
Sodium	7.9		0.50	0.35	mg/L		06/30/20 15:21	07/03/20 01:44	1

Method: EPA 6020B - Metals (ICP/MS) - Dissolved										
	Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Iron	<0.020	0.050	0.020	mg/L		06/30/20 15:21	07/03/20 01:13	1	
	Manganese	<0.00087	0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 01:13	1	

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1		3.0	2.1	mg/L		07/02/20 11:40	07/02/20 13:13	1
Total Alkalinity as CaCO3 to pH 4.!	33		5.0	5.0	mg/L			07/07/20 10:31	1
Bicarbonate Alkalinity as CaCO3	33		5.0	5.0	mg/L			07/07/20 10:31	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			07/07/20 10:31	1

Method: Field Sampling - Field Analyte	l Sampling Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
рН	5.75		SU			06/25/20 16:20	1

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7/9/2020

Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWA-5

Date Collected: 06/25/20 14:05 Date Received: 06/29/20 09:23

General Chemistry

Analyte

Sulfide

Lab Sample ID: 180-107679-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.2		1.0	0.32	mg/L			06/30/20 19:37	1
Fluoride	0.042	J	0.10	0.026	mg/L			06/30/20 19:37	1
Nitrate as N	0.056	J H H3	0.10	0.023	mg/L			06/30/20 19:37	1
Nitrite as N	<0.029	H H3	0.050	0.029	mg/L			06/30/20 19:37	1
Sulfate	<0.38	Н	1.0	0.38	mg/L			06/30/20 19:37	1
Method: EPA 6020B -		otal Recove	erable RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.039	Qualifier	0.080				06/30/20 15:21	07/03/20 01:55	DII Fac
				0.039	-				1
Calcium	6.1		0.50		mg/L		06/30/20 15:21	07/03/20 01:55	1
Cobalt	<0.00013		0.0025	0.00013			06/30/20 15:21		
Lithium	<0.0034		0.0050	0.0034	mg/L		06/30/20 15:21	07/03/20 01:55	1
Magnesium	2.5		0.50	0.083	mg/L		06/30/20 15:21	07/03/20 01:55	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/30/20 15:21	07/03/20 01:55	1
Potassium	1.2		0.50	0.16	mg/L		06/30/20 15:21	07/03/20 01:55	1
Sodium	7.9		0.50	0.35	mg/L		06/30/20 15:21	07/03/20 01:55	1
Method: EPA 6020B -	· Metals (ICP/MS) - D	issolved							
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.020		0.050	0.020	mg/L		06/30/20 15:21	07/03/20 01:16	1
Manganese	0.00091		0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 01:16	4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Method: Field Sampling - Field	Sampling								
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			07/07/20 10:38	1
Bicarbonate Alkalinity as CaCO3	37		5.0	5.0	mg/L			07/07/20 10:38	1
Total Alkalinity as CaCO3 to pH 4.	37		5.0	5.0	mg/L			07/07/20 10:38	1

RL

3.0

MDL Unit

2.1 mg/L

Prepared

Analyzed

07/02/20 11:40 07/02/20 13:15

Dil Fac

Result Qualifier

<2.1

Analyte	 Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
рН	5.87				SU			06/25/20 14:05	1

7/9/2020

Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-7

Date Collected: 06/25/20 16:15 Date Received: 06/29/20 09:23

Bicarbonate Alkalinity as CaCO3

Carbonate Alkalinity as CaCO3

Lab Sample ID: 180-107679-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.6		1.0	0.32	mg/L			06/30/20 19:53	1
Fluoride	< 0.026		0.10	0.026	mg/L			06/30/20 19:53	1
Nitrate as N	0.35	H H3	0.10	0.023	mg/L			06/30/20 19:53	1
Nitrite as N	0.049	J H H3	0.050	0.029	mg/L			06/30/20 19:53	1
Sulfate	42		1.0	0.38	mg/L			06/30/20 19:53	1
Method: EPA 6020B - Metals (IC	P/MS) - T	otal Recove	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.091		0.080	0.039	mg/L		06/30/20 15:21	07/03/20 01:58	1
Calcium	11		0.50	0.13	mg/L		06/30/20 15:21	07/03/20 01:58	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		06/30/20 15:21	07/03/20 01:58	1
Lithium	0.0046	J	0.0050	0.0034	mg/L		06/30/20 15:21	07/03/20 01:58	1
Magnesium	8.6		0.50	0.083	mg/L		06/30/20 15:21	07/03/20 01:58	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/30/20 15:21	07/03/20 01:58	1
Potassium	1.0		0.50	0.16	mg/L		06/30/20 15:21	07/03/20 01:58	1
Sodium	6.2		0.50	0.35	mg/L		06/30/20 15:21	07/03/20 01:58	1
Method: EPA 6020B - Metals (IC	P/MS) - D	issolved							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.020		0.050	0.020	mg/L		06/30/20 15:21	07/03/20 01:20	1
Manganese	0.00096	J	0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 01:20	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1		3.0	2.1	mg/L		07/02/20 11:40	07/02/20 13:16	1
Total Alkalinity as CaCO3 to pH 4.!	24		5.0	5.0	mg/L			07/07/20 10:44	1

Method: Field Sampling - Field	Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
рН	5.75				SU			06/25/20 16:15	1

5.0

5.0

5.0 mg/L

5.0 mg/L

24

< 5.0

7/9/2020

07/07/20 10:44

07/07/20 10:44

Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWA-13

Date Collected: 06/25/20 15:14

Lab Sample ID: 180-107679-6

Matrix: Water

		Jonicolou.		
Dat	e F	Received:	06/29/20	09:23

Method: EPA 300.0 R2.1 - Anion Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.8		1.0	0.32	mg/L			06/30/20 20:09	1
Fluoride	0.030	J	0.10	0.026	mg/L			06/30/20 20:09	1
Nitrate as N	0.95	н нз	0.10	0.023	mg/L			06/30/20 20:09	1
Nitrite as N	0.044	J H H3	0.050	0.029	mg/L			06/30/20 20:09	1
Sulfate	410		10	3.8	mg/L			07/09/20 01:52	10
Method: EPA 6020B - Metals (IC	P/MS) - T	otal Recove	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.32		0.080	0.039	mg/L		06/30/20 15:21	07/03/20 02:02	1
Calcium	100		0.50	0.13	mg/L		06/30/20 15:21	07/03/20 02:02	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		06/30/20 15:21	07/03/20 02:02	1
Lithium	0.0067		0.0050	0.0034	mg/L		06/30/20 15:21	07/03/20 02:02	1
Magnesium	66		0.50	0.083	mg/L		06/30/20 15:21	07/03/20 02:02	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/30/20 15:21	07/03/20 02:02	1
Potassium	3.2		0.50	0.16	mg/L		06/30/20 15:21	07/03/20 02:02	1
Sodium	14		0.50	0.35	mg/L		06/30/20 15:21	07/03/20 02:02	1
Method: EPA 6020B - Metals (IC	P/MS) - D	issolved							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.020		0.050	0.020	mg/L		06/30/20 15:21	07/03/20 01:23	1
Manganese	0.010		0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 01:23	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1		3.0	2.1	mg/L		07/02/20 11:40	07/02/20 13:18	1
Total Alkalinity as CaCO3 to pH 4.4	61		5.0	5.0	mg/L			07/07/20 11:18	1
Bicarbonate Alkalinity as CaCO3	61		5.0	5.0	mg/L			07/07/20 11:18	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			07/07/20 11:18	1
Method: Field Sampling - Field S									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.80				SU			06/25/20 15:14	1

7/9/2020

Job ID: 180-107679-1

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Lab Sample ID: MB 180-319944/39

Matrix: Water

Analysis Batch: 319944

Client Sample ID: Method Blank

Prep Type: Total/NA

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Chloride 1.0 0.32 mg/L 06/30/20 15:15 <0.32 Fluoride < 0.026 0.10 0.026 mg/L 06/30/20 15:15 Nitrate as N < 0.023 0.10 0.023 mg/L 06/30/20 15:15 Nitrite as N 0.050 0.029 mg/L < 0.029 06/30/20 15:15 0.38 mg/L Sulfate < 0.38 1.0 06/30/20 15:15

Lab Sample ID: MB 180-319944/6

Matrix: Water

Analysis Batch: 319944

Prep Type: Total/NA

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Chloride 1.0 0.32 mg/L 06/30/20 05:32 <0.32 Fluoride < 0.026 0.10 0.026 mg/L 06/30/20 05:32 Nitrate as N <0.023 0.10 0.023 mg/L 06/30/20 05:32 Nitrite as N < 0.029 0.050 0.029 mg/L 06/30/20 05:32 Sulfate < 0.38 1.0 0.38 mg/L 06/30/20 05:32

Lab Sample ID: LCS 180-319944/38

Matrix: Water

Analysis Ratch: 319944

Alialysis Dalcii. 3 13344								
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	53.7		mg/L		107	90 - 110	
Fluoride	2.50	2.62		mg/L		105	90 - 110	
Nitrate as N	2.50	2.65		mg/L		106	90 - 110	
Nitrite as N	2.50	2.58		mg/L		103	90 - 110	
Sulfate	50.0	52.1		mg/L		104	90 - 110	

Lab Sample ID: MB 180-320882/48

Matrix: Water

Analysis Batch: 320882

MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.38		1.0	0.38	mg/L			07/09/20 01:36	1

Lab Sample ID: LCS 180-320882/47

Matrix: Water

Analysis Batch: 320882

Alidiysis batcii. 320002								
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Sulfate	50.0	52.5		ma/l	_	105	90 110	

Lab Sample ID: 180-107679-6 MS

Matrix: Water

Analysis Batch: 320882

Analysis Batch. 320002	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	4.5	J	500	529		mg/L		105	90 - 110	
Fluoride	<0.26		25.0	26.2		mg/L		105	90 - 110	
Nitrate as N	0.65	J H H3 *	25.0	26.6		ma/L		104	90 - 110	

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Client Sample ID: Method Blank Prep Type: Total/NA

Prep Type: Total/NA

7/9/2020

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Job ID: 180-107679-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy (Continued)

Lab Sample ID: 180-107679-6 MS

Matrix: Water

Analysis Batch: 320882

Client Sample ID: ARGWA-13

Prep Type: Total/NA

MS MS Sample Sample Spike %Rec. Result Qualifier Added Result Qualifier Unit Limits Analyte D %Rec Nitrite as N <0.29 H H3 * 25.0 24.1 96 90 - 110 mg/L Sulfate 410 500 915 mg/L 100 90 - 110

Lab Sample ID: 180-107679-6 MSD

Matrix: Water

Analysis Batch: 320882

Client Sample ID: ARGWA-13 Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4.5	J	500	520		mg/L		103	90 - 110	2	20
Fluoride	<0.26		25.0	25.8		mg/L		103	90 - 110	2	20
Nitrate as N	0.65	J H H3 *	25.0	26.2		mg/L		102	90 - 110	1	20
Nitrite as N	<0.29	H H3 *	25.0	24.0		mg/L		96	90 - 110	1	20
Sulfate	410		500	907		mg/L		99	90 - 110	1	20

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-320069/2-A

Matrix: Water

Analysis Batch: 320452

Client Sample ID: Method Blank **Prep Type: Total Recoverable**

Prep Batch: 320069

	MB	MB						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.039		0.080	0.039	mg/L		06/30/20 15:21	07/03/20 00:03	1
Iron	<0.020		0.050	0.020	mg/L		06/30/20 15:21	07/03/20 00:03	1
Calcium	<0.13		0.50	0.13	mg/L		06/30/20 15:21	07/03/20 00:03	1
Manganese	<0.00087		0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 00:03	1
Cobalt	<0.00013		0.00050	0.00013	mg/L		06/30/20 15:21	07/03/20 00:03	1
Lithium	<0.0034		0.0050	0.0034	mg/L		06/30/20 15:21	07/03/20 00:03	1
Magnesium	<0.083		0.50	0.083	mg/L		06/30/20 15:21	07/03/20 00:03	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/30/20 15:21	07/03/20 00:03	1
Potassium	<0.16		0.50	0.16	mg/L		06/30/20 15:21	07/03/20 00:03	1
Sodium	<0.35		0.50	0.35	mg/L		06/30/20 15:21	07/03/20 00:03	1

Lab Sample ID: LCS 180-320069/3-A

Matrix: Water

Analysis Batch: 320452

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 320069

Analysis Batch. 320432	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Boron	1.25	1.24		mg/L		100	80 - 120
Iron	5.00	5.20		mg/L		104	80 - 120
Calcium	25.0	29.4		mg/L		118	80 - 120
Manganese	0.500	0.508		mg/L		102	80 - 120
Cobalt	0.500	0.530		mg/L		106	80 - 120
Lithium	0.500	0.526		mg/L		105	80 - 120
Magnesium	25.0	25.9		mg/L		103	80 - 120
Molybdenum	0.500	0.528		mg/L		106	80 - 120
Potassium	25.0	26.0		mg/L		104	80 - 120
Sodium	25.0	26.9		ma/L		108	80 - 120

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Spike

Added

11.6

Lab Sample ID: MB 180-320341/1-A

Lab Sample ID: LCS 180-320341/2-A

Matrix: Water

Matrix: Water

Analyte

Sulfide

Analyte

Sulfide

Analysis Batch: 320374

Analysis Batch: 320374

MB MB

Result Qualifier

<2.1

RL **MDL** Unit 2.1 mg/L 3.0

LCS LCS

9.95

Result Qualifier

Unit

mg/L

Prepared

D %Rec

86

Analyzed 07/02/20 11:40 07/02/20 12:53

Client Sample ID: Method Blank

10

Dil Fac

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 320341

Prep Batch: 320341

Limits

%Rec.

85 - 115

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-320796/29

Matrix: Water

Analysis Batch: 320796

Client Sample ID: Method Blank

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

MB MB **MDL** Unit Analyte Result Qualifier RL D Prepared Analyzed Dil Fac Total Alkalinity as CaCO3 to pH 4.5 <5.0 5.0 5.0 mg/L 07/07/20 11:11 Bicarbonate Alkalinity as CaCO3 <5.0 5.0 5.0 mg/L 07/07/20 11:11 Carbonate Alkalinity as CaCO3 <5.0 5.0 5.0 mg/L 07/07/20 11:11

Lab Sample ID: MB 180-320796/5

Matrix: Water

Analysis Batch: 320796

MB MB

Analyte Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac Total Alkalinity as CaCO3 to pH 4.5 5.0 5.0 mg/L 07/07/20 08:32 < 5.0 Bicarbonate Alkalinity as CaCO3 5.0 07/07/20 08:32 < 5.0 5.0 mg/L Carbonate Alkalinity as CaCO3 <5.0 5.0 5.0 mg/L 07/07/20 08:32

Spike

Added

Spike

Added

250

250

Lab Sample ID: LCS 180-320796/28

Matrix: Water

Analysis Batch: 320796

Analyte Total Alkalinity as CaCO3 to pH

Lab Sample ID: LCS 180-320796/4

Matrix: Water Analysis Batch: 320796

Analyte Total Alkalinity as CaCO3 to pH

4.5

LCS LCS

LCS LCS

233

Result Qualifier

Result Qualifier 235

Unit mg/L

Unit

mg/L

%Rec

D %Rec

93

94 90 - 110

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample

%Rec.

Limits

90 - 110

%Rec. Limits

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QC Sample Results

Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

Method: SM2320 B - Alkalinity, Total (Continued)

Lab Sample ID: 180-107679-6 DU **Client Sample ID: ARGWA-13 Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 320796								
-	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Total Alkalinity as CaCO3 to pH	61		62.7		mg/L		 2	20
Bicarbonate Alkalinity as CaCO3	61		62.7		mg/L		2	20
Carbonate Alkalinity as CaCO3	<5.0		<5.0		mg/L		NC	20

QC Association Summary

Client: Southern Company Job ID: 180-107679-1

Project/Site: Plant Arkwright AP3 Alternate Source

HPLC/IC

Analysis Batch: 319944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107679-1	ARGWC-15	Total/NA	Water	EPA 300.0 R2.1	
180-107679-2	ARGWA-14	Total/NA	Water	EPA 300.0 R2.1	
180-107679-3	ARGWA-3	Total/NA	Water	EPA 300.0 R2.1	
180-107679-4	ARGWA-5	Total/NA	Water	EPA 300.0 R2.1	
180-107679-5	ARGWC-7	Total/NA	Water	EPA 300.0 R2.1	
180-107679-6	ARGWA-13	Total/NA	Water	EPA 300.0 R2.1	
MB 180-319944/39	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
MB 180-319944/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-319944/38	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 320882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107679-6	ARGWA-13	Total/NA	Water	EPA 300.0 R2.1	
MB 180-320882/48	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-320882/47	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-107679-6 MS	ARGWA-13	Total/NA	Water	EPA 300.0 R2.1	
180-107679-6 MSD	ARGWA-13	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 320069

Lab Sample ID	Client Sample ID Prep Type		Matrix	Method	Prep Batch
180-107679-1	ARGWC-15	Dissolved	Water	3005A	_
180-107679-1	ARGWC-15	Total Recoverable	Water	3005A	
180-107679-2	ARGWA-14	Dissolved	Water	3005A	
180-107679-2	ARGWA-14	Total Recoverable	Water	3005A	
180-107679-3	ARGWA-3	Dissolved	Water	3005A	
180-107679-3	ARGWA-3	Total Recoverable	Water	3005A	
180-107679-4	ARGWA-5	Dissolved	Water	3005A	
180-107679-4	ARGWA-5	Total Recoverable	Water	3005A	
180-107679-5	ARGWC-7	Dissolved	Water	3005A	
180-107679-5	ARGWC-7	Total Recoverable	Water	3005A	
180-107679-6	ARGWA-13	Dissolved	Water	3005A	
180-107679-6	ARGWA-13	Total Recoverable	Water	3005A	
MB 180-320069/2-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-320069/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 320452

ab Sample ID Client Sample ID		Prep Type	Matrix	Method	Prep Batch
180-107679-1	ARGWC-15	Dissolved	Water	EPA 6020B	320069
180-107679-1	ARGWC-15	Total Recoverable	Water	EPA 6020B	320069
180-107679-2	ARGWA-14	Dissolved	Water	EPA 6020B	320069
180-107679-2	ARGWA-14	Total Recoverable	Water	EPA 6020B	320069
180-107679-3	ARGWA-3	Dissolved	Water	EPA 6020B	320069
180-107679-3	ARGWA-3	Total Recoverable	Water	EPA 6020B	320069
180-107679-4	ARGWA-5	Dissolved	Water	EPA 6020B	320069
180-107679-4	ARGWA-5	Total Recoverable	Water	EPA 6020B	320069
180-107679-5	ARGWC-7	Dissolved	Water	EPA 6020B	320069
180-107679-5	ARGWC-7	Total Recoverable	Water	EPA 6020B	320069
180-107679-6	ARGWA-13	Dissolved	Water	EPA 6020B	320069
180-107679-6	ARGWA-13	Total Recoverable	Water	EPA 6020B	320069

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QC Association Summary

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Metals (Continued)

Analysis Batch: 320452 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-320069/2-A	Method Blank	Total Recoverable	Water	EPA 6020B	320069
LCS 180-320069/3-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	320069

General Chemistry

Prep Batch: 320341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107679-1	ARGWC-15	Total/NA	Water	9030B	_
180-107679-2	ARGWA-14	Total/NA	Water	9030B	
180-107679-3	ARGWA-3	Total/NA	Water	9030B	
180-107679-4	ARGWA-5	Total/NA	Water	9030B	
180-107679-5	ARGWC-7	Total/NA	Water	9030B	
180-107679-6	ARGWA-13	Total/NA	Water	9030B	
MB 180-320341/1-A	Method Blank	Total/NA	Water	9030B	
LCS 180-320341/2-A	Lab Control Sample	Total/NA	Water	9030B	

Analysis Batch: 320374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107679-1	ARGWC-15	ARGWC-15 Total/NA Water	Water	EPA 9034	320341
180-107679-2	ARGWA-14	Total/NA	Water	EPA 9034	320341
180-107679-3	ARGWA-3	Total/NA	Water	EPA 9034	320341
180-107679-4	ARGWA-5	Total/NA	Water	EPA 9034	320341
180-107679-5	ARGWC-7	Total/NA	Water	EPA 9034	320341
180-107679-6	ARGWA-13	Total/NA	Water	EPA 9034	320341
MB 180-320341/1-A	Method Blank	Total/NA	Water	EPA 9034	320341
LCS 180-320341/2-A	Lab Control Sample	Total/NA	Water	EPA 9034	320341

Analysis Batch: 320796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107679-1	ARGWC-15	Total/NA	Water	SM2320 B	_
180-107679-2	ARGWA-14	Total/NA	Water	SM2320 B	
180-107679-3	ARGWA-3	Total/NA	Water	SM2320 B	
180-107679-4	ARGWA-5	Total/NA	Water	SM2320 B	
180-107679-5	ARGWC-7	Total/NA	Water	SM2320 B	
180-107679-6	ARGWA-13	Total/NA	Water	SM2320 B	
MB 180-320796/29	Method Blank	Total/NA	Water	SM2320 B	
MB 180-320796/5	Method Blank	Total/NA	Water	SM2320 B	
_CS 180-320796/28	Lab Control Sample	Total/NA	Water	SM2320 B	
LCS 180-320796/4	Lab Control Sample	Total/NA	Water	SM2320 B	
180-107679-6 DU	ARGWA-13	Total/NA	Water	SM2320 B	

Field Service / Mobile Lab

Analysis Batch: 320074

Lab Sample ID	Client Sample ID	nple ID Prep Type		Method	Prep Batch
180-107679-1	ARGWC-15	Total/NA	Water	Field Sampling	
180-107679-2	ARGWA-14	Total/NA	Water	Field Sampling	
180-107679-3	ARGWA-3	Total/NA	Water	Field Sampling	
180-107679-4	ARGWA-5	Total/NA	Water	Field Sampling	
180-107679-5	ARGWC-7	Total/NA	Water	Field Sampling	
180-107679-6	ARGWA-13	Total/NA	Water	Field Sampling	

Eurofins TestAmerica, Pittsburgh

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Job ID: 180-107679-1

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301 Alpha Drive RIDC Park

Chain of Custody Record Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468

681-Atlanta

: eurofins	
C. CHOINS	

Client Information	Sampler D Howard, E Guiller F May 1 a	Srowr	n, Sh	ali					Canier Tracking No(s)		COC No. 180-61584-12490.1
Dient Contact. Joju Abraham	Phone: G-Mail: shall.brown@lestamericainc.com								Page Page 1 of 1		
Company Southern Company		T					An	alysis I	Requested		Job #.
Address 241 Ralph McGill Blvd SE B10185	Due Date Requested:		T	T	T	Г	П	T		T	Preservation Codes:
City: Atlanta	TAT Requested (days):			-							A - HCL M - Haxane B - NaOH N - None C - Zn Acetale O - AsNaO2
State, Zip GA, 30308	5 days		1		15		(a)				D - Ntric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3
Phone Phone	PO# SCS10382606				MgNa		d (TD				F - MeOH R - Ns2S2O3 G - Amchior S - H2SO4
Email Email	WO #.		or No.		OLICa	-	ssolve				H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - Dt Water V - MCAA
JAbraham@southernco.com Project Name	Project #		Nos N		CoM	Fe/M	otel D	9		containers	J - Dt Water V - MCAA K - EDTA W - pH 4.5 L - EDA Z - other (specify)
Plant Arkwright AP3 Alternale Source Site	18020201 SSOW#		Sample (Yes	WS	Hom 8	solve	de, To	Metho		contra	Other:
Georgia			d Sa	SRGF) Cus	O Dis	8.	ocal		er of	
Sample Identification	Туре		Field Filtered Sample (Yes or No.)	Z 2320B, 300_ORGFMS	6020B - (MOD) Custom 8 (CoMoLiCaMgNaKF)	-	2540C_Cated - Solids, Total Dissolved (TDS)	9034_Galc - Local Method		Total Number	Special Instructions/Note:
ADCINO IS		Water	fY	N.	D	D	N	CB		*	11 (20
ARGWC-15 ARGWA-14 ARGWA-3 ARGWA-5	10/25/20/11/0 G	Water	H	+	+	┝				+	pH=632 pH=638
10 C W 0 - 3		Water	+	+	+	╁	\vdash	-		+	p 17 = 6:38
AKGWA-S		Water	╟	+	+	\vdash	-	+	è è	+	pH=5.75
AKG WA-5	1705	Water	Н	+	+	╁	\vdash		Custody	+	pH=5.87
ARGWC-7 ARGWA-13	1/6/2		H	+	+	-	-			+	p H=5.75
ARGWA-13	13/7 0	Water Water	- -	+	+	-	-		Chair	+	pH =5.80
		Water	H	+	+	╁	\vdash	\vdash	679	+	
		Water	H	+	+	+	-	-	80-107	+	-
		Water	H	+	+	+	+	-		+	
			H	$^{+}$	+	+	+	1		+	
Possible Hazard Identification Non-Hazard Flammable Skin Imitant . Deliverable Requested I, II, III, IV, Other (specify)	Poison B Unknown Radiological				Retu	m To	Clier	fee may		retain Arci	ined longer than 1 month) thive For Months
Empty Kit Relinquished by:	Date:		Tim	e:			r		Method of Shipment.		
Daniel LHoward	6/25/20/1815	опрапу опрату			edeve	0	U	U	Date Title 9	12	O A3 Company Company
Reinquished by	Date/Time: Co	ompany		Rie	eceive	d by	١		Date/Time:		Company
Custody Seals Intact: Custody Seal No.:	L			-	oolar T	empe	rature(s) °C and 0	ther Remarks:		

7/9/2020

Ver. 01/16/2019



Client: Southern Company

Job Number: 180-107679-1

Login Number: 107679 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Kovitch, Christina M

Answer	Comment
N/A	
True	
True	
True	
True	
False	melted ice 13.1°C
True	
False	
True	
True	
True	
True	
True	
True	
True	
True	
True	
True	
N/A	
	N/A True True True False True True True True True True True Tru



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-107680-1

Client Project/Site: Plant Arkwright AP3 Alternate Source

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham

Authorized for release by: 7/8/2020 4:13:08 PM

Shali Brown, Project Manager II (615)301-5031

shali.brown@testamericainc.com

LINKS

Review your project results through

Have a Question?



Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

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Job ID: 180-107680-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-107680-1

Comments

No additional comments.

Receipt

The samples were received on 6/29/2020 9:23 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.9° C.

Receipt Exceptions

The following samples were received outside of holding time for the nitrate and nitrite analysis. Field Blank #2 (180-107680-1), ARGWA-12 (180-107680-2) and ARGWC-9 (180-107680-3).

GC Semi VOA

Methods 300.0: The following samples were received outside of holding time for Nitrate and/or Nitrite analysis: Field Blank #2 (180-107680-1), ARGWA-12 (180-107680-2) and ARGWC-9 (180-107680-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 180-107680-1

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Definitions/Glossary

Client: Southern Company Job ID: 180-107680-1

Project/Site: Plant Arkwright AP3 Alternate Source

Qualifiers

	_	_	_		_
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п	_	L	•	"	u

Qualifier	Qualifier Description
Н	Sample was prepped or analyzed beyond the specified holding time
H3	Sample was received and analyzed past holding time.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier **Qualifier Description**

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery **CFL** Contains Free Liquid CFU Colony Forming Unit **CNF** Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample DL, RA, RE, IN

Decision Level Concentration (Radiochemistry) DLC

Estimated Detection Limit (Dioxin) **EDL** LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit ML Minimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

Not Detected at the reporting limit (or MDL or EDL if shown) ND

Negative / Absent NEG POS Positive / Present

PQL **Practical Quantitation Limit**

PRES Presumptive QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

RPD Relative Percent Difference, a measure of the relative difference between two points

Toxicity Equivalent Factor (Dioxin) **TEF** Toxicity Equivalent Quotient (Dioxin) **TEQ**

TNTC Too Numerous To Count

Eurofins TestAmerica, Pittsburgh

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Accreditation/Certification Summary

Client: Southern Company Job ID: 180-107680-1

Project/Site: Plant Arkwright AP3 Alternate Source

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-20 *
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	08-01-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	05-23-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

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^{*} Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company Project/Site: Plant Arkwright AP3 Alternate Source

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asse
180-107680-1	Field Blank #2	Water	06/26/20 08:30	06/29/20 09:23	
180-107680-2	ARGWA-12	Water	06/26/20 10:15	06/29/20 09:23	
180-107680-3	ARGWC-9	Water	06/26/20 12:50	06/29/20 09:23	

Job ID: 180-107680-1

Method Summary

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatgraphy	EPA	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
EPA 9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Job ID: 180-107680-1

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: Field Blank #2

Date Collected: 06/26/20 08:30 Date Received: 06/29/20 09:23 Lab Sample ID: 180-107680-1

Matrix: Water

Job ID: 180-107680-1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			319944	06/30/20 20:26	MJH	TAL PIT
Dissolved	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21		TAL PIT
Dissolved	Analysis Instrumen	EPA 6020B at ID: DORY		1			320452	07/03/20 01:27	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: DORY		1			320452	07/03/20 02:05	RSK	TAL PIT
Total/NA	Prep	9030B			50 mL	50 mL	320341	07/02/20 11:40	CMR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9034 at ID: NOEQUIP		1			320374	07/02/20 13:20	CMR	TAL PIT
Total/NA	Analysis Instrumen	SM2320 B at ID: PCTITRATOR		1			320796	07/07/20 14:43	AVS	TAL PIT

Client Sample ID: ARGWA-12

Date Collected: 06/26/20 10:15

Date Received: 06/29/20 09:23

Lab Sample ID: 180-107680-2

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 300.0 R2.1 ID: CHIC2100A		1			319944	06/30/20 20:42	MJH	TAL PIT
Dissolved	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Dissolved	Analysis Instrument	EPA 6020B ID: DORY		1			320452	07/03/20 01:30	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020B ID: DORY		1			320452	07/03/20 02:09	RSK	TAL PIT
Total/NA	Prep	9030B			50 mL	50 mL	320341	07/02/20 11:40	CMR	TAL PIT
Total/NA	Analysis Instrument	EPA 9034 ID: NOEQUIP		1			320374	07/02/20 13:21	CMR	TAL PIT
Total/NA	Analysis Instrument	SM2320 B ID: PCTITRATOR		1			320796	07/07/20 14:50	AVS	TAL PIT
Total/NA	Analysis Instrument	Field Sampling ID: NOEQUIP		1			320074	06/26/20 10:15	NJD	TAL PIT

Client Sample ID: ARGWC-9

Date Collected: 06/26/20 12:50 Date Received: 06/29/20 09:23

Lab Sample ID: 180-107680-3 **Matrix: Water**

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			319944	06/30/20 20:58	MJH	TAL PIT
	Instrumer	t ID: CHIC2100A								
Dissolved	Prep	3005A			50 mL	50 mL	320069	06/30/20 15:21	JL	TAL PIT
Dissolved	Analysis	EPA 6020B		1			320452	07/03/20 01:34	RSK	TAL PIT
	Instrumer	t ID: DORY								

Eurofins TestAmerica, Pittsburgh

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7/8/2020

Lab Chronicle

Client: Southern Company Job ID: 180-107680-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-9

Date Collected: 06/26/20 12:50

Matrix: Water

Lab Sample ID: 180-107680-3

Date Received: 06/29/20 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable Total Recoverable	Prep Analysis	3005A EPA 6020B It ID: DORY	<u></u>	1	50 mL	50 mL	320069 320452	06/30/20 15:23 07/03/20 02:12	JL	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	9030B EPA 9034 tt ID: NOEQUIP		1	50 mL	50 mL	320341 320374	07/02/20 11:40 07/02/20 13:23	•	TAL PIT TAL PIT
Total/NA	Analysis Instrumen	SM2320 B at ID: PCTITRATOR		1			320796	07/07/20 15:10	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling		1			320074	06/26/20 12:50	NJD	TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

CMR = Carl Reagle

JL = James Lyu

Batch Type: Analysis

AVS = Abbey Smith

CMR = Carl Reagle

MJH = Matthew Hartman NJD = Nicholas DiNardo

RSK = Robert Kurtz

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2

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Client Sample Results

Client: Southern Company Job ID: 180-107680-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: Field Blank #2

Date Collected: 06/26/20 08:30

Lab Sample ID: 180-107680-1

Matrix: Water

Date Received: 06/29	9/20 09:23

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32		1.0	0.32	mg/L			06/30/20 20:26	1
Fluoride	<0.026		0.10	0.026	mg/L			06/30/20 20:26	1
Nitrate as N	<0.023	H H3	0.10	0.023	mg/L			06/30/20 20:26	1
Nitrite as N	<0.029	Н Н3	0.050	0.029	mg/L			06/30/20 20:26	1
Sulfate	< 0.38		1.0	0.38	mg/L			06/30/20 20:26	1

					9				
Nitrate as N	<0.023	H H3	0.10	0.023	mg/L			06/30/20 20:26	1
Nitrite as N	<0.029	H H3	0.050	0.029	mg/L			06/30/20 20:26	1
Sulfate	<0.38		1.0	0.38	mg/L			06/30/20 20:26	1
Method: EPA 6020B Analyte	3 - Metals (ICP/MS) - To Result	otal Recove	erable RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.039		0.080	0.039	mg/L		06/30/20 15:21	07/03/20 02:05	
Calcium									ı
	<0.13		0.50	0.13	mg/L		06/30/20 15:21	07/03/20 02:05	1
Cobalt	<0.13 <0.00013		0.50 0.0025	0.13 0.00013	J		06/30/20 15:21 06/30/20 15:21	07/03/20 02:05 07/03/20 02:05	1 1

Analyte	Result	Qualifier	KL	MDL	Unit	ט	Prepared	Anaiyzea	DII Fac
Boron	<0.039		0.080	0.039	mg/L		06/30/20 15:21	07/03/20 02:05	1
Calcium	<0.13		0.50	0.13	mg/L		06/30/20 15:21	07/03/20 02:05	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		06/30/20 15:21	07/03/20 02:05	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		06/30/20 15:21	07/03/20 02:05	1
Magnesium	<0.083		0.50	0.083	mg/L		06/30/20 15:21	07/03/20 02:05	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/30/20 15:21	07/03/20 02:05	1
Potassium	<0.16		0.50	0.16	mg/L		06/30/20 15:21	07/03/20 02:05	1
Sodium	< 0.35		0.50	0.35	mg/L		06/30/20 15:21	07/03/20 02:05	1
L									

Method: EPA 6020B - Metals (ICP/MS) - Dissolved											
	Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
	Iron	<0.020	0.050	0.020	mg/L		06/30/20 15:21	07/03/20 01:27	1		
	Manganese	<0.00087	0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 01:27	1		

General Chemistry Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1	3.0	2.1	mg/L		07/02/20 11:40	07/02/20 13:20	1
Total Alkalinity as CaCO3 to pH 4.5	<5.0	5.0	5.0	mg/L			07/07/20 14:43	1
Bicarbonate Alkalinity as CaCO3	<5.0	5.0	5.0	mg/L			07/07/20 14:43	1
Carbonate Alkalinity as CaCO3	<5.0	5.0	5.0	mg/L			07/07/20 14:43	1

7/8/2020

Client Sample Results

Client: Southern Company Job ID: 180-107680-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWA-12

Date Collected: 06/26/20 10:15 Date Received: 06/29/20 09:23

Lab Sample ID: 180-107680-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.32	mg/L			06/30/20 20:42	1
Fluoride	0.051	J	0.10	0.026	mg/L			06/30/20 20:42	1
Nitrate as N	0.12	H H3	0.10	0.023	mg/L			06/30/20 20:42	1
Nitrite as N	<0.029	H H3	0.050	0.029	mg/L			06/30/20 20:42	1
Sulfate	9.0		1.0	0.38	mg/L			06/30/20 20:42	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.039		0.080	0.039	mg/L		06/30/20 15:21	07/03/20 02:09	1
Calcium	15		0.50	0.13	mg/L		06/30/20 15:21	07/03/20 02:09	1
Cobalt	0.00013	J	0.0025	0.00013	mg/L		06/30/20 15:21	07/03/20 02:09	1
Lithium	0.0061		0.0050	0.0034	mg/L		06/30/20 15:21	07/03/20 02:09	1
Magnesium	8.9		0.50	0.083	mg/L		06/30/20 15:21	07/03/20 02:09	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/30/20 15:21	07/03/20 02:09	1
Potassium	2.5		0.50	0.16	mg/L		06/30/20 15:21	07/03/20 02:09	1
Sodium	11		0.50	0.35	mg/L		06/30/20 15:21	07/03/20 02:09	1

Method: EPA 6020B - Metals (ICP/MS) - Dissolved												
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
	Iron	<0.020		0.050	0.020	mg/L		06/30/20 15:21	07/03/20 01:30	1		
	Manganese	<0.00087		0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 01:30	1		

General Chemistry Analyte	Result Qu	ıalifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1		3.0	2.1	mg/L		07/02/20 11:40	07/02/20 13:21	1
Total Alkalinity as CaCO3 to pH 4.!	69		5.0	5.0	mg/L			07/07/20 14:50	1
Bicarbonate Alkalinity as CaCO3	69		5.0	5.0	mg/L			07/07/20 14:50	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	5.0	mg/L			07/07/20 14:50	1

Method: Field Sampling - Field Analyte	l Sampling Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
рН	5.94		SU			06/26/20 10:15	1

Client Sample Results

Client: Southern Company Job ID: 180-107680-1

Project/Site: Plant Arkwright AP3 Alternate Source

Client Sample ID: ARGWC-9

Date Collected: 06/26/20 12:50 Date Received: 06/29/20 09:23

Lab Sample ID: 180-107680-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.4		1.0	0.32	mg/L			06/30/20 20:58	1
Fluoride	0.027	J	0.10	0.026	mg/L			06/30/20 20:58	1
Nitrate as N	0.54	H H3	0.10	0.023	mg/L			06/30/20 20:58	1
Nitrite as N	0.031	J H H3	0.050	0.029	mg/L			06/30/20 20:58	1
Sulfate	0.94	J	1.0	0.38	mg/L			06/30/20 20:58	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recove	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.039		0.080	0.039	mg/L		06/30/20 15:23	07/03/20 02:12	1
Calcium	5.6		0.50	0.13	mg/L		06/30/20 15:23	07/03/20 02:12	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		06/30/20 15:23	07/03/20 02:12	1
Lithium	<0.0034		0.0050	0.0034	mg/L		06/30/20 15:23	07/03/20 02:12	1
Magnesium	2.4		0.50	0.083	mg/L		06/30/20 15:23	07/03/20 02:12	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		06/30/20 15:23	07/03/20 02:12	1
Potassium	1.8		0.50	0.16	mg/L		06/30/20 15:23	07/03/20 02:12	1
Sodium	6.7		0.50	0.35	mg/L		06/30/20 15:23	07/03/20 02:12	1
Method: EPA 6020B -	Metals (ICP/MS) - D	issolved							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.020		0.050	0.020	mg/L		06/30/20 15:21	07/03/20 01:34	1
Manganese	<0.00087		0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 01:34	1

General Chemistry Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1	3.0	2.1	mg/L		07/02/20 11:40	07/02/20 13:23	1
Total Alkalinity as CaCO3 to pH 4.!	29	5.0	5.0	mg/L			07/07/20 15:10	1
Bicarbonate Alkalinity as CaCO3	29	5.0	5.0	mg/L			07/07/20 15:10	1
Carbonate Alkalinity as CaCO3	<5.0	5.0	5.0	mg/L			07/07/20 15:10	1

Method: Field Sampling - Fig Analyte	eld Sampling Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
рН	5.85		SU			06/26/20 12:50	1

Job ID: 180-107680-1

Client: Southern Company Project/Site: Plant Arkwright AP3 Alternate Source

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Lab Sample ID: MB 180-319944/39

Matrix: Water

Analysis Batch: 319944

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32		1.0	0.32	mg/L			06/30/20 15:15	1
Fluoride	<0.026		0.10	0.026	mg/L			06/30/20 15:15	1
Nitrate as N	<0.023		0.10	0.023	mg/L			06/30/20 15:15	1
Nitrite as N	<0.029		0.050	0.029	mg/L			06/30/20 15:15	1
Sulfate	<0.38		1.0	0.38	mg/L			06/30/20 15:15	1

Lab Sample ID: MB 180-319944/6

Matrix: Water

Analysis Batch: 319944

Client Sample ID: Method Blank

Prep Type: Total/NA

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Chloride <0.32 1.0 0.32 mg/L 06/30/20 05:32 Fluoride 0.10 0.026 mg/L < 0.026 06/30/20 05:32 Nitrate as N <0.023 0.10 0.023 mg/L 06/30/20 05:32 0.029 mg/L Nitrite as N < 0.029 0.050 06/30/20 05:32 Sulfate < 0.38 1.0 0.38 mg/L 06/30/20 05:32

Lab Sample ID: LCS 180-319944/38

Matrix: Water

Analyte Chloride Fluoride Nitrate as N Nitrite as N Sulfate

Analysis Batch: 319944

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Spike	LCS	LCS				%Rec.	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
50.0	53.7		mg/L		107	90 - 110	
2.50	2.62		mg/L		105	90 - 110	
2.50	2.65		mg/L		106	90 - 110	
2.50	2.58		mg/L		103	90 - 110	
50.0	52.1		mg/L		104	90 - 110	

Lab Sample ID: 180-107680-3 MS

Matrix: Water

Analysis Batch: 319944

Client Sample ID: ARGWC-9 Prep Type: Total/NA

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	5.4		50.0	57.0		mg/L		103	90 - 110	
Fluoride	0.027	J	2.50	2.56		mg/L		101	90 - 110	
Nitrate as N	0.54	H H3	2.50	3.14		mg/L		104	90 - 110	
Nitrite as N	0.031	J H H3	2.50	2.52		mg/L		100	90 - 110	
Sulfate	0.94	J	50.0	51.9		mg/L		102	90 - 110	

Lab Sample ID: 180-107680-3 MSD

Matrix: Water

Analysis Batch: 319944

Client Sample ID: ARGWC-9 Prep Type: Total/NA

	,	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Ar	nalyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cr	nloride	5.4		50.0	57.3		mg/L		104	90 - 110	0	20
Flu	uoride	0.027	J	2.50	2.55		mg/L		101	90 - 110	0	20
Ni	trate as N	0.54	H H3	2.50	3.14		mg/L		104	90 - 110	0	20
Ni	trite as N	0.031	J H H3	2.50	2.54		mg/L		100	90 - 110	1	20
Su	ılfate	0.94	J	50.0	51.8		mg/L		102	90 - 110	0	20

Eurofins TestAmerica, Pittsburgh

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Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-320069/2-A

Matrix: Water

Analysis Batch: 320452

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 320069

Job ID: 180-107680-1

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.039		0.080	0.039	mg/L		06/30/20 15:21	07/03/20 00:03	1
Iron	<0.020		0.050	0.020	mg/L		06/30/20 15:21	07/03/20 00:03	1
Calcium	<0.13		0.50	0.13	mg/L		06/30/20 15:21	07/03/20 00:03	1
Manganese	<0.00087		0.0050	0.00087	mg/L		06/30/20 15:21	07/03/20 00:03	1
Cobalt	<0.00013		0.00050	0.00013	mg/L		06/30/20 15:21	07/03/20 00:03	1
Lithium	<0.0034		0.0050	0.0034	mg/L		06/30/20 15:21	07/03/20 00:03	1
Magnesium	<0.083		0.50	0.083	mg/L		06/30/20 15:21	07/03/20 00:03	1
Molybdenum	< 0.00061		0.0050	0.00061	mg/L		06/30/20 15:21	07/03/20 00:03	1
Potassium	<0.16		0.50	0.16	mg/L		06/30/20 15:21	07/03/20 00:03	1
Sodium	<0.35		0.50	0.35	mg/L		06/30/20 15:21	07/03/20 00:03	1

Lab Sample ID: LCS 180-320069/3-A

Matrix: Water

Analysis Batch: 320452

Client Sample ID: Lab Control Sample											
Prep Type: Total Recoverable											
			Prep B	atch: 320069							
			%Rec.								
Unit	D	%Rec	Limits								
mg/L		100	80 - 120								

7 mary 515 Datom 525 152	Spike	LCS	LCS				%Rec.
Analyte	Added	_	Qualifier	Unit	D	%Rec	Limits
Boron	1.25	1.24		mg/L		100	80 - 120
Iron	5.00	5.20		mg/L		104	80 - 120
Calcium	25.0	29.4		mg/L		118	80 - 120
Manganese	0.500	0.508		mg/L		102	80 - 120
Cobalt	0.500	0.530		mg/L		106	80 - 120
Lithium	0.500	0.526		mg/L		105	80 - 120
Magnesium	25.0	25.9		mg/L		103	80 - 120
Molybdenum	0.500	0.528		mg/L		106	80 - 120
Potassium	25.0	26.0		mg/L		104	80 - 120
Sodium	25.0	26.9		mg/L		108	80 - 120
Soaium	25.0	26.9		mg/L		108	80 - 120

Method: EPA 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 180-320341/1-A

Matrix: Water

Analyte

Sulfide

Analysis Batch: 320374

Client Sample ID: Method Blank Prep Type: Total/NA **Prep Batch: 320341**

	1410	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<2.1		3.0	2.1	mg/L		07/02/20 11:40	07/02/20 12:53	1

LCS LCS

9.95

Lab Sample ID: LCS 180-320341/2-A **Matrix: Water**

Analysis Batch: 320374

4			
		Spike	
		Added	
	 	11.6	_

MD MD

Result Qualifier Unit D %Rec

mg/L

Prep Type: Total/NA **Prep Batch: 320341** %Rec.

Limits 85 - 115

Client Sample ID: Lab Control Sample

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company Job ID: 180-107680-1

Project/Site: Plant Arkwright AP3 Alternate Source

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-320796/53

Matrix: Water

Analysis Batch: 320796

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: ARGWC-9

MB MB Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Total Alkalinity as CaCO3 to pH 4.5 5.0 5.0 mg/L 07/07/20 13:56 <5.0 Bicarbonate Alkalinity as CaCO3 5.0 mg/L 07/07/20 13:56 <5.0 5.0 Carbonate Alkalinity as CaCO3 07/07/20 13:56 <5.0 5.0 5.0 mg/L

Lab Sample ID: LCS 180-320796/52

Matrix: Water

Analysis Batch: 320796

_	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Total Alkalinity as CaCO3 to pH	 250	229		mg/L		92	90 - 110	
4.5								

Lab Sample ID: 180-107680-3 DU

Matrix: Water

Analysis Batch: 320796

Alialysis Dalcii. 320730								
	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Total Alkalinity as CaCO3 to pH	29		 28.0		mg/L		 3	20
Bicarbonate Alkalinity as CaCO3	29		28.0		mg/L		3	20
Carbonate Alkalinity as CaCO3	<5.0		<5.0		mg/L		NC	20

QC Association Summary

Client: Southern Company

Project/Site: Plant Arkwright AP3 Alternate Source

HPLC/IC

Analysis Batch: 319944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107680-1	Field Blank #2	Total/NA	Water	EPA 300.0 R2.1	
180-107680-2	ARGWA-12	Total/NA	Water	EPA 300.0 R2.1	
180-107680-3	ARGWC-9	Total/NA	Water	EPA 300.0 R2.1	
MB 180-319944/39	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
MB 180-319944/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-319944/38	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-107680-3 MS	ARGWC-9	Total/NA	Water	EPA 300.0 R2.1	
180-107680-3 MSD	ARGWC-9	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 320069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107680-1	Field Blank #2	Dissolved	Water	3005A	-
180-107680-1	Field Blank #2	Total Recoverable	Water	3005A	
180-107680-2	ARGWA-12	Dissolved	Water	3005A	
180-107680-2	ARGWA-12	Total Recoverable	Water	3005A	
180-107680-3	ARGWC-9	Dissolved	Water	3005A	
180-107680-3	ARGWC-9	Total Recoverable	Water	3005A	
MB 180-320069/2-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-320069/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 320452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107680-1	Field Blank #2	Dissolved	Water	EPA 6020B	320069
180-107680-1	Field Blank #2	Total Recoverable	Water	EPA 6020B	320069
180-107680-2	ARGWA-12	Dissolved	Water	EPA 6020B	320069
180-107680-2	ARGWA-12	Total Recoverable	Water	EPA 6020B	320069
180-107680-3	ARGWC-9	Dissolved	Water	EPA 6020B	320069
180-107680-3	ARGWC-9	Total Recoverable	Water	EPA 6020B	320069
MB 180-320069/2-A	Method Blank	Total Recoverable	Water	EPA 6020B	320069
LCS 180-320069/3-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	320069

General Chemistry

Prep Batch: 320341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107680-1	Field Blank #2	Total/NA	Water	9030B	
180-107680-2	ARGWA-12	Total/NA	Water	9030B	
180-107680-3	ARGWC-9	Total/NA	Water	9030B	
MB 180-320341/1-A	Method Blank	Total/NA	Water	9030B	
LCS 180-320341/2-A	Lab Control Sample	Total/NA	Water	9030B	

Analysis Batch: 320374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107680-1	Field Blank #2	Total/NA	Water	EPA 9034	320341
180-107680-2	ARGWA-12	Total/NA	Water	EPA 9034	320341
180-107680-3	ARGWC-9	Total/NA	Water	EPA 9034	320341
MB 180-320341/1-A	Method Blank	Total/NA	Water	EPA 9034	320341
LCS 180-320341/2-A	Lab Control Sample	Total/NA	Water	EPA 9034	320341

Eurofins TestAmerica, Pittsburgh

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Job ID: 180-107680-1

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QC Association Summary

Client: Southern Company Job ID: 180-107680-1

Project/Site: Plant Arkwright AP3 Alternate Source

General Chemistry

Analysis Batch: 320796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107680-1	Field Blank #2	Total/NA	Water	SM2320 B	
180-107680-2	ARGWA-12	Total/NA	Water	SM2320 B	
180-107680-3	ARGWC-9	Total/NA	Water	SM2320 B	
MB 180-320796/53	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-320796/52	Lab Control Sample	Total/NA	Water	SM2320 B	
180-107680-3 DU	ARGWC-9	Total/NA	Water	SM2320 B	

Field Service / Mobile Lab

Analysis Batch: 320074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107680-2	ARGWA-12	Total/NA	Water	Field Sampling	
180-107680-3	ARGWC-9	Total/NA	Water	Field Sampling	

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301 Alpha Drive RIDC Park

Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins Environment Testing America

Client Information	FMay: 1 a , E Guillen Brown . Phone EMait:								Carrier Tracking N	Carrier Tracking No(s):		90.3		
Client Contact	Phone:	100	C. PICST	E-M									Page:	
Joju Abraham Company:				sha	ali brov	wni@te	estam	ericain	ic.com				Page 3 of 3	
Southern Company Address:					1				Ana	lysis R	Requested		000 a.	
Address: 241 Ralph McGill Blvd SE B10185	Due Date Request	ed:			I		T		\top	T			Preservation Co	des:
241 Ralph McGill Blvd SE B10185 Chy Aflanta	TAT Requested (d.	aysk:			11		1					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A - HCL B - NaOH	M - Hexane N - None
Atlanta	11						1						C - Zn Apetate	O - AsNaO2
State, Zip: GA, 30308	5da	75					12		=				D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3
Phone:	P0#				11		8 (CoMoLiCaMgNaid)		E				F - MeOH G - Amphior	R - Na2S2O3 S - H2SO4
Email:	SCS10382606 W0#:				9		CaM		lved					T - TSP Dodecahydrate
					0	9	MoL	5	989				I - lice J - Di Water	U - Acetone V - MCAA
JAbraham@southernco.com Project Name	Project #:				18	6	100	Fe/a	ē .			containers	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)
Plant Arkwright AP3 Alternate Source	18020201 SSOW#:				- 10			lved	5 1 g		1111	onta	Other	100000
Georgia					Sam	Perform MS/MSD (Yes or No) 23208, 300, ORGFMS	6020B - (MOD) Custom	6020B - (MOD) Dissolved Fe/Mn	2540C_Calcd - Solids, Total Dissolved (TDS)			10	other.	
			Sample	Matrix	pered	MS/N	(QQ	(00)	· pol			Total Number		
			Type	(##water, S=splid,	1	E S	5	5	0 0			No.	l	
Sample Identification	Sample Date	Sample Time	(C=comp,	Orwasteloit,	Field	320	020	050B	2540C			o tal		
demple identification	Salliple Date	11111111		et-tissue, A-Ai	1	X N	0		N CI	_			Special II	nstructions/Note:
Field Blank #2 ARGWA-12 ARGWC-9	6/26/20	0830		Water	y	X			X	_		4		
ARGWA-12)	1015	G	Water	ý	X	_	-	X >	-		4	0H350	94
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					††	+	+		+	180	-107680 Chain o		WW -	
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Possible Hazard Identification					1	Sampl	le Dis	posal	(A fe	e may b	e assessed if sai	mples are retain	ed longer than	1 month)
Non-Hazard Flammable Skin Imitant Pois	on B Unkr	nown L	Radiologica	1				то С		9	Disposal By Lal	Arch	tive For	Months
Deliverable Requested: I, II, III, IV, Other (specify)					5	Specia	al Instr	uction	s/QC	Requirer				
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David L Howard	6/26/2	0/14	4.5	2		A	1/1	W	000	800		PPAC	9:23	C 180
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Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Cox	oler Ter	nperatu	re(s) °C	and Othe	r Remarks			

Ver Billanose

FedEx

TRK# 8121 9394 5819

SAMPLE RECEIVING

EUROFINS TESTAMERICA 301 ALPHA DR RIDC PARK

80-107680 Waybill

JOPPER

SATURDAY 12:00 PRIORITY OVERNIGH

BILL THIRD PARTY

DSR AHS 15238

ncorrected temp

PT-WI-SR-001 effective 7/26/13

F2 B02

5819 06.29

urday Delivery

fedex.com 1800.GoFedEx 1.800.463.3339

Express Package Service

5120

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Client: Southern Company Job Number: 180-107680-1

Login Number: 107680 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Kovitch, Christina M

Creator. Novitcii, Ciiristina W		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Date: 2020-06-24 15:43:47

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

Project Information:

Operator Name **Daniel Howard**

Company Name Project Name

Wood Plant Arkwright AP3 ASD Site Name ARAMW-3

0° 0' 0" Latitude 0° 0' 0" Longitude Sonde SN 646770

Turbidity Make/Model Hatch 2100Q Pump placement from TOC

62.9 ft

HDPE

0.17 in

67 ft

QED Sample Pro Bladder Pump

Well Information:

Well ID ARAMW-3 Well diameter 2 in Well Total Depth 67.92 ft Screen Length 10 ft Depth to Water 24.68 ft

Pumping Information:

Final Pumping Rate 200 mL/min Total System Volume 0.4890493 L Calculated Sample Rate 300 sec Stabilization Drawdown 0 in **Total Volume Pumped** 17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:19:29	3900.94	21.24	6.34	345.95	5.64	25.39	0.15	0.46
Last 5	15:24:29	4200.93	21.27	6.34	348.58	5.60	25.39	0.14	1.00
Last 5	15:29:29	4500.93	21.19	6.36	350.61	5.48	25.31	0.13	0.29
Last 5	15:34:29	4800.92	21.27	6.38	351.90	4.68	25.31	0.13	-1.68
Last 5	15:39:29	5100.91	21.17	6.38	350.83	4.91	25.31	0.12	-2.23
Variance 0			-0.08	0.02	2.03			-0.01	-0.71
Variance 1			0.09	0.02	1.29			-0.00	-1.97
Variance 2			-0.10	0.01	-1.07			-0.01	-0.55

Notes

ATAMW-3 sample time 1550

Date: 2020-06-24 12:12:38

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

Project Information:

Operator Name Daniel Howard

Company Name Wood
Project Name Plant Arkwright AP3 ASD

Site Name ARAMW-4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770

Turbidity Make/Model Hatch 2100Q

Pump placement from TOC

52 ft

HDPE

0.17 in

57 ft

Masterflex Peristaltic

Well Information:

Well IDARAMW-4Well diameter2 inWell Total Depth57.65 ftScreen Length10 ftDepth to Water20.95 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4444151 L
Calculated Sample Rate 300 sec
Stabilization Drawdown
Total Volume Pumped 17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:49:43	300.06	20.96	5.77	1381.75	1.80	21.05	0.09	41.73
Last 5	11:54:43	600.02	21.05	5.77	1372.46	1.83	21.05	0.09	42.65
Last 5	11:59:43	900.01	21.04	5.77	1365.25	1.88	21.05	0.09	43.05
Last 5	12:04:43	1200.01	21.05	5.78	1358.92	1.66	21.05	0.08	43.13
Last 5	12:09:43	1500.00	20.93	5.78	1358.02	1.68	21.05	0.08	43.27
Variance 0			-0.01	0.00	-7.21			-0.00	0.39
Variance 1			0.01	0.01	-6.33			-0.00	80.0
Variance 2			-0.13	-0.00	-0.90			0.00	0.15

Notes

ARAMW-4 sample time 1210

Date: 2020-06-24 16:16:03

Project Information:

Ever Guillen

Pump Information:

Operator Name Company Name Project Name

Wood Plant Arkwright AP3 ASD Pump Model/Type M Flex Tubing Type HDPE **Tubing Diameter** Tubing Length

Site Name ftLatitude Longitude

ARAMW-6 00 0' 0" 00 0' 0"

0.17 in 32.90

Sonde SN Turbidity Make/Model

459710 Hach 2100Q

Pump placement from TOC

27.90 ft

Well Information:

Well ID Well diameter Well Total Depth Screen Length Depth to Water

ARAMW-6 2 in 32.90 ft 10 ft 13.08 ft

Pumping Information:

Final Pumping Rate Total System Volume Calculated Sample Rate Stabilization Drawdown **Total Volume Pumped**

200 mL/min 0.6268466 L 300 sec

0 in 27 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond mS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:53:02	6899.83	22.77	6.32	0.38	5.91	13.91	0.15	15.10
Last 5	15:58:02	7199.83	22.96	6.33	0.37	5.06	13.91	0.15	13.34
Last 5	16:03:02	7499.83	23.09	6.32	0.38	5.38	13.91	0.15	16.83
Last 5	16:08:02	7799.83	22.94	6.33	0.37	5.07	13.91	0.15	16.69
Last 5	16:13:02	8099.83	22.73	6.33	0.37	4.83	13.91	0.15	16.44
Variance 0			0.13	-0.01	0.00			0.00	3.49
Variance 1			-0.15	0.01	-0.01			-0.00	-0.14
Variance 2			-0.21	0.00	-0.00			-0.00	-0.25

Notes

Sample time = 1620

Date: 2020-06-25 16:11:41

Project Information:		Pump Information:	
Operator Name	Ferdinand Mayila	Pump Model/Type	QED Micropurge
Company Name	Wood	Tubing Type	HDPE
Project Name Site Name Latitude	Plant Arkwright AP3 ASD ARGWA-3 0° 0' 0"	Tubing Diameter Tubing Length	0.25 in 40.5 ft
Longitude	00 0' 0"		
Sonde SN	601533		
Turbidity Make/Model	HACH 2100Q	Pump placement from T	OC 35.5 ft

Well Information: Pumping Information:

Final Pumping Rate Total System Volume Calculated Sample Rate Well ID ARGWA-3 100 mL/min Well diameter 0.09 L 2 in Well Total Depth 40.5 ft 300 sec Screen Length 10.0 ft Stabilization Drawdown 0.01 in Depth to Water 34.2 ft Total Volume Pumped 5 L

Low-Flow Sa	mpling Stabiliz	ation Summary							
	Time	Elapsed	Temp C	рН	SpCond μS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	15:48:43	1199.98	22.23	5.76	67.32	4.12	34.35	6.66	107.37
Last 5	15:53:43	1499.98	22.11	5.75	67.84	5.87	34.36	6.71	108.30
Last 5	15:58:43	1799.99	21.82	5.75	68.41	4.52	34.36	6.70	108.57
Last 5	16:03:45	2101.98	21.64	5.76	68.50	4.37	34.37	6.67	108.62
Last 5	16:08:45	2401.98	21.47	5.75	68.82	4.61	34.36	6.72	109.12
Variance 0			-0.30	-0.00	0.57			-0.01	0.27
Variance 1			-0.18	0.00	0.08			-0.03	0.05
Variance 2			-0.17	-0.00	0.32			0.04	0.49

Notes: Sample Time 1620

Date: 2020-06-25 14:03:09

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

Project Information:

Operator Name Ever Guillen
Company Name Wood
Project Name Plant Arkwright CCR ASD

Site Name ARGWA-5

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 459710

Turbidity Make/Model Hach 2100Q

Pump placement from TOC

25.00 ft

QED

HDPE

0.17 in

30.00 ft

Well Information:

Well IDARGWA-5Well diameter2 inWell Total Depth30.00 ftScreen Length10 ftDepth to Water22.45 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6139027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond mS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:40:01	900.03	19.25	5.86	0.09	1.91	22.62	6.22	84.37
Last 5	13:45:01	1200.03	19.43	5.87	0.09	1.19	22.62	6.23	83.33
Last 5	13:50:01	1500.03	19.31	5.87	0.09	1.73	22.62	6.21	82.75
Last 5	13:55:01	1799.92	19.15	5.87	0.09	1.12	22.62	6.27	82.38
Last 5	14:00:02	2100.92	19.02	5.87	0.09	0.90	22.62	6.21	82.51
Variance 0			-0.12	0.01	-0.00			-0.02	-0.58
Variance 1			-0.16	0.00	0.00			0.06	-0.37
Variance 2			-0.13	0.00	-0.00			-0.06	0.13

Notes

Sampled @ 1405

Date: 2020-06-25 16:10:46

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

Project Information:

Operator Name Ever Guillen Company Name Wood

Project Name Plant Arkwright AP3 ASD

Site Name ARGWC-7
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 459710

Turbidity Make/Model Hach 2100Q

Pump placement from TOC

45.2 ft

QED

HDPE

0.17 in

50.20 ft

Well Information:

Well IDARGWC-7Well diameter2 inWell Total Depth50.20 ftScreen Length10 ftDepth to Water21.11 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.7040638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond mS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:48:33	1590.03	24.06	5.75	0.17	0.77	21.36	3.21	87.28
Last 5	15:53:33	1889.92	24.33	5.75	0.17	0.64	21.36	3.21	86.77
Last 5	15:58:33	2189.92	23.59	5.75	0.17	0.66	21.36	3.21	85.17
Last 5	16:03:33	2489.92	23.08	5.75	0.17	0.72	21.36	3.21	83.80
Last 5	16:08:33	2789.92	22.64	5.75	0.17	0.58	21.36	3.21	82.45
Variance 0			-0.74	-0.00	-0.00			0.00	-1.60
Variance 1			-0.52	0.00	-0.00			0.01	-1.37
Variance 2			-0.44	0.00	0.00			-0.00	-1.35

Notes

Sampled @ 1615

Date: 2020-06-23 13:04:52

Project Information:

Operator Name

F Mayila

Pump Information:

Pump Model/Type

QED Micropurge

Company NameWoodTubing TypeHDPEProject NamePlant Arkwright AP3 ASDTubing Diameter2 inSite NameARGWC-8Tubing Length43 ft

Site Name ARGWC-8 Latitude 0° 0' 0" Longitude 0° 0' 0" Sonde SN 601533

Turbidity Make/Model HDPE Pump placement from TOC 38.1 ft

Well Information: Pumping Information:

Final Pumping Rate 150 mL/min Well ID ARGWC-8 Well diameter 2 in Total System Volume 0.09 L Well Total Depth 43.22 ft Calculated Sample Rate 300 sec Screen Length Stabilization Drawdown 10 ft 0 in Depth to Water 25.63 ft **Total Volume Pumped** 60 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1%	+/- 3%	+/- 10%		+/- 0.3	+/- 10
Last 5	12:44:02	599.95	20.39	6.38	396.82	4.58	25.64	0.07	77.34
Last 5	12:49:02	899.95	20.22	6.37	396.20	4.12	25.63	0.09	76.67
Last 5	12:54:02	1199.95	20.48	6.37	396.13	4.35	25.62	0.06	75.81
Last 5	12:59:02	1499.95	20.70	6.37	395.71	4.45	25.62	0.06	74.97
Last 5	13:04:04	1801.95	20.74	6.37	396.23	4.37	25.62	0.06	74.58
Variance 0			0.26	-0.01	-0.06			-0.03	-0.85
Variance 1			0.22	0.01	-0.42			-0.00	-0.84
Variance 2			0.03	-0.00	0.52			-0.00	-0.39

Notes: Sample time 1315

Date: 2020-06-26 12:36:28

Project Information:		Pump Information:	
Operator Name	Ferdinand Mayila	Pump Model/Type	QED Micropurge
Company Name	Wood	Tubing Type	HDPE
Project Name	Plant Arkwright AP3 ASD	Tubing Diameter	0.25 in
Site Name Latitude	ARGWC-9 0° 0' 0"	Tubing Length	38.2 ft
Longitude	00 0' 0"		
Sonde SN	601533		
Turbidity Make/Model	HACH	Pump placement from	n TOC 33.2 ft
Well Information:		Pumping Information:	
Well ID	ARGWC-9	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.09 L
Well Total Depth	38.2 ft	Calculated Sample Ra	ate 300 sec
Screen Length	10.0 ft	Stabilization Drawdov	wn 0.03 in
Depth to Water	19.58 ft	Total Volume Pumped	29 L

Low-Flow Sar	npling Stabiliz	ation Summary							
	Time	Elapsed	Temp C	рН	SpCond µS	/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	12:13:12	5702.97	23.70	5.85	72.52	7.17	19.64	5.03	111.58
Last 5	12:18:12	6002.97	23.95	5.85	72.30	5.21	19.64	5.03	111.55
Last 5	12:23:12	6303.06	23.88	5.84	72.60	5.21	19.64	5.02	111.47
Last 5	12:28:12	6603.00	23.78	5.85	72.51	4.56	19.64	5.03	111.10
Last 5	12:33:12	6902.97	24.02	5.85	72.44	4.75	19.64	5.00	110.01
Variance 0			-0.08	-0.02	0.31			-0.01	-0.07
Variance 1			-0.09	0.02	-0.09			0.01	-0.37
Variance 2			0.23	-0.00	-0.07			-0.03	-1.09

Notes: Sample time 1250. Smartroll was restarted after overheating. Lost some electronic data but have backup hard copy.

Date: 2020-06-23 15:04:04

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

Project Information:

Operator Name Ever Guillen Company Name Wood

Project Name Plant Arkwright AP3 ASD

Site Name ARGWC-10 Latitude 00 0' 0" 00 0' 0" Longitude Sonde SN 459710

Turbidity Make/Model Hach 2100Q Pump placement from TOC

33.35 ft

QED

HDPE

0.17 in

38.35 ft

Well Information:

Well ID ARGWC-10 Well diameter 2 in Well Total Depth 38.35 ft Screen Length 10 ft Depth to Water 22.20 ft

Pumping Information:

Final Pumping Rate 200 mL/min Total System Volume 0.6511722 L Calculated Sample Rate 300 sec Stabilization Drawdown 0 in 60 L **Total Volume Pumped**

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond mS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:38:41	16517.32	21.82	5.95	0.11	6.02	22.48	4.54	79.68
Last 5	14:43:41	16817.32	21.73	5.95	0.11	5.73	22.48	4.44	79.95
Last 5	14:48:41	17117.32	21.83	5.94	0.11	5.39	22.48	4.55	79.77
Last 5	14:53:41	17417.32	21.86	5.94	0.11	5.16	22.48	4.50	79.82
Last 5	14:58:41	17717.22	21.90	5.95	0.11	4.58	22.48	4.60	79.42
Variance 0			0.10	-0.01	0.00			0.11	-0.18
Variance 1			0.03	-0.00	-0.00			-0.05	0.05
Variance 2			0.03	0.01	0.00			0.10	-0.40

Notes

Sample time = 1515

Date: 2020-06-26 10:18:05

Project Information:

Operator Name Daniel Howard

Company Name Wood
Project Name Plant Arkwright AP3 ASD

Site Name ARGWA-12
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770

Turbidity Make/Model Hatch 2100Q

Well Information:

Well ID ARGWA-12
Well diameter 2 in
Well Total Depth 35.21 ft
Screen Length 12 ft
Depth to Water 14.42 ft

Pump Information:

Pump Model/Type QED Micropurge Bladder Pump

Tubing TypeHDPETubing Diameter.25 inTubing Length35 ft

Pump placement from TOC 29.2 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.8178456 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.45 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10		
Last 5	09:53:42	900.01	19.29	5.94	171.27	6.06	14.87	2.94	84.09		
Last 5	09:58:42	1200.01	19.30	5.94	171.83	4.51	14.87	2.85	82.22		
Last 5	10:03:42	1500.00	19.16	5.94	171.51	3.31	14.87	2.77	81.12		
Last 5	10:08:42	1799.99	19.31	5.94	170.90	3.24	14.87	2.73	80.11		
Last 5	10:13:42	2099.99	19.27	5.94	170.69	2.97	14.87	2.71	79.91		
Variance 0			-0.14	0.00	-0.31			-0.08	-1.09		
Variance 1			0.15	-0.00	-0.62			-0.04	-1.01		
Variance 2			-0.04	-0.00	-0.21			-0.02	-0.20		

Notes

ARGWA-12 sample time 1015

Grab Samples ARGWA-12 GW sample

Date: 2020-06-25 15:16:49

Tubing Type

Pump Information: Pump Model/Type

Tubing Diameter

Tubing Length

Project Information:

Operator Name Daniel Howard

Company Name Wood
Project Name Plant Arkwright AP3 ASD

Site Name ARGWA-13
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646770

Turbidity Make/Model Hach 2100Q

Pump placement from TOC

om TOC 38.3 ft

HDPE

0.25 in

43.3 ft

QED Micropurge Bladder Pump

Well Information:

Well IDARGWA-13Well diameter2 inWell Total Depth43.31 ftScreen Length10 ftDepth to Water22.06 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.8979633 L
Calculated Sample Rate 300 sec
Stabilization Drawdown
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	1		+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:52:51	900.02	19.09	5.85	840.70	2.06	22.59	1.91	67.85
Last 5	14:57:51	1200.01	18.87	5.83	835.67	1.91	22.59	1.83	68.30
Last 5	15:02:51	1500.00	18.83	5.82	826.00	1.19	22.59	1.78	68.82
Last 5	15:07:51	1800.00	18.89	5.81	819.59	1.09	22.59	1.76	69.23
Last 5	15:12:51	2099.99	18.86	5.80	811.89	0.83	22.59	1.74	69.74
Variance 0			-0.04	-0.01	-9.67			-0.05	0.52
Variance 1			0.06	-0.01	-6.41			-0.02	0.42
Variance 2			-0.02	-0.01	-7.71			-0.02	0.51

Notes

ARGWA-13 sample time 1514

Date: 2020-06-25 13:31:54

Project Information:		Pump Information:	
Operator Name	Ferdinand Mayila	Pump Model/Type	QED Micropurge
Company Name	Wood	Tubing Type	HDPE
Project Name	Plant Arkwright AP3 ASD	Tubing Diameter	0.25 in
Site Name	ARGWA-14	Tubing Length	58.45 ft
Latitude	00 0' 0"		
Longitude	00 0' 0"		
Sonde SN	601533		

Turbidity Make/Model HACH 2100Q Pump placement from TOC 53.45 ft

Well Information: Pumping Information:

Well ID ARGWA-14 Final Pumping Rate 80 mL/min Total System Volume Well diameter 0.09 L 2 in Well Total Depth 58.75 ft Calculated Sample Rate 300 sec Screen Length Stabilization Drawdown 10.0 ft 0.4 in Depth to Water 40.96 ft **Total Volume Pumped** 6 L

Low-Flow Sampling Stabilization Summary SpCond µS/cmTurb NTU DTW ft ORP mV Time Elapsed Temp C рΗ RDO mg/L +/- 0.5 +/- 0.1 +/- 3% +/- 10 +/- 0.3 +/- 10 Stabilization 6.40 4.20 Last 5 21.83 280.13 0.47 58.19 13:07:22 1500.03 46.95 Last 5 13:12:22 1800.03 21.94 6.39 270.54 0.47 45.50 4.11 60.51 13:17:22 2100.03 22.16 6.37 263.16 0.63 45.85 3.97 62.25 Last 5 3.96 13:22:22 2400.03 23.43 6.37 263.91 0.58 45.90 63.35 Last 5 Last 5 13:27:22 2700.03 24.55 6.38 259.72 0.61 46.25 3.89 64.57 -0.02 Variance 0 -0.14 0.22 -7.38 1.75 1.27 0.00 0.75 -0.01 Variance 1 1.10 Variance 2 1.12 0.01 -4.19 -0.08 1.21

Notes: Sample time 1340

Date: 2020-06-25 11:01:47

Project Information:		Pump Information:	
Operator Name	Ferdinand Mayila	Pump Model/Type	QED Micropurge
Company Name	Wood	Tubing Type	HDPE
Project Name Site Name Latitude	Plant Arkwright AP3 ASD ARGWC-15 0° 0' 0"	Tubing Diameter Tubing Length	0.25 in 43 ft
Longitude	00 0' 0"		
Sonde SN	601533		
Turbidity Make/Model	HACH 2100Q	Pump placement from TC	OC 37.7 ft

Well Information: Pumping Information:

Well ID Final Pumping Rat ARGWC-15 80 mL/min Total System Volume
Calculated Sample Rate Well diameter 2 in 43 ft 0.09 L Well Total Depth 300 secScreen Length 10.0 ft Stabilization Drawdown .08 in Depth to Water 28.25 ft Total Volume Pumped 7.5 L

Low-Flow Sa	mpling Stabiliz	ation Summary							
	Time	Elapsed	Temp C	рН	SpCond μS	/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1%	+/- 3%	+/- 10%		+/- 0.3%	+/- 10%
Last 5	10:36:35	4202.98	23.88	6.30	192.09	5.48	30.46	6.83	95.34
Last 5	10:41:35	4502.93	23.70	6.30	192.70	4.83	30.52	6.75	95.73
Last 5	10:46:35	4802.93	23.16	6.32	192.75	4.46	30.60	6.47	94.48
Last 5	10:51:35	5102.93	22.83	6.32	193.27	4.39	30.65	6.34	94.12
Last 5	10:56:36	5403.93	22.62	6.32	191.78	4.25	30.68	6.18	93.26
Variance 0			-0.54	0.02	0.05			-0.29	-1.25
Variance 1			-0.33	-0.00	0.52			-0.12	-0.36
Variance 2			-0.21	0.00	-1.49			-0.16	-0.87

Notes: Sample time 110

Date: 2020-06-24 09:57:02

Project Information:

Operator Name

Ever Guillen

Pump Information:

Pump Model/Type

Operator NameEver GuillenPump Model/TypeQEDCompany NameWoodTubing TypeHDPEProject NamePlant Arkwright AP3 ASDTubing Diameter0.17 inSite NameARGWC-16Tubing Length34.52 ft

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 459710

Turbidity Make/Model Hach 2100Q Pump placement from TOC 29.62 ft

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWC-16 Well diameter Total System Volume 0.6340774 L 2 in 34.52 ft Calculated Sample Rate Well Total Depth 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water 19.56 ft **Total Volume Pumped** 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond mS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:34:33	2099.93	18.55	5.20	0.60	0.54	19.61	2.32	91.80
Last 5	09:39:33	2399.93	18.57	5.20	0.60	0.78	19.61	2.20	90.82
Last 5	09:44:34	2700.93	18.53	5.20	0.60	0.50	19.61	2.12	89.88
Last 5	09:49:34	3000.92	18.53	5.20	0.60	0.47	19.61	2.05	90.43
Last 5	09:54:34	3300.93	18.53	5.20	0.60	0.39	10.61	1.97	88.75
Variance 0			-0.04	0.00	-0.00			-0.08	-0.94
Variance 1			0.00	0.00	-0.00			-0.07	0.55
Variance 2			-0.01	0.00	-0.00			-0.08	-1.68

Notes: Sample time 1000

Date: 2020-06-24 12:32:15

Project Information:

Operator Name Ever Guillen Company Name Wood

Project Name Plant Arkwright CCR ASD Site Name ARGWC-17

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 459710

Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type HDPE
Tubing Diameter 0.17 in
Tubing Length 34.50 ft

Pump placement from TOC 24.50 ft

Well Information:

Well IDARGWC-17Well diameter2 inWell Total Depth34.50 ftScreen Length10 ftDepth to Water21.25 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6339881 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond mS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:07:59	600.03	22.67	5.11	0.21	4.45	21.77	0.66	94.92
Last 5	12:12:59	900.03	22.58	5.11	0.21	3.73	21.77	0.63	93.51
Last 5	12:17:59	1200.03	22.85	5.11	0.21	2.99	21.77	0.64	93.03
Last 5	12:22:59	1499.93	22.54	5.10	0.21	2.43	21.77	0.63	92.29
Last 5	12:27:59	1799.93	23.07	5.11	0.21	2.37	21.77	0.61	92.28
Variance 0			0.27	-0.00	0.00			0.00	-0.48
Variance 1			-0.31	-0.01	0.00			-0.00	-0.74
Variance 2			0.54	0.01	-0.00			-0.02	-0.01

Notes

Battery pack lost connection. Restarted well. P Sample time = 1235

Date: 2020-06-24 13:17:08

Project Information: Pump Information: **Operator Name** Ferdinand Mayila Pump Model/Type **QED Micropurge** Company Name Wood **Tubing Type HDPE** 0.25 in Plant Arkwright AP3 ASD **Tubing Diameter** Proiect Name Tubing Length Site Name ARGWC-18 50.55 ft 00 0' 0" Latitude 00 0' 0" Longitude

Sonde SN 601533

Turbidity Make/Model HACH 2100Q Pump placement from TOC 45.55 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID 0 mL/min ARGWC-18 Total System Volume Well diameter 0.09 L 2 in Calculated Sample Rate Well Total Depth 50.55 ft 300 sec Screen Length Stabilization Drawdown 0 in 10 ft **Total Volume Pumped** Depth to Water 27.65 ft 53 L

Low-Flow Sar	npling Stabiliz	ation Summary							
	Time	Elapsed	Temp C	рН	SpCond µS	/cmTurb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1%	+/- 3%	+/- 10%		+/- 0.3%	+/- 10%
Last 5	12:36:59	10802.88	22.17	5.91	533.87	10.80	28.23	0.10	58.74
Last 5	12:46:59	11402.88	22.30	5.91	534.96	9.95	28.23	0.09	58.71
Last 5	12:51:59	11702.88	22.53	5.91	535.61	9.40	28.23	0.09	58.57
Last 5	12:56:59	12002.88	22.64	5.91	533.99	9.05	28.23	0.09	58.65
Last 5	13:02:00	12303.87	22.62	5.91	534.28	9.03	28.23	0.09	58.70
Variance 0			0.23	0.00	0.64			-0.00	-0.14
Variance 1			0.11	0.00	-1.61			0.01	0.08
Variance 2			-0.02	0.00	0.29			-0.00	0.05

Notes: Sample time 1320. Total and dissolved metals collected due to final turbidity

		<u>G</u> 6	eorgia Pov	wer Site S	ampling D	Data (GW)	
Site Name: Plant	Arkwr	icht				Date: 6/23:24,25,26/2020	
	Sample	Sample	***************************************	Equipment			
Well ID	Date	Time	Field Blank	Blank	Field Dup.	Additional Comments	
ARGWC-8	6/23/20	1315	-				
ARGWC-10	6/23/20	1515					
Field Black#1	6/23/20	0930	FieldBlanker			Field Blank For 6/23/20 Beginning of Jenpling	
AP3PZ-IA	6/23/26	0930					
Dup#1	6/23/20				AP3PZ-IA	Duplicate of AP3PZ-iA(DuP#1)	
AP3PZ-2A	6/23/20	1345					
AP3PZ-3A	6/23/20	1308					
AP3PZ-4A	6/23/20	1552					
AP3PZ-5A	6/23/20	1705					
ARGWC-22	6/24/20	1005					
DUP#2	6/24/20				ARGWC-22	Duplicate of ARGWC-22 (BUP#2)	
ARAMW-I	6/24/20	1245					
ARAMW-2	6/24/20	1640					
EB#1	6/24/20			EB#1		Equip Blank of bladder pump	•
ARGWC-16	6/24/20						
ARGWC-17	6/24/20	1235					
ARAMW-6	6/24/20	1620					
ARAMW-4	6/24/20	1210					
ARAMW-3	6/24/20	1345					
ARGWC-18	6/24/20	1320					•
EB#2	6/25/20			EB#2		EquipBlank of tubing use with pas	peristaltic pump
ARGWC-23	625/20					7 7	, , ,
ARGWC-21	6/25/20	1315					
ARGWA-19	6/25/20	1015					
ARGWA-20	6/25/20	1230					
ARGWC-15	6/25/20	1110					
Additional comments : F	ield Blan	k#1 a	nd Field	Blank#2	were to	eken using ASTM Type I/II	
TEGGRAPH WATER, K	TCCH K:	ه ا لا یہ ج	ナキラスハ	2 A K 7 F -	m 8/2021		
collected from QE	D.Sample	Pro Blad	lder Pump	ID#38	796 using	ASTM Type I/II reagent water	
RICCABrand Let	井2062	A53 , Ex	p8/2021!	Equip BI	ank ER#	=2 was collected from the	
HDPE+whing used i	with the	perista	Hicpum	p. Tubing	Lo+ # 12"	ASTM Type I/II reagest water \$2 was collected from the 159-05. Reagest water used 8/2021.	
HSTM TYPE IT	RICC	A Bran	1 ro+#	12002 A	53, Exp	8/2021.	
· -					• •		

e Name: Plant	Arkwria	ht				Date: 6/23,24,25,26/2020
	Sample	Sample		Equipment		
Well ID	Date	Time	Field Blank	Blank	Field Dup.	Additional Comments
ARGWA-14	6/25/20	1340				
ARGWA-3	6/25/20					
ARGWA-3 ARGWA-5	6/25/20	1405				
ARGWC-7	6/25/20	1615				
ARGWA-13	6/25/20	1514		-		
ARGWA-12	6/26/20	0830	FieldBlank			Field Blank For 6/26/20 EndoFSame
ARGWA-12	6/26/20	1015				•
ARGWC-9	6/26/20	1250				
-	•					
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dditional comments:			e.			

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-109846-1

Client Project/Site: CCR - Plant Arkwright

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham

(Halfman

Authorized for release by: 9/24/2020 4:40:14 PM

Shali Brown, Project Manager II (615)301-5031

Shali.Brown@Eurofinset.com

LINKS

Review your project results through

Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

Client: Southern Company Project/Site: CCR - Plant Arkwright Laboratory Job ID: 180-109846-1

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Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-109846-1

Comments

No additional comments.

Receipt

The samples were received on 8/20/2020 9:30 AM, 8/21/2020 9:45 AM and 8/22/2020 10:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 9 coolers at receipt time were 1.1° C, 1.2° C, 1.5° C, 1.6° C, 2.1° C, 2.4° C, 2.6° C, 2.7° C and 3.6° C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): ARGWC-10 (180-109848-1). The container labels list an id of GWC-10 while the COC lists ARGWC10.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): ARGWC-9 (180-109848-3). The container labels list an id of GWC-9 while the COC lists ARGWC-9. The id's on the Coc were used.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): ARGWA-5 (180-109850-1). The container labels list an id of GWA-5 while the COC lists ARGWA-5.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): ARGWA-3 (180-109850-2). The container labels list an id of GWA-3 while the COC lists ARGWA-3.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): ARGWC-7 (180-109850-3). The container labels list an id of GWC-7 while the COC lists ARGWC-7. The id's on the Coc were used.

GC Semi VOA

Method 300.0: The matrix spike and matrix spike duplicate (MS/MSD) recoveries for the following sample associated with analytical batch 180-326478 were outside control limits for Fluoride: (180-109846-B-2 MS) and (180-109846-B-2 MSD). The associated laboratory control sample (LCS) recovery met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Methods 6020A, 6020B: The ICVL failed high for tin. Another (ICVL 180-330300/6) made from a separate stock solution was run and passes for 6020B method with 103% recovery; therefore, the data has been reported.

Method 6020B: The method blank for preparation batch 180-327642 contained boron above the reporting limit (RL). None of the samples associated with this method blank contained the target compound above the RL; therefore, re-extraction and/or re-analysis of samples were not performed.

Method 6020B: The method blank for preparation batch 180-327640 contained zinc above the reporting limit (RL). None of the samples associated with this method blank contained the target compound above the RL; therefore, re-extraction and/or re-analysis of samples were not performed.

Method 7470A: The continuing calibration verification (CCV) associated with batch 180-328261 recovered above the upper control limit for mercury. The samples associated with this CCV were non-detects for the affected analytes or were below the reporting limit (RL); therefore, the data have been reported.

Method 7470A: The low level continuing calibration verification (CCVL) associated with batch 180-328261 recovered above the upper control limit for mercury. The samples associated with this CCVL were non-detects for the affected analytes or below the reporting limit (RL); therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Job ID: 180-109846-1

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Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-1

Job ID: 180-109846-1 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Definitions/Glossary

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Qualifiers

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 Qualifier
 Qualifier Description

 F1
 MS and/or MSD recovery exceeds control limits.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier Qualifier Description

ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

B Compound was found in the blank and sample.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)
LOD Limit of Detection (DoD/DOE)
LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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Accreditation/Certification Summary

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-21
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-21
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-14-21
West Virginia DEP	State	142	02-01-21

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Sample Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-1

180-109846-1 ARGWA-14 Water 08/19/20 13:55 08/20/20 09 180-109846-2 ARGWC-15 Water 08/19/20 10:05 08/20/20 09 180-109846-3 ARGWC-16 Water 08/19/20 12:05 08/20/20 09 180-109847-1 FB#1 Water 08/18/20 11:00 08/20/20 09 180-109847-2 ARGWA-12 Water 08/18/20 13:00 08/20/20 09
180-109846-3 ARGWC-16 Water 08/19/20 12:05 08/20/20 09 180-109847-1 FB#1 Water 08/18/20 11:00 08/20/20 09
180-109847-1 FB#1 Water 08/18/20 11:00 08/20/20 09
180-109847-2 ARGWA-12 Water 08/18/20 13:00 08/20/20 09
180-109847-3 ARGWA-13 Water 08/18/20 14:50 08/20/20 09
180-109847-4 ARGWC-17 Water 08/18/20 14:45 08/20/20 09
180-109848-1 ARGWC-10 Water 08/19/20 11:35 08/20/20 09
180-109848-2 DUP-1 Water 08/19/20 00:00 08/20/20 09
180-109848-3 ARGWC-9 Water 08/19/20 14:25 08/20/20 09
180-109850-1 ARGWA-5 Water 08/18/20 11:35 08/20/20 09
180-109850-2 ARGWA-3 Water 08/18/20 13:20 08/20/20 09
180-109850-3 ARGWC-7 Water 08/18/20 15:25 08/20/20 09
180-109851-1 EB#2 Water 08/19/20 09:15 08/20/20 09
180-109851-2 ARGWA-19 Water 08/19/20 10:56 08/20/20 09
180-109851-3 ARGWA-20 Water 08/19/20 13:44 08/20/20 09
180-109851-4 ARGWC-22 Water 08/19/20 15:32 08/20/20 09
180-109918-1 FB#2 Water 08/20/20 10:45 08/21/20 09
180-109918-2 ARGWC-23 Water 08/20/20 12:15 08/21/20 09
180-109918-3 DUP-2 Water 08/20/20 00:00 08/21/20 09
180-109918-4 ARAMW-1 Water 08/20/20 14:36 08/21/20 09
180-109918-5 ARAMW-2 Water 08/20/20 16:35 08/21/20 09
180-109929-1 ARGWC-8 Water 08/20/20 10:35 08/21/20 09
180-109929-2 ARGWC-18 Water 08/20/20 17:05 08/21/20 09
180-109930-1 EB#1 Water 08/20/20 09:30 08/21/20 09
180-109930-2 ARAMW-3 Water 08/20/20 14:45 08/21/20 09
180-109930-3 ARAMW-4 Water 08/20/20 11:45 08/21/20 09
180-109970-1 ARAMW-6 Water 08/21/20 09:45 08/22/20 10
180-109970-2 ARGWC-21 Water 08/21/20 10:36 08/22/20 10

Method Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
Filtration	Sample Filtration	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client: Southern Company

Client Sample ID: ARGWA-14

Date Collected: 08/19/20 13:55 Date Received: 08/20/20 09:30

Lab Sample ID: 180-109846-1

Lab Sample ID: 180-109846-2

Lab Sample ID: 180-109846-3

Matrix: Water

Matrix: Water

Matrix: Water

Prep Type Total/NA	Batch Type Analysis	Batch Method EPA 300.0 R2.1	Run	Factor	Initial Amount	Final Amount	Batch Number 326785	Prepared or Analyzed 08/24/20 08:46	Analyst	Lab TAL PIT
IO(a)/IVA	,	at ID: CHICS2000		'			320703	00/24/20 00.40	LIG	IALIII
Total Recoverable	Prep	3005A			50 mL	50 mL	327640	08/28/20 15:02	TJO	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B at ID: A		1			330300	09/17/20 21:08	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A at ID: HGY		1			328261	09/02/20 15:09	RJR	TAL PIT
Total/NA	Analysis Instrumer	Field Sampling at ID: NOEQUIP		1			326626	08/19/20 13:55	FDS	TAL PIT

Client Sample ID: ARGWC-15

Date Collected: 08/19/20 10:05

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			326478	08/21/20 13:28	MJH	TAL PIT
	Instrumer	nt ID: CHICS2000								
Total Recoverable	Prep	3005A			50 mL	50 mL	327640	08/28/20 15:02	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			330300	09/17/20 21:11	RSK	TAL PIT
	Instrumer	nt ID: A								
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis	EPA 7470A		1			328261	09/02/20 15:13	RJR	TAL PIT
	Instrumer	nt ID: HGY								
Total/NA	Analysis	Field Sampling		1			326626	08/19/20 10:05	FDS	TAL PIT
	Instrumer	nt ID: NOEQUIP								

Client Sample ID: ARGWC-16

Date Collected: 08/19/20 12:05

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHICS2000		1			326785	08/24/20 09:01	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327640	08/28/20 15:02	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			330300	09/17/20 21:36	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			328261	09/02/20 15:14	RJR	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			326626	08/19/20 12:05	FDS	TAL PIT

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Client: Southern Company

Project/Site: CCR - Plant Arkwright

Client Sample ID: FB#1 Lab Sample ID: 180-109847-1 Date Collected: 08/18/20 11:00

Matrix: Water

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 300.0 R2.1 at ID: CHICS2000		1			326917	08/25/20 11:35	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327640	08/28/20 15:02	TJO	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B at ID: A		1			330300	09/17/20 21:40	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A at ID: HGY		1			328261	09/02/20 15:15	RJR	TAL PIT

Lab Sample ID: 180-109847-2 **Client Sample ID: ARGWA-12**

Date Collected: 08/18/20 13:00 **Matrix: Water**

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHICS2000		1			326917	08/25/20 11:50	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327640	08/28/20 15:02	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			330300	09/17/20 21:43	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			328261	09/02/20 15:16	RJR	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			326626	08/18/20 13:00	FDS	TAL PIT

Lab Sample ID: 180-109847-3 **Client Sample ID: ARGWA-13**

Date Collected: 08/18/20 14:50 Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			326890	08/25/20 14:31	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327640	08/28/20 15:02	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			330300	09/17/20 21:47	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			328261	09/02/20 15:17	RJR	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			326626	08/18/20 14:50	FDS	TAL PIT

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Matrix: Water

Job ID: 180-109846-1

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-17

Date Collected: 08/18/20 14:45

Date Received: 08/20/20 09:30

Lab Sample ID: 180-109847-4

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 300.0 R2.1 at ID: CHIC2100A		1			326890	08/25/20 14:47	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327640	08/28/20 15:02	TJO	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B nt ID: A		1			330300	09/17/20 21:50	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGY		1			328261	09/02/20 15:21	RJR	TAL PIT
Total/NA	Analysis Instrumer	Field Sampling of ID: NOEQUIP		1			326626	08/18/20 14:45	FDS	TAL PIT

Client Sample ID: ARGWC-10

Date Collected: 08/19/20 11:35

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 300.0 R2.1 at ID: CHIC2100A		1			326890	08/25/20 05:59	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327640	08/28/20 15:02	TJO	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B nt ID: A		1			330300	09/17/20 21:54	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGY		1			328261	09/02/20 15:22	RJR	TAL PIT
Total/NA	Analysis Instrumer	Field Sampling at ID: NOEQUIP		1			326626	08/19/20 11:35	FDS	TAL PIT

Client Sample ID: DUP-1 Date Collected: 08/19/20 00:00

Date Received: 08/20/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 300.0 R2.1 at ID: CHIC2100A		1			326890	08/25/20 06:46	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327640	08/28/20 15:02	TJO	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B at ID: A		1			330300	09/17/20 22:06	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGY		1			328261	09/02/20 15:23	RJR	TAL PIT
Total/NA	Analysis Instrumer	Field Sampling at ID: NOEQUIP		1			326626	08/19/20 00:00	FDS	TAL PIT

Lab Sample ID: 180-109848-1 **Matrix: Water**

Lab Sample ID: 180-109848-2

Matrix: Water

Project/Site: CCR - Plant Arkwright

Client: Southern Company

Client Sample ID: ARGWC-9

Date Collected: 08/19/20 14:25 Date Received: 08/20/20 09:30

Lab Sample ID: 180-109848-3

Lab Sample ID: 180-109850-1

Lab Sample ID: 180-109850-2

Matrix: Water

Matrix: Water

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 300.0 R2.1 at ID: CHIC2100A		1			326890	08/25/20 07:02	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327640	08/28/20 15:02	TJO	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B at ID: A		1			330300	09/17/20 22:10	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A at ID: HGY		1			328261	09/02/20 15:24	RJR	TAL PIT
Total/NA	Analysis Instrumer	Field Sampling at ID: NOEQUIP		1			326626	08/19/20 14:25	FDS	TAL PIT

Client Sample ID: ARGWA-5

Date Collected: 08/18/20 11:35

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			326890	08/25/20 07:50	EPS	TAL PIT
	Instrumer	nt ID: CHIC2100A								
Total Recoverable	Prep	3005A			50 mL	50 mL	327642	08/28/20 15:10	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			330300	09/17/20 17:56	RSK	TAL PIT
	Instrumer	nt ID: A								
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis	EPA 7470A		1			328261	09/02/20 15:25	RJR	TAL PIT
	Instrumer	nt ID: HGY								
Total/NA	Analysis	Field Sampling		1			326626	08/18/20 11:35	FDS	TAL PIT
	Instrumer	nt ID: NOEQUIP								

Client Sample ID: ARGWA-3

Date Collected: 08/18/20 13:20

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			326890	08/25/20 08:06	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327642	08/28/20 15:10	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			330300	09/17/20 18:14	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			328261	09/02/20 15:26	RJR	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			326626	08/18/20 13:20	FDS	TAL PIT

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Client: Southern Company

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-7

Date Collected: 08/18/20 15:25

Lab Sample ID: 180-109850-3

Matrix: Water

Date Received: 08/20/20 09:30

Batch Batch

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 t ID: CHIC2100A		1			326890	08/25/20 08:21	EPS	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020B t ID: A		1	50 mL	50 mL	327642 330300	08/28/20 15:10 09/17/20 18:18		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGY		1	50 mL	50 mL	328121 328261	09/02/20 05:45 09/02/20 15:27		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			326626	08/18/20 15:25	FDS	TAL PIT

Client Sample ID: EB#2

Date Collected: 08/19/20 09:15

Lab Sample ID: 180-109851-1

Matrix: Water

Date Collected: 08/19/20 09:15 Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: CHIC2100A		1			326890	08/25/20 10:19	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327642	08/28/20 15:10	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: A		1			330300	09/17/20 18:21	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			328261	09/02/20 15:28	RJR	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C		1	100 mL	100 mL	326608	08/21/20 11:11	AVS	TAL PIT

Client Sample ID: ARGWA-19 Lab Sample ID: 180-109851-2

Date Collected: 08/19/20 10:56 Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			326890	08/25/20 11:50	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327642	08/28/20 15:10	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			330300	09/17/20 18:25	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			328261	09/02/20 15:29	RJR	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			326626	08/19/20 10:56	FDS	TAL PIT

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Matrix: Water

Project/Site: CCR - Plant Arkwright

Client: Southern Company

Client Sample ID: ARGWA-20 Date Collected: 08/19/20 13:44

Lab Sample ID: 180-109851-3

Matrix: Water

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 300.0 R2.1 at ID: CHIC2100A		1			326890	08/25/20 12:06	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327642	08/28/20 15:10	TJO	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B nt ID: A		1			330300	09/17/20 18:36	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGY		1			328261	09/02/20 15:30	RJR	TAL PIT
Total/NA	Analysis Instrumer	Field Sampling at ID: NOEQUIP		1			326626	08/19/20 13:44	FDS	TAL PIT

Lab Sample ID: 180-109851-4 **Client Sample ID: ARGWC-22**

Date Collected: 08/19/20 15:32 **Matrix: Water**

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: CHIC2100A		1			326890	08/25/20 10:35	EPS	TAL PIT
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: CHIC2100A		10			326890	08/25/20 11:31	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327642	08/28/20 15:10	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: A		1			330300	09/17/20 18:39	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	327642	08/28/20 15:10	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: A		1			330464	09/18/20 13:03	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328121	09/02/20 05:45	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			328261	09/02/20 15:34	RJR	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	326608	08/21/20 11:11	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling		1			326626	08/19/20 15:32	FDS	TAL PIT

Client Sample ID: FB#2 Lab Sample ID: 180-109918-1

Date Collected: 08/20/20 10:45 **Matrix: Water** Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 300.0 R2.1 at ID: CHIC2100A		1			326777	08/24/20 14:46	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			329135	09/10/20 01:16	DSH	TAL PIT
	Instrumer	nt ID: DORY								

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Lab Chronicle

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Lab Sample ID: 180-109918-1

Matrix: Water

Job ID: 180-109846-1

Date Collected: 08/20/20 10:45 Date Received: 08/21/20 09:45

Client Sample ID: FB#2

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			50 mL	50 mL	328516	09/04/20 08:35	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGZ		1			328649	09/05/20 09:53	RJR	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	326682	08/22/20 08:53	AVS	TAL PIT

Client Sample ID: ARGWC-23 Lab Sample ID: 180-109918-2

Date Collected: 08/20/20 12:15

Date Received: 08/21/20 09:45

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: CHIC2100A		1			326777	08/24/20 13:43	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: DORY		1			329135	09/10/20 01:19	DSH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: DORY		1			329474	09/11/20 22:34	DSH	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328516	09/04/20 08:35	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGZ		1			328649	09/05/20 09:54	RJR	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	326682	08/22/20 08:53	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling		1			327279	08/20/20 12:15	FDS	TAL PIT

Client Sample ID: DUP-2 Lab Sample ID: 180-109918-3

Date Collected: 08/20/20 00:00 Matrix: Water Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			326777	08/24/20 13:59	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: DORY		1			329135	09/10/20 01:23	DSH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: DORY		1			330720	09/21/20 15:00	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328516	09/04/20 08:35	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			328649	09/05/20 09:57	RJR	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	326682	08/22/20 08:53	AVS	TAL PIT

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Client: Southern Company

Project/Site: CCR - Plant Arkwright

Client Sample ID: DUP-2 Lab Sample ID: 180-109918-3

Date Collected: 08/20/20 00:00 Matrix: Water Date Received: 08/21/20 09:45

Date Neceived. 00/21/20 03.43

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Method **Factor** Number or Analyzed Type Run **Amount Amount** Analyst Lab Total/NA Analysis Field Sampling 327279 08/20/20 00:00 FDS TAL PIT

Client Sample ID: ARAMW-1

Date Collected: 08/20/20 14:36

Lab Sample ID: 180-109918-4

Matrix: Water

Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 300.0 R2.1 ID: CHICS2000		1			326785	08/24/20 10:29	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020B ID: DORY		1			329135	09/10/20 01:26	DSH	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328516	09/04/20 08:35	RJR	TAL PIT
Total/NA	Analysis Instrument	EPA 7470A ID: HGZ		1			328649	09/05/20 09:58	RJR	TAL PIT
Total/NA	Analysis Instrument	Field Sampling		1			327279	08/20/20 14:36	FDS	TAL PIT

Client Sample ID: ARAMW-2

Date Collected: 08/20/20 16:35

Lab Sample ID: 180-109918-5

Matrix: Water

Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 300.0 R2.1 ID: CHIC2100A		1			326777	08/24/20 12:32	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020B ID: DORY		1			329135	09/10/20 01:30	DSH	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328516	09/04/20 08:35	RJR	TAL PIT
Total/NA	Analysis Instrument	EPA 7470A ID: HGZ		1			328649	09/05/20 09:59	RJR	TAL PIT
Total/NA	Analysis Instrument	Field Sampling ID: NOEQUIP		1			327279	08/20/20 16:35	FDS	TAL PIT

Client Sample ID: ARGWC-8 Lab Sample ID: 180-109929-1

Date Collected: 08/20/20 10:35 Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 300.0 R2.1 at ID: CHIC2100A		1			327077	08/26/20 06:26	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B It ID: DORY		1			329135	09/10/20 01:33	DSH	TAL PIT

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Job ID: 180-109846-1

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Client: Southern Company

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-8 Lab Sample ID: 180-109929-1 Date Collected: 08/20/20 10:35

Matrix: Water

Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	7470A	_		50 mL	50 mL	328516	09/04/20 08:35	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGZ		1			328649	09/05/20 10:00	RJR	TAL PIT
Total/NA	Analysis Instrumer	Field Sampling nt ID: NOEQUIP		1			327279	08/20/20 10:35	FDS	TAL PIT

Client Sample ID: ARGWC-18 Lab Sample ID: 180-109929-2

Date Collected: 08/20/20 17:05 **Matrix: Water**

Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			327077	08/26/20 11:27	EPS	TAL PIT
Dissolved	Filtration	Filtration			250 mL	250 mL	326831	08/24/20 09:48	TJO	TAL PIT
Dissolved	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Dissolved	Analysis Instrumen	EPA 6020B t ID: DORY		1			329135	09/10/20 01:40	DSH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: DORY		1			329135	09/10/20 01:37	DSH	TAL PIT
Dissolved	Filtration	Filtration			250 mL	250 mL	326831	08/24/20 09:48	TJO	TAL PIT
Dissolved	Prep	7470A			50 mL	50 mL	328516	09/04/20 08:35	RJR	TAL PIT
Dissolved	Analysis Instrumen	EPA 7470A t ID: HGZ		1			328649	09/05/20 10:03	RJR	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328516	09/04/20 08:35	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			328649	09/05/20 10:01	RJR	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			327279	08/20/20 17:05	FDS	TAL PIT

Client Sample ID: EB#1 Lab Sample ID: 180-109930-1 Date Collected: 08/20/20 09:30 **Matrix: Water**

Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			327077	08/26/20 11:59	EPS	TAL PIT
	Instrumer	t ID: CHIC2100A								
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:00	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			329135	09/10/20 01:44	DSH	TAL PIT
	Instrumer	it ID: DORY								
Total/NA	Prep	7470A			50 mL	50 mL	328516	09/04/20 08:35	RJR	TAL PIT
Total/NA	Analysis	EPA 7470A		1			328649	09/05/20 10:04	RJR	TAL PIT
	Instrumer	nt ID: HGZ								

Client: Southern Company Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-3

Date Collected: 08/20/20 14:45 Date Received: 08/21/20 09:45

Lab Sample ID: 180-109930-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 t ID: CHIC2100A		1			327077	08/26/20 13:02	EPS	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020B t ID: DORY		1	50 mL	50 mL	328062 329135	09/01/20 16:01 09/10/20 01:55		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGZ		1	50 mL	50 mL	328516 328649	09/04/20 08:35 09/05/20 10:05		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			327279	08/20/20 14:45	FDS	TAL PIT

Client Sample ID: ARAMW-4

Date Collected: 08/20/20 11:45

Date Received: 08/21/20 09:45

	•	Matrix: Water
Batch	Prepared	

Lab Sample ID: 180-109930-3

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: CHIC2100A		1			327077	08/26/20 11:11	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328062	09/01/20 16:04	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: DORY		1			329135	09/10/20 02:12	DSH	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328515	09/04/20 08:35	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			328649	09/05/20 09:50	RJR	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			327279	08/20/20 11:45	FDS	TAL PIT

Client Sample ID: ARAMW-6

Date Collected: 08/21/20 09:45

Date Received: 08/22/20 10:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: CHICS2000		1			327578	08/28/20 15:07	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	328065	09/01/20 16:08	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: DORY		1			328773	09/04/20 22:07	RJR	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	328636	09/05/20 06:15	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGZ		1			328684	09/07/20 08:48	RJR	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling at ID: NOEQUIP		1			327279	08/21/20 09:45	FDS	TAL PIT

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Lab Chronicle

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-21 Lab Sample ID: 180-109970-2

Date Collected: 08/21/20 10:36

Date Received: 08/22/20 10:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	7 unount	741104111	327578	08/28/20 15:21	MJH	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis	3005A EPA 6020B		1	50 mL	50 mL	328065 328773	09/01/20 16:08 09/04/20 22:10		TAL PIT
Total/NA Total/NA	Prep Analysis	7470A EPA 7470A at ID: HGZ		1	50 mL	50 mL	328636 328684	09/05/20 06:15 09/07/20 08:49		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	Field Sampling at ID: NOEQUIP		1			327279	08/21/20 10:36	FDS	TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Filtration

TJO = Tyler Oliver

Batch Type: Prep

RJR = Ron Rosenbaum

TJO = Tyler Oliver

Batch Type: Analysis

AVS = Abbey Smith

DSH = David Heakin

EPS = Evan Scheuer

FDS = Sampler Field

MJH = Matthew Hartman

RJR = Ron Rosenbaum

RSK = Robert Kurtz

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Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-14 Lab Sample ID: 180-109846-1 Date Collected: 08/19/20 13:55

Matrix: Water

Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.12		0.10	0.026	mg/L			08/24/20 08:46	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recov	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:02	09/17/20 21:08	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:02	09/17/20 21:08	1
Barium	0.041		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 21:08	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 21:08	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 21:08	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 21:08	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 21:08	1
Lead	< 0.00013		0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 21:08	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 21:08	1
Molybdenum	0.00065	J	0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 21:08	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 21:08	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 21:08	1
Method: EPA 7470A -	Mercury (CVAA)								
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	٨	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:09	1
Method: Field Sampli	ng - Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.62				SU			08/19/20 13:55	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-15 Lab Sample ID: 180-109846-2 Date Collected: 08/19/20 10:05

Matrix: Water

Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.081	J F1	0.10	0.026	mg/L			08/21/20 13:28	1
Method: EPA 6020B -	Motals (ICP/MS) - To	ntal Recove	orablo						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038	<u> </u>	0.0020	0.00038	mg/L		08/28/20 15:02	09/17/20 21:11	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:02	09/17/20 21:11	1
Barium	0.028		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 21:11	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 21:11	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 21:11	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 21:11	1
Cobalt	0.00040	J	0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 21:11	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 21:11	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 21:11	1
Molybdenum	0.0016	J	0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 21:11	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 21:11	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 21:11	1
Method: EPA 7470A -	Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	^	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:13	1
Method: Field Sampli	ng - Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.47				SU			08/19/20 10:05	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-16 Lab Sample ID: 180-109846-3 Date Collected: 08/19/20 12:05

Matrix: Water

Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/24/20 09:01	1
Method: EPA 6020B -	Metals (ICP/MS) - To	ntal Recove	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:02	09/17/20 21:36	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:02	09/17/20 21:36	1
Barium	0.045		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 21:36	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 21:36	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 21:36	1
Chromium	0.0021		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 21:36	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 21:36	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 21:36	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 21:36	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 21:36	1
Selenium	0.0029	J	0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 21:36	1
Thallium	0.00027	J	0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 21:36	1
Method: EPA 7470A -	Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	٨	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:14	1
Method: Field Sampli	ing - Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5,24				SU			08/19/20 12:05	

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Lab Sample ID: 180-109847-1 **Client Sample ID: FB#1**

Date Collected: 08/18/20 11:00 **Matrix: Water**

Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 11:35	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:02	09/17/20 21:40	1
Arsenic	< 0.00031		0.0010	0.00031	mg/L		08/28/20 15:02	09/17/20 21:40	1
Barium	<0.0016		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 21:40	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 21:40	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 21:40	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 21:40	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 21:40	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 21:40	1
Lithium	<0.0034		0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 21:40	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 21:40	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 21:40	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 21:40	1
Method: EPA 7470A -	Mercury (CVAA)								
Analyte	• • • • • • • • • • • • • • • • • • • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	٨	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:15	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Lab Sample ID: 180-109847-2 Client Sample ID: ARGWA-12 Date Collected: 08/18/20 13:00

Matrix: Water

Date Received:	08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.041	J	0.10	0.026	mg/L			08/25/20 11:50	1
Method: EPA 6020B -	· Metals (ICP/MS) - To	otal Recov	erable						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:02	09/17/20 21:43	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:02	09/17/20 21:43	1
Barium	0.079		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 21:43	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 21:43	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 21:43	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 21:43	1
Cobalt	0.00019	J	0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 21:43	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 21:43	1
Lithium	0.0039	J	0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 21:43	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 21:43	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 21:43	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 21:43	1
Method: EPA 7470A -	Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	۸	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:16	1
Method: Field Sampl	ing - Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.48				SU			08/18/20 13:00	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-13 Lab Sample ID: 180-109847-3

Matrix: Water

Date Collected: 08/18/20 14:50 Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 14:31	1
Method: FDA 6020B	- Metals (ICP/MS) - To	ntal Pecovi	orablo						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:02	09/17/20 21:47	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:02	09/17/20 21:47	1
Barium	0.025		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 21:47	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 21:47	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 21:47	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 21:47	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 21:47	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 21:47	1
Lithium	0.0042	J	0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 21:47	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 21:47	1
Selenium	0.019		0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 21:47	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 21:47	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	^	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:17	1
Method: Field Samp	ling - Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.15				SU			08/18/20 14:50	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Lab Sample ID: 180-109847-4 **Client Sample ID: ARGWC-17** Date Collected: 08/18/20 14:45

Matrix: Water

Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 14:47	1
Method: EPA 6020B	- Metals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:02	09/17/20 21:50	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:02	09/17/20 21:50	1
Barium	0.062		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 21:50	1
Beryllium	0.00039	J	0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 21:50	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 21:50	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 21:50	1
Cobalt	0.030		0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 21:50	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 21:50	1
Lithium	<0.0034		0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 21:50	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 21:50	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 21:50	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 21:50	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	٨	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:21	1
Method: Field Samp	ling - Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.07				SU			08/18/20 14:45	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-10 Lab Sample ID: 180-109848-1

Matrix: Water

Date Collected: 08/19/20 11:35 Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 05:59	1
Mothod: EDA COZOD	Motole (ICD/MC) To	stal Dagov	a va bla						
Analyte	- Metals (ICP/MS) - To Result	Qualifier	erable RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L	=	08/28/20 15:02		1
Arsenic	<0.00031		0.0010	0.00031	-		08/28/20 15:02	09/17/20 21:54	1
Barium	0.034		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 21:54	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 21:54	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 21:54	1
Chromium	0.0049		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 21:54	1
Cobalt	0.00015	J	0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 21:54	1
Lead	0.00013	J	0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 21:54	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 21:54	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 21:54	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 21:54	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 21:54	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	۸	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:22	1
Method: Field Samp	ling - Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.06				SU			08/19/20 11:35	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: DUP-1 Lab Sample ID: 180-109848-2

Matrix: Water

Date Collected: 08/19/20 00:00 Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 06:46	1
Mothod: EDA COZOD	Motole (ICD/MC) To	tal Dagov	a va bla						
Analyte	- Metals (ICP/MS) - To Result	Qualifier	erable RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L	=	08/28/20 15:02		1
Arsenic	<0.00031		0.0010	0.00031	-		08/28/20 15:02	09/17/20 22:06	1
Barium	0.034		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 22:06	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 22:06	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 22:06	1
Chromium	0.0051		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 22:06	1
Cobalt	0.00020	J	0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 22:06	1
Lead	0.00016	J	0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 22:06	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 22:06	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 22:06	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 22:06	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 22:06	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	^	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:23	1
Method: Field Samp	ling - Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.06				SU			08/19/20 00:00	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-9 Lab Sample ID: 180-109848-3 Date Collected: 08/19/20 14:25

Matrix: Water

Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 07:02	1
Method: EPA 6020B	- Metals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:02	09/17/20 22:10	1
Arsenic	< 0.00031		0.0010	0.00031	mg/L		08/28/20 15:02	09/17/20 22:10	1
Barium	0.046		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 22:10	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 22:10	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 22:10	1
Chromium	0.0080		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 22:10	1
Cobalt	0.00013	J	0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 22:10	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 22:10	1
Lithium	<0.0034		0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 22:10	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 22:10	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 22:10	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 22:10	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	۸	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:24	1
Method: Field Sampl									
Analyte		Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
pH	7.21				SU			08/19/20 14:25	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-5 Lab Sample ID: 180-109850-1 Date Collected: 08/18/20 11:35

Matrix: Water

Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 07:50	1
Method: EPA 6020B	- Metals (ICP/MS) - To	otal Recov	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:10	09/17/20 17:56	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:10	09/17/20 17:56	1
Barium	0.031		0.010	0.0016	mg/L		08/28/20 15:10	09/17/20 17:56	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:10	09/17/20 17:56	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:10	09/17/20 17:56	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:10	09/17/20 17:56	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		08/28/20 15:10	09/17/20 17:56	1
Lead	0.00013	J	0.0010	0.00013	mg/L		08/28/20 15:10	09/17/20 17:56	1
Lithium	<0.0034		0.0050	0.0034	mg/L		08/28/20 15:10	09/17/20 17:56	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:10	09/17/20 17:56	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:10	09/17/20 17:56	1
Thallium	0.00021	J	0.0010	0.00015	mg/L		08/28/20 15:10	09/17/20 17:56	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	۸	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:25	1
Method: Field Sampl									
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
pH	6.18				SU			08/18/20 11:35	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-3 Lab Sample ID: 180-109850-2

Matrix: Water

Date Collected: 08/18/20 13:20 Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 08:06	1
Mothod: EDA 6020D	Motolo (ICD/MS) To	stal Bassy	oroblo						
Analyte	- Metals (ICP/MS) - To Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:10		
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:10	09/17/20 18:14	1
Barium	0.021		0.010	0.0016	mg/L		08/28/20 15:10	09/17/20 18:14	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:10	09/17/20 18:14	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:10	09/17/20 18:14	1
Chromium	0.0027		0.0020	0.0015	mg/L		08/28/20 15:10	09/17/20 18:14	1
Cobalt	0.00022	J	0.0025	0.00013	mg/L		08/28/20 15:10	09/17/20 18:14	1
Lead	0.00019	J	0.0010	0.00013	mg/L		08/28/20 15:10	09/17/20 18:14	1
Lithium	<0.0034		0.0050	0.0034	mg/L		08/28/20 15:10	09/17/20 18:14	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:10	09/17/20 18:14	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:10	09/17/20 18:14	1
Thallium	0.00036	J	0.0010	0.00015	mg/L		08/28/20 15:10	09/17/20 18:14	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	^	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:26	1
Method: Field Samp	ling - Field Sampling								
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.47				SU			08/18/20 13:20	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-7
Date Collected: 08/18/20 15:25 Lab Sample ID: 180-109850-3

Matrix: Water

Date	Conecteu.	00/10/20	15.25
Date	Received:	08/20/20	09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 08:21	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recove	erable						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:10	09/17/20 18:18	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:10	09/17/20 18:18	1
Barium	0.044		0.010	0.0016	mg/L		08/28/20 15:10	09/17/20 18:18	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:10	09/17/20 18:18	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:10	09/17/20 18:18	1
Chromium	0.0031		0.0020	0.0015	mg/L		08/28/20 15:10	09/17/20 18:18	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		08/28/20 15:10	09/17/20 18:18	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:10	09/17/20 18:18	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		08/28/20 15:10	09/17/20 18:18	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:10	09/17/20 18:18	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:10	09/17/20 18:18	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:10	09/17/20 18:18	1
Method: EPA 7470A -	Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	٨	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:27	1
Method: Field Sampli	ing - Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.70				SU			08/18/20 15:25	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: EB#2 Lab Sample ID: 180-109851-1

Date Collected: 08/19/20 09:15 Date Received: 08/20/20 09:30 **Matrix: Water**

Method: EPA 300.0 R2.1 Analyte	•	r <mark>omatogra</mark> j Qualifier	phy RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32	Quaimer	1.0		mg/L		Prepared	08/25/20 10:19	DII Fac
Fluoride	<0.32		0.10		-			08/25/20 10:19	1
Sulfate	<0.026		1.0	0.026 0.38	mg/L			08/25/20 10:19	1
Method: EPA 6020B - Me	tals (ICP/MS) - To	otal Recove	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:10	09/17/20 18:21	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:10	09/17/20 18:21	1
Barium	<0.0016		0.010	0.0016	mg/L		08/28/20 15:10	09/17/20 18:21	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:10	09/17/20 18:21	1
Boron	< 0.039	٨	0.080	0.039	mg/L		08/28/20 15:10	09/17/20 18:21	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:10	09/17/20 18:21	1
Calcium	<0.13		0.50	0.13	mg/L		08/28/20 15:10	09/17/20 18:21	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:10	09/17/20 18:21	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		08/28/20 15:10	09/17/20 18:21	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:10	09/17/20 18:21	1
Lithium	<0.0034		0.0050	0.0034	mg/L		08/28/20 15:10	09/17/20 18:21	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:10	09/17/20 18:21	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:10	09/17/20 18:21	1
Thallium	0.00015	J	0.0010	0.00015	mg/L		08/28/20 15:10	09/17/20 18:21	1
Method: EPA 7470A - Me	rcury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	۸	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:28	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			08/21/20 11:11	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-19 Lab Sample ID: 180-109851-2

Date Collected: 08/19/20 10:56 Matrix: Water

Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 11:50	1
Method: EPA 6020B	- Metals (ICP/MS) - To	otal Recove	erable						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:10	09/17/20 18:25	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:10	09/17/20 18:25	1
Barium	0.044		0.010	0.0016	mg/L		08/28/20 15:10	09/17/20 18:25	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:10	09/17/20 18:25	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:10	09/17/20 18:25	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:10	09/17/20 18:25	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		08/28/20 15:10	09/17/20 18:25	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:10	09/17/20 18:25	1
Lithium	0.0038	J	0.0050	0.0034	mg/L		08/28/20 15:10	09/17/20 18:25	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:10	09/17/20 18:25	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:10	09/17/20 18:25	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:10	09/17/20 18:25	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	^	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:29	1
Method: Field Samn	ling - Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.25				SU			08/19/20 10:56	

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Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Lab Sample ID: 180-109851-3 **Client Sample ID: ARGWA-20**

Matrix: Water

Date Collected: 08/19/20 13:44 Date Received: 08/20/20 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/25/20 12:06	1
Method: EPA 6020B	- Metals (ICP/MS) - To	otal Recov	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:10	09/17/20 18:36	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:10	09/17/20 18:36	1
Barium	0.085		0.010	0.0016	mg/L		08/28/20 15:10	09/17/20 18:36	1
Beryllium	0.00022	J	0.0025	0.00018	mg/L		08/28/20 15:10	09/17/20 18:36	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:10	09/17/20 18:36	1
Chromium	0.0063		0.0020	0.0015	mg/L		08/28/20 15:10	09/17/20 18:36	1
Cobalt	0.00064	J	0.0025	0.00013	mg/L		08/28/20 15:10	09/17/20 18:36	1
Lead	0.00039	J	0.0010	0.00013	mg/L		08/28/20 15:10	09/17/20 18:36	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		08/28/20 15:10	09/17/20 18:36	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:10	09/17/20 18:36	1
Selenium	0.0015	J	0.0050	0.0015	mg/L		08/28/20 15:10	09/17/20 18:36	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:10	09/17/20 18:36	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	٨	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:30	1
Method: Field Samp	ling - Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.16				SU			08/19/20 13:44	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-22

Lab Sample ID: 180-109851-4

Date Collected: 08/19/20 15:32 **Matrix: Water** Date Received: 08/20/20 09:30

Method: EPA 300.0 R2.1 -	•	•	•	MD:	11:4	_	Duamanad	A a l a	D:: E
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.7		1.0		mg/L			08/25/20 10:35	1
Fluoride	<0.026		0.10	0.026	-			08/25/20 10:35	1
Sulfate	1000		10	3.8	mg/L			08/25/20 11:31	10
Method: EPA 6020B - Meta	als (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:10	09/17/20 18:39	1
Arsenic	< 0.00031		0.0010	0.00031	mg/L		08/28/20 15:10	09/17/20 18:39	1
Barium	0.046		0.010	0.0016	mg/L		08/28/20 15:10	09/17/20 18:39	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:10	09/17/20 18:39	1
Boron	1.3		0.080	0.039	mg/L		08/28/20 15:10	09/18/20 13:03	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:10	09/17/20 18:39	1
Calcium	220	В	0.50	0.13	mg/L		08/28/20 15:10	09/17/20 18:39	1
Chromium	< 0.0015		0.0020	0.0015	mg/L		08/28/20 15:10	09/17/20 18:39	1
Cobalt	0.0032		0.0025	0.00013	mg/L		08/28/20 15:10	09/17/20 18:39	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:10	09/17/20 18:39	1
Lithium	0.026		0.0050	0.0034	mg/L		08/28/20 15:10	09/17/20 18:39	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:10	09/17/20 18:39	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:10	09/17/20 18:39	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:10	09/17/20 18:39	1
Method: EPA 7470A - Merc	curv (CVAA)								
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013	۸	0.00020	0.00013	mg/L		09/02/20 05:45	09/02/20 15:34	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1400		10	10	mg/L			08/21/20 11:11	1
Method: Field Sampling -	Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.21				SU			08/19/20 15:32	

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: FB#2 Lab Sample ID: 180-109918-1

Matrix: Water

Date Collected: 08/20/20 10:45 Date Received: 08/21/20 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32		1.0	0.32	mg/L			08/24/20 14:46	1
Fluoride	<0.026		0.10	0.026	mg/L			08/24/20 14:46	1
Sulfate	<0.38		1.0	0.38	mg/L			08/24/20 14:46	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:00	09/10/20 01:16	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		09/01/20 16:00	09/10/20 01:16	1
Barium	<0.0016		0.010	0.0016	mg/L		09/01/20 16:00	09/10/20 01:16	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:00	09/10/20 01:16	1
Boron	0.056	J ^	0.080	0.039	mg/L		09/01/20 16:00	09/10/20 01:16	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:00	09/10/20 01:16	1
Calcium	<0.13		0.50	0.13	mg/L		09/01/20 16:00	09/10/20 01:16	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:00	09/10/20 01:16	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		09/01/20 16:00	09/10/20 01:16	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:00	09/10/20 01:16	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		09/01/20 16:00	09/10/20 01:16	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		09/01/20 16:00	09/10/20 01:16	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:00	09/10/20 01:16	1
Thallium	<0.00015		0.0010	0.00015	mg/L		09/01/20 16:00	09/10/20 01:16	1
Method: EPA 7470A -	Mercury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/04/20 08:35	09/05/20 09:53	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			08/22/20 08:53	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-23

Lab Sample ID: 180-109918-2 Date Collected: 08/20/20 12:15

Matrix: Water

Date Received: 08/21/20 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.9		1.0	0.32	mg/L			08/24/20 13:43	1
Fluoride	0.19		0.10	0.026	mg/L			08/24/20 13:43	1
Sulfate	69		1.0	0.38	mg/L			08/24/20 13:43	1
Method: EPA 6020B - Meta	ils (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:00	09/10/20 01:19	1
Arsenic	< 0.00031		0.0010	0.00031	mg/L		09/01/20 16:00	09/10/20 01:19	1
Barium	0.16		0.010	0.0016	mg/L		09/01/20 16:00	09/10/20 01:19	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:00	09/10/20 01:19	1
Boron	0.44		0.080	0.039	mg/L		09/01/20 16:00	09/11/20 22:34	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:00	09/10/20 01:19	1
Calcium	69		0.50	0.13	mg/L		09/01/20 16:00	09/10/20 01:19	1
Chromium	< 0.0015		0.0020	0.0015	mg/L		09/01/20 16:00	09/10/20 01:19	1
Cobalt	0.0023	J	0.0025	0.00013	mg/L		09/01/20 16:00	09/10/20 01:19	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:00	09/10/20 01:19	1
Lithium	0.036		0.0050	0.0034	mg/L		09/01/20 16:00	09/10/20 01:19	1
Molybdenum	0.061		0.015	0.00061	mg/L		09/01/20 16:00	09/10/20 01:19	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:00	09/10/20 01:19	1
Thallium	<0.00015		0.0010	0.00015	mg/L		09/01/20 16:00	09/10/20 01:19	1
Method: EPA 7470A - Merc	cury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/04/20 08:35	09/05/20 09:54	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	310		10	10	mg/L			08/22/20 08:53	1
Method: Field Sampling -	Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.33				SU			08/20/20 12:15	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: DUP-2 Lab Sample ID: 180-109918-3

Matrix: Water

Date Collected: 08/20/20 00:00 Date Received: 08/21/20 09:45

Method: EPA 300.0 R2.1 -	Anions, Ion Ch	romatograp	ohy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.9		1.0	0.32	mg/L			08/24/20 13:59	1
Fluoride	0.19		0.10	0.026	mg/L			08/24/20 13:59	1
Sulfate	70		1.0	0.38	mg/L			08/24/20 13:59	1
- Method: EPA 6020B - Meta	als (ICP/MS) - To	otal Recove	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L	 _	09/01/20 16:00	09/10/20 01:23	1
Arsenic	< 0.00031		0.0010	0.00031	mg/L		09/01/20 16:00	09/10/20 01:23	1
Barium	0.16		0.010	0.0016	mg/L		09/01/20 16:00	09/10/20 01:23	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:00	09/10/20 01:23	1
Boron	0.40		0.080	0.039	mg/L		09/01/20 16:00	09/21/20 15:00	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:00	09/10/20 01:23	1
Calcium	68		0.50	0.13	mg/L		09/01/20 16:00	09/10/20 01:23	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:00	09/10/20 01:23	1
Cobalt	0.0022	J	0.0025	0.00013	mg/L		09/01/20 16:00	09/10/20 01:23	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:00	09/10/20 01:23	1
Lithium	0.035		0.0050	0.0034	mg/L		09/01/20 16:00	09/10/20 01:23	1
Molybdenum	0.061		0.015	0.00061	mg/L		09/01/20 16:00	09/10/20 01:23	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:00	09/10/20 01:23	1
_Thallium	<0.00015		0.0010	0.00015	mg/L		09/01/20 16:00	09/10/20 01:23	1
_ Method: EPA 7470A - Merc	cury (CVAA)								
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/04/20 08:35	09/05/20 09:57	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	310		10	10	mg/L			08/22/20 08:53	1
	Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.33				SU			08/20/20 00:00	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-1 Lab Sample ID: 180-109918-4

Matrix: Water

Date Collected: 08/20/20 14:36 Date Received: 08/21/20 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.23		0.10	0.026	mg/L			08/24/20 10:29	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:00	09/10/20 01:26	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		09/01/20 16:00	09/10/20 01:26	1
Barium	0.055		0.010	0.0016	mg/L		09/01/20 16:00	09/10/20 01:26	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:00	09/10/20 01:26	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:00	09/10/20 01:26	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:00	09/10/20 01:26	1
Cobalt	0.0010	J	0.0025	0.00013	mg/L		09/01/20 16:00	09/10/20 01:26	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:00	09/10/20 01:26	1
Lithium	0.0066		0.0050	0.0034	mg/L		09/01/20 16:00	09/10/20 01:26	1
Molybdenum	0.0076	J	0.015	0.00061	mg/L		09/01/20 16:00	09/10/20 01:26	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:00	09/10/20 01:26	1
Thallium	<0.00015		0.0010	0.00015	mg/L		09/01/20 16:00	09/10/20 01:26	1
Method: EPA 7470A -	Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/04/20 08:35	09/05/20 09:58	1
Method: Field Sampli	ng - Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
pH	6.09				SU			08/20/20 14:36	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-2 Lab Sample ID: 180-109918-5

Matrix: Water

Date Collected: 08/20/20 16:35 Date Received: 08/21/20 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/24/20 12:32	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:00	09/10/20 01:30	1
Arsenic	0.084		0.0010	0.00031	mg/L		09/01/20 16:00	09/10/20 01:30	1
Barium	0.14		0.010	0.0016	mg/L		09/01/20 16:00	09/10/20 01:30	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:00	09/10/20 01:30	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:00	09/10/20 01:30	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:00	09/10/20 01:30	1
Cobalt	0.0022	J	0.0025	0.00013	mg/L		09/01/20 16:00	09/10/20 01:30	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:00	09/10/20 01:30	1
Lithium	0.036		0.0050	0.0034	mg/L		09/01/20 16:00	09/10/20 01:30	1
Molybdenum	0.0013	J	0.015	0.00061	mg/L		09/01/20 16:00	09/10/20 01:30	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:00	09/10/20 01:30	1
Thallium	<0.00015		0.0010	0.00015	mg/L		09/01/20 16:00	09/10/20 01:30	1
Method: EPA 7470A -	Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/04/20 08:35	09/05/20 09:59	1
Method: Field Sampli	ng - Field Sampling								
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
pH	5.99				SU			08/20/20 16:35	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-8 Lab Sample ID: 180-109929-1

Date Collected: 08/20/20 10:35 **Matrix: Water**

Date Received: 08/21/20 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.054	J	0.10	0.026	mg/L			08/26/20 06:26	1
Method: EPA 6020B - I	Metals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:00	09/10/20 01:33	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		09/01/20 16:00	09/10/20 01:33	1
Barium	0.053		0.010	0.0016	mg/L		09/01/20 16:00	09/10/20 01:33	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:00	09/10/20 01:33	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:00	09/10/20 01:33	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:00	09/10/20 01:33	1
Cobalt	0.00023	J	0.0025	0.00013	mg/L		09/01/20 16:00	09/10/20 01:33	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:00	09/10/20 01:33	1
Lithium	<0.0034		0.0050	0.0034	mg/L		09/01/20 16:00	09/10/20 01:33	1
Molybdenum	0.042		0.015	0.00061	mg/L		09/01/20 16:00	09/10/20 01:33	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:00	09/10/20 01:33	1
Thallium	<0.00015		0.0010	0.00015	mg/L		09/01/20 16:00	09/10/20 01:33	1
Method: EPA 7470A - I	Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/04/20 08:35	09/05/20 10:00	1
Method: Field Samplir	ng - Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.34				SU			08/20/20 10:35	1

<0.00013

6.43

Result Qualifier

Method: Field Sampling - Field Sampling

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-18

Lab Sample ID: 180-109929-2 Date Collected: 08/20/20 17:05 **Matrix: Water**

Date Received: 08/21/20 09:45

Mercury

Analyte

рΗ

Method: EPA 300.0 R Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Fluoride	<0.026		0.10	0.026		— <u>-</u>		08/26/20 11:27	
Mathada EDA COCOD	Matala (IOD/MO) T	-4-1 D							
<mark>Method: EPA 6020B -</mark> Analyte	•	Qualifier	erable RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony	<0.00038	Quanner	0.0020	0.00038		=	09/01/20 16:00	09/10/20 01:37	
Arsenic	<0.00031		0.0020	0.00030	U		09/01/20 16:00	09/10/20 01:37	
Barium	0.041		0.010	0.0016	J		09/01/20 16:00	09/10/20 01:37	
Beryllium	<0.00018		0.0025	0.00018			09/01/20 16:00	09/10/20 01:37	
Cadmium	<0.00010		0.0025	0.00010	U		09/01/20 16:00	09/10/20 01:37	
Chromium	<0.0015		0.0020	0.0015	-		09/01/20 16:00	09/10/20 01:37	
Cobalt	0.0015		0.0025	0.00013				09/10/20 01:37	
Lead	0.00028		0.0023	0.00013	-			09/10/20 01:37	
Lithium	< 0.0034	•	0.0010	0.0034	-		09/01/20 16:00	09/10/20 01:37	
Molybdenum	<0.0061		0.0050	0.00061			09/01/20 16:00	09/10/20 01:37	
Selenium	<0.0001		0.0050	0.00001	-		09/01/20 16:00	09/10/20 01:37	
Thallium	<0.0015		0.0030	0.0015	J			09/10/20 01:37	
	•	issolved Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Mathadi EDA COOD	Matala (ICD/MC) D	المعددات معا							
Method: EPA 6020B - Analyte	Result				Unit	D	Prepared	Analyzed	Dil Fa
Analyte	•		RL 0.0020	MDL 0.00038	Unit mg/L	<u>D</u>	Prepared 09/01/20 16:00	Analyzed 09/10/20 01:40	
	Result		0.0020 0.0010	0.00038 0.00031	mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40	
Analyte Antimony	Result <0.00038		0.0020	0.00038 0.00031 0.0016	mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00	09/10/20 01:40	
Analyte Antimony Arsenic	Result <0.00038 <0.00031		0.0020 0.0010	0.00038 0.00031	mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40	
Analyte Antimony Arsenic Barium Beryllium	Result <0.00038 <0.00031 0.037		0.0020 0.0010 0.010	0.00038 0.00031 0.0016	mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40 09/10/20 01:40	
Analyte Antimony Arsenic Barium	Result <0.00038 <0.00031 0.037 <0.00018		0.0020 0.0010 0.010 0.0025	0.00038 0.00031 0.0016 0.00018 0.00022 0.0015	mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40	Dil Fa
Analyte Antimony Arsenic Barium Beryllium Cadmium	Result <0.00038 <0.00031 0.037 <0.00018 <0.00022	Qualifier	0.0020 0.0010 0.010 0.0025 0.0025	0.00038 0.00031 0.0016 0.00018 0.00022	mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40	
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium	Result <0.00038 <0.00031 0.037 <0.00018 <0.00022 <0.0015	Qualifier	0.0020 0.0010 0.010 0.0025 0.0025 0.0020	0.00038 0.00031 0.0016 0.00018 0.00022 0.0015	mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40	
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Lead	Result <0.00038 <0.00031 0.037 <0.00018 <0.00022 <0.0015 0.0013	Qualifier	0.0020 0.0010 0.010 0.0025 0.0025 0.0020 0.0025	0.00038 0.00031 0.0016 0.00018 0.00022 0.0015 0.00013	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40	
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt	Result <0.00038 <0.00031 0.037 <0.00018 <0.00022 <0.0015 0.0013 <0.00013	Qualifier	0.0020 0.0010 0.010 0.0025 0.0025 0.0020 0.0025 0.0010	0.00038 0.00031 0.0016 0.00018 0.00022 0.0015 0.00013	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40	
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Lead Lithium Molybdenum	Result <0.00038 <0.00031 0.037 <0.00018 <0.00022 <0.0015 0.0013 <0.00013	Qualifier	0.0020 0.0010 0.010 0.0025 0.0025 0.0020 0.0025 0.0010 0.0050	0.00038 0.00031 0.0016 0.00018 0.00022 0.0015 0.00013 0.00013	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40	Dil Fa
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Lead Lithium Molybdenum Selenium	Result <0.00038 <0.00031 0.037 <0.00018 <0.00022 <0.0015 0.0013 <0.00013 <0.0034 <0.00061	Qualifier	0.0020 0.0010 0.010 0.0025 0.0025 0.0020 0.0025 0.0010 0.0050 0.015	0.00038 0.00031 0.0016 0.00018 0.00022 0.0015 0.00013 0.00013 0.0034	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40	Dil Fa
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Lead Lithium Molybdenum Selenium Thallium	Result <0.00038 <0.00031 0.037 <0.00018 <0.00022 <0.0015 0.0013 <0.00013 <0.0004 <0.00061 <0.0015 <0.00015	Qualifier	0.0020 0.0010 0.010 0.0025 0.0025 0.0020 0.0025 0.0010 0.0050 0.015	0.00038 0.00031 0.0016 0.00018 0.00022 0.0015 0.00013 0.00013 0.0034 0.00061	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40	Dil Fa
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Lead Lithium Molybdenum Selenium Thallium Method: EPA 7470A -	Result <0.00038 <0.00031 0.037 <0.00018 <0.00022 <0.0015 0.0013 <0.00013 <0.00044 <0.00061 <0.0015 <0.00015 Mercury (CVAA)	Qualifier	0.0020 0.0010 0.010 0.0025 0.0025 0.0020 0.0025 0.0010 0.0050 0.015	0.00038 0.00031 0.0016 0.00018 0.00022 0.0015 0.00013 0.00013 0.0034 0.00061	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40 09/10/20 01:40	
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Lead Lithium	Result <0.00038 <0.00031 0.037 <0.00018 <0.00022 <0.0015 0.0013 <0.00013 <0.00044 <0.00061 <0.0015 <0.00015 Mercury (CVAA)	Qualifier	0.0020 0.0010 0.010 0.0025 0.0025 0.0020 0.0025 0.0010 0.0050 0.015 0.0050	0.00038 0.00031 0.0016 0.00018 0.00022 0.0015 0.00013 0.00034 0.00061 0.0015	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L		09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40	
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Lead Lithium Molybdenum Selenium Thallium Method: EPA 7470A - Analyte	Result <0.00038 <0.00031 0.037 <0.00018 <0.00022 <0.0015 0.00013 <0.0004 <0.00061 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00015 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0.00013 <0	Qualifier J	0.0020 0.0010 0.010 0.0025 0.0025 0.0020 0.0025 0.0010 0.0050 0.015 0.0050	0.00038 0.00031 0.0016 0.00018 0.00022 0.0015 0.00013 0.00034 0.00061 0.0015	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L		09/01/20 16:00 09/01/20 16:00	09/10/20 01:40 09/10/20 01:40	

Analyzed

08/20/20 17:05

09/04/20 08:35 09/05/20 10:03

0.00020

RL

0.00013 mg/L

MDL Unit

SU

D

Prepared

Job ID: 180-109846-1

Dil Fac

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: EB#1 Lab Sample ID: 180-109930-1

Matrix: Water

Date Collected: 08/20/20 09:30 Date Received: 08/21/20 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/26/20 11:59	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:00	09/10/20 01:44	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		09/01/20 16:00	09/10/20 01:44	1
Barium	<0.0016		0.010	0.0016	mg/L		09/01/20 16:00	09/10/20 01:44	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:00	09/10/20 01:44	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:00	09/10/20 01:44	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:00	09/10/20 01:44	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		09/01/20 16:00	09/10/20 01:44	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:00	09/10/20 01:44	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		09/01/20 16:00	09/10/20 01:44	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		09/01/20 16:00	09/10/20 01:44	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:00	09/10/20 01:44	1
Thallium	<0.00015		0.0010	0.00015	mg/L		09/01/20 16:00	09/10/20 01:44	1
Method: EPA 7470A -	Mercury (CVAA)								
Analyte	• • • • • • • • • • • • • • • • • • • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/04/20 08:35	09/05/20 10:04	1

9/24/2020

3

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9

10

12

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-3 Lab Sample ID: 180-109930-2 Date Collected: 08/20/20 14:45

Matrix: Water

Date Received: 08/21/20 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/26/20 13:02	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:01	09/10/20 01:55	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		09/01/20 16:01	09/10/20 01:55	1
Barium	0.093		0.010	0.0016	mg/L		09/01/20 16:01	09/10/20 01:55	1
Beryllium	<0.00018	^	0.0025	0.00018	mg/L		09/01/20 16:01	09/10/20 01:55	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:01	09/10/20 01:55	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:01	09/10/20 01:55	1
Cobalt	0.00056	J	0.0025	0.00013	mg/L		09/01/20 16:01	09/10/20 01:55	1
Lead	< 0.00013		0.0010	0.00013	mg/L		09/01/20 16:01	09/10/20 01:55	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		09/01/20 16:01	09/10/20 01:55	1
Molybdenum	0.0029	J	0.015	0.00061	mg/L		09/01/20 16:01	09/10/20 01:55	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:01	09/10/20 01:55	1
Thallium	<0.00015		0.0010	0.00015	mg/L		09/01/20 16:01	09/10/20 01:55	1
Method: EPA 7470A - I	Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/04/20 08:35	09/05/20 10:05	1
Method: Field Samplin	ng - Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.24				SU			08/20/20 14:45	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-4 Lab Sample ID: 180-109930-3 Date Collected: 08/20/20 11:45

Matrix: Water

Date Received: 08/21/20 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.10	0.026	mg/L			08/26/20 11:11	1
Method: EPA 6020B	- Metals (ICP/MS) - To	otal Recove	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:04	09/10/20 02:12	1
Arsenic	0.00034	J	0.0010	0.00031	mg/L		09/01/20 16:04	09/10/20 02:12	1
Barium	0.053		0.010	0.0016	mg/L		09/01/20 16:04	09/10/20 02:12	1
Beryllium	<0.00018	^	0.0025	0.00018	mg/L		09/01/20 16:04	09/10/20 02:12	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:04	09/10/20 02:12	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:04	09/10/20 02:12	1
Cobalt	0.0050		0.0025	0.00013	mg/L		09/01/20 16:04	09/10/20 02:12	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:04	09/10/20 02:12	1
Lithium	0.012		0.0050	0.0034	mg/L		09/01/20 16:04	09/10/20 02:12	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		09/01/20 16:04	09/10/20 02:12	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:04	09/10/20 02:12	1
Thallium	0.00022	J	0.0010	0.00015	mg/L		09/01/20 16:04	09/10/20 02:12	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/04/20 08:35	09/05/20 09:50	1
Method: Field Samp	ling - Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.77				SU			08/20/20 11:45	1

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-6 Lab Sample ID: 180-109970-1

. Matrix: Water

Date Collected: 08/21/20 09:45 Date Received: 08/22/20 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.051	J	0.10	0.026	mg/L			08/28/20 15:07	1
Method: EPA 6020B	- Metals (ICP/MS) - To	otal Recov	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:08	09/04/20 22:07	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		09/01/20 16:08	09/04/20 22:07	1
Barium	0.049		0.010	0.0016	mg/L		09/01/20 16:08	09/04/20 22:07	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:08	09/04/20 22:07	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:08	09/04/20 22:07	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:08	09/04/20 22:07	1
Cobalt	0.0018	J	0.0025	0.00013	mg/L		09/01/20 16:08	09/04/20 22:07	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:08	09/04/20 22:07	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		09/01/20 16:08	09/04/20 22:07	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		09/01/20 16:08	09/04/20 22:07	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:08	09/04/20 22:07	1
Thallium	0.00018	J	0.0010	0.00015	mg/L		09/01/20 16:08	09/04/20 22:07	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/05/20 06:15	09/07/20 08:48	1
Method: Field Samp	ling - Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
pH	6.32				SU			08/21/20 09:45	1

9/24/2020

G

5

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Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-21 Lab Sample ID: 180-109970-2

Matrix: Water

Date Collected: 08/21/20 10:36 Date Received: 08/22/20 10:00

Method: EPA 300.0 R Analyte	· · · · · · · · · · · · · · · · · · ·	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.084	J	0.10	0.026	mg/L			08/28/20 15:21	1
Method: EPA 6020B	- Metals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:08	09/04/20 22:10	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		09/01/20 16:08	09/04/20 22:10	1
Barium	0.054		0.010	0.0016	mg/L		09/01/20 16:08	09/04/20 22:10	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:08	09/04/20 22:10	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:08	09/04/20 22:10	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:08	09/04/20 22:10	1
Cobalt	0.00066	J	0.0025	0.00013	mg/L		09/01/20 16:08	09/04/20 22:10	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:08	09/04/20 22:10	1
Lithium	0.013		0.0050	0.0034	mg/L		09/01/20 16:08	09/04/20 22:10	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		09/01/20 16:08	09/04/20 22:10	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:08	09/04/20 22:10	1
Thallium	<0.00015		0.0010	0.00015	mg/L		09/01/20 16:08	09/04/20 22:10	1
Method: EPA 7470A	- Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00013		0.00020	0.00013	mg/L		09/05/20 06:15	09/07/20 08:49	1
Method: Field Sampl	ing - Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.89				SU			08/21/20 10:36	1

Job ID: 180-109846-1

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: ARGWC-15

Client Sample ID: ARGWC-15

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-326478/18

Matrix: Water

Analysis Batch: 326478

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte D Prepared Fluoride 0.10 08/21/20 11:35 < 0.026 0.026 mg/L

Lab Sample ID: LCS 180-326478/17

Matrix: Water

Analysis Batch: 326478

Spike LCS LCS %Rec. Added Result Qualifier Unit D %Rec Limits Analyte 2.50 90 - 110 Fluoride 2.73 mg/L 109

Lab Sample ID: 180-109846-2 MS

Matrix: Water

Analysis Batch: 326478

Sample Sample Spike MS MS %Rec. Result Qualifier Added Result Qualifier Limits **Analyte** Unit %Rec Fluoride 0.081 JF1 2.50 2.22 F1 85 90 - 110 mg/L

Lab Sample ID: 180-109846-2 MSD

Matrix: Water

Analysis Batch: 326478

Spike MSD MSD %Rec. **RPD** Sample Sample Added Analyte Result Qualifier Result Qualifier Unit %Rec Limits **RPD** Limit Fluoride 0.081 JF1 2.50 2.21 F1 90 - 110 mg/L 85

Lab Sample ID: MB 180-326777/6

Matrix: Water

Analysis Batch: 326777

MR MR

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32		1.0	0.32	mg/L			08/24/20 06:29	1
Fluoride	<0.026		0.10	0.026	mg/L			08/24/20 06:29	1
Sulfate	<0.38		1.0	0.38	mg/L			08/24/20 06:29	1

Lab Sample ID: LCS 180-326777/5

Matrix: Water

Analysis Batch: 326777

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits Chloride 50.0 53.8 mg/L 108 90 - 110 Fluoride 2.50 2.57 mg/L 103 90 - 110 90 - 110 Sulfate 50.0 52.7 mg/L 105

Lab Sample ID: MB 180-326785/6

Matrix: Water

Analysis Batch: 326785

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Fluoride <0.026 0.10 0.026 mg/L 08/24/20 08:17

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Client Sample ID: Method Blank

Client: Southern Company Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 180-326785/5 Prep Type: Total/NA

Matrix: Water

Analysis Batch: 326785 Spike LCS LCS

%Rec. Added Result Qualifier Unit %Rec Limits Analyte D Fluoride 2.50 2.38 mg/L 95 90 - 110

Lab Sample ID: MB 180-326890/6 Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Water

Analysis Batch: 326890

MB MB Result Qualifier RL **MDL** Unit

Prepared Analyzed Dil Fac Analyte 0.10 0.026 mg/L 08/25/20 05:13 Fluoride < 0.026

Lab Sample ID: LCS 180-326890/5 Client Sample ID: Lab Control Sample Prep Type: Total/NA

Matrix: Water

Analysis Batch: 326890

Spike LCS LCS %Rec. Added Result Qualifier Limits **Analyte** Unit %Rec Fluoride 2.50 2.52 101 90 - 110 mg/L

Lab Sample ID: 180-109847-4 MS Client Sample ID: ARGWC-17 **Matrix: Water Prep Type: Total/NA**

Analysis Batch: 326890

Spike MS MS %Rec. Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 2.50 Fluoride <0.026 90 - 110 2.48 mg/L

Lab Sample ID: 180-109847-4 MSD

Matrix: Water

Analysis Batch: 326890

MSD MSD Sample Sample Spike %Rec. Analyte Result Qualifier Added Limits Result Qualifier Unit %Rec Limit Fluoride <0.026 2.50 2.52 101 90 - 110 mg/L

Lab Sample ID: 180-109848-1 MS

Matrix: Water

Analysis Batch: 326890

Sample Sample Spike MS MS %Rec. Result Qualifier Added Result Qualifier Limits Analyte Unit D %Rec <0.026 2.50 Fluoride 2.48 mg/L 99

Lab Sample ID: 180-109848-1 MSD

Matrix: Water

Analysis Batch: 326890

Sample Sample Spike MSD MSD %Rec. **RPD Result Qualifier** Added Analyte Result Qualifier Limits RPD Limit Unit D %Rec Fluoride <0.026 2.50 2 41 mg/L 97 90 - 110

Lab Sample ID: MB 180-326917/18 Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Water

Analysis Batch: 326917

MB MB Result Qualifier RL **MDL** Unit Analyte Prepared Analyzed Dil Fac Fluoride <0.026 0.10 08/25/20 10:20 0.026 mg/L

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Prep Type: Total/NA RPD

Client Sample ID: ARGWC-10 Prep Type: Total/NA

Client Sample ID: ARGWC-17

90 - 110

Project/Site: CCR - Plant Arkwright

Lab Sample ID: LCS 180-326917/17

Job ID: 180-109846-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Matrix: Water

Analysis Batch: 326917

Spike LCS LCS %Rec. Added Result Qualifier Unit %Rec Limits Analyte D Fluoride 2.50 2.40 mg/L 96 90 - 110

Lab Sample ID: 180-109847-2 MS **Client Sample ID: ARGWA-12** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 326917

Sample Sample Spike MS MS %Rec. Result Qualifier Added Result Qualifier Unit D %Rec Limits Analyte 2.50 90 - 110 Fluoride 0.041 .1 2.52 mg/L 99

Lab Sample ID: 180-109847-2 MSD Client Sample ID: ARGWA-12 **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 326917

Sample Sample Spike MSD MSD %Rec. **RPD** Result Qualifier Added Result Qualifier Limits **RPD** Analyte Unit %Rec Limit Fluoride 0.041 J 2.50 2.52 99 20 mg/L

Lab Sample ID: MB 180-327077/6 Client Sample ID: Method Blank **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 327077

MB MB

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac 0.10 0.026 ma/L 08/26/20 05:39 Fluoride < 0.026

Lab Sample ID: LCS 180-327077/5 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

LCS LCS

Matrix: Water

Analysis Batch: 327077

Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits Fluoride 2.50 2.55 102 90 - 110 mg/L

Lab Sample ID: 180-109929-1 MS

Matrix: Water

Analysis Batch: 327077

Sample Sample Spike MS MS %Rec. Result Qualifier Added Analyte Result Qualifier Unit D %Rec Limits 0.054 2.50 Fluoride 2.62 mg/L 102 90 - 110

Lab Sample ID: 180-109929-1 MSD

Matrix: Water

Analysis Batch: 327077

Sample Sample Spike MSD MSD %Rec. **RPD** Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Fluoride 2.50 0.054 J. 2.48 mg/L 97 90 - 110

Lab Sample ID: 180-109930-2 MS Client Sample ID: ARAMW-3 Prep Type: Total/NA

Matrix: Water

Analysis Batch: 327077

Spike MS MS %Rec. Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Fluoride <0.026 90 - 110 2.50 2.42 mg/L 97

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Client Sample ID: ARGWC-8

Client Sample ID: ARGWC-8

Prep Type: Total/NA

Prep Type: Total/NA

9/24/2020

Job ID: 180-109846-1

Client: Southern Company Project/Site: CCR - Plant Arkwright

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Client Sample ID: ARAMW-3 Lab Sample ID: 180-109930-2 MSD **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 327077

RPD Sample Sample Spike MSD MSD %Rec. Result Qualifier Analyte Result Qualifier Added Unit %Rec Limits RPD Limit D Fluoride 2.50 <0.026 2.47 mg/L 99 90 - 110 2

Lab Sample ID: MB 180-327578/6 Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Water

Analysis Batch: 327578

MB MB **MDL** Unit Analyte Result Qualifier RL Prepared Analyzed Dil Fac 0.10 0.026 mg/L 08/28/20 13:11 Fluoride < 0.026

Lab Sample ID: LCS 180-327578/5 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 327578

Spike LCS LCS %Rec. Analyte Added Result Qualifier Limits Unit %Rec Fluoride 2.50 2.43 97 90 - 110 mg/L

Lab Sample ID: 180-109970-2 MS Client Sample ID: ARGWC-21 **Matrix: Water Prep Type: Total/NA**

Analysis Batch: 327578

Spike MS MS %Rec. Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Fluoride 0.084 2.50 2.55 90 - 110 mg/L

Lab Sample ID: 180-109970-2 MSD Client Sample ID: ARGWC-21

Matrix: Water

Analysis Batch: 327578

MSD MSD RPD Sample Sample Spike %Rec. Analyte Result Qualifier Added Limits Result Qualifier Unit %Rec Limit Fluoride 0.084 J 2.50 2.75 mg/L 107 90 - 110 20

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-327640/1-A **Client Sample ID: Method Blank Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 330300 Prep Batch: 327640

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:02	09/17/20 20:39	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:02	09/17/20 20:39	1
Barium	<0.0016		0.010	0.0016	mg/L		08/28/20 15:02	09/17/20 20:39	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:02	09/17/20 20:39	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:02	09/17/20 20:39	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:02	09/17/20 20:39	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		08/28/20 15:02	09/17/20 20:39	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:02	09/17/20 20:39	1
Lithium	<0.0034		0.0050	0.0034	mg/L		08/28/20 15:02	09/17/20 20:39	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:02	09/17/20 20:39	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:02	09/17/20 20:39	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:02	09/17/20 20:39	1

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9/24/2020

Prep Type: Total/NA

Spike

Added

0.250

1.00

1.00

0.500

0.500

0.500

0.500

0.500

0.500

0.500

1.00

1.00

Client: Southern Company Job ID: 180-109846-1 Project/Site: CCR - Plant Arkwright

LCS LCS

0.262

1.05

1.05

0.525

0.525

0.521

0.520

0.526

0.497

0.540

1.01

1.13

mg/L

mg/L

mg/L

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-327640/2-A

Analysis Batch: 330300

Matrix: Water

Analyte

Antimony

Arsenic

Barium

Beryllium

Cadmium

Chromium

Cobalt

Lithium

Molybdenum

Selenium

Thallium

Lead

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Prep Batch: 327640 %Rec. Result Qualifier Unit D %Rec Limits mg/L 105 80 - 120 mg/L 105 80 - 120 mg/L 105 80 - 120 105 80 - 120 mg/L mg/L 105 80 - 120 mg/L 104 80 - 120 104 80 - 120 mg/L mg/L 105 80 - 120 mg/L 99 80 - 120

108

101

113

Lab Sample ID: 180-109846-2 MS

Matrix: Water

Analysis Ratch: 330300

Client Sample ID: ARGWC-15 Prep Type: Total Recoverable

80 - 120

80 - 120

80 - 120

Prep Batch: 327640

Alialysis Batch. 330300	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	<0.00038		0.250	0.262		mg/L		105	75 - 125
Arsenic	<0.00031		1.00	1.06		mg/L		106	75 - 125
Barium	0.028		1.00	1.08		mg/L		106	75 - 125
Beryllium	<0.00018		0.500	0.523		mg/L		105	75 - 125
Cadmium	<0.00022		0.500	0.522		mg/L		104	75 - 125
Chromium	<0.0015		0.500	0.523		mg/L		105	75 - 125
Cobalt	0.00040	J	0.500	0.516		mg/L		103	75 - 125
Lead	<0.00013		0.500	0.529		mg/L		106	75 - 125
Lithium	< 0.0034		0.500	0.513		mg/L		103	75 - 125
Molybdenum	0.0016	J	0.500	0.544		mg/L		109	75 - 125
Selenium	<0.0015		1.00	1.01		mg/L		101	75 - 125
Thallium	<0.00015		1.00	1.14		mg/L		114	75 - 125

Lab Sample ID: 180-109846-2 MSD

Matrix: Water

Analysis Batch: 330300

Client Sample ID: ARGWC-15 **Prep Type: Total Recoverable Prep Batch: 327640**

								i ieh ne	itteri. 32	-70-0
Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
<0.00038		0.250	0.268		mg/L		107	75 - 125	3	20
< 0.00031		1.00	1.06		mg/L		106	75 - 125	1	20
0.028		1.00	1.09		mg/L		106	75 - 125	1	20
<0.00018		0.500	0.510		mg/L		102	75 - 125	3	20
<0.00022		0.500	0.530		mg/L		106	75 - 125	2	20
<0.0015		0.500	0.518		mg/L		104	75 - 125	1	20
0.00040	J	0.500	0.522		mg/L		104	75 - 125	1	20
< 0.00013		0.500	0.530		mg/L		106	75 - 125	0	20
< 0.0034		0.500	0.496		mg/L		99	75 - 125	3	20
0.0016	J	0.500	0.547		mg/L		109	75 - 125	0	20
<0.0015		1.00	1.01		mg/L		101	75 - 125	0	20
<0.00015		1.00	1.14		mg/L		114	75 - 125	1	20
	Result <0.00038 <0.00031 0.028 <0.00018 <0.00022 <0.0015 0.00040 <0.00013 <0.0034 0.0016 <0.0015	<0.00031 0.028 <0.00018 <0.00022 <0.0015 0.00040 J <0.00013 <0.0034 0.0016 J <0.00015	Result Qualifier Added <0.00038	Result Qualifier Added Result <0.00038	Result Qualifier Added Result Qualifier <0.00038	Result Qualifier Added Result Qualifier Unit <0.00038	Result Qualifier Added Result Qualifier Unit D <0.00038	Result Qualifier Added Result Qualifier Unit D %Rec <0.00038	Sample Result Result Qualifier Added Added Result Qualifier Qualifier Unit Unit Unit Unit Unit Unit Unit Unit	Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD <0.00038

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Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-1

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 180-327642/1-A

Matrix: Water

Analysis Batch: 330300

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 327642

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		08/28/20 15:10	09/17/20 17:35	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		08/28/20 15:10	09/17/20 17:35	1
Barium	<0.0016		0.010	0.0016	mg/L		08/28/20 15:10	09/17/20 17:35	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		08/28/20 15:10	09/17/20 17:35	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		08/28/20 15:10	09/17/20 17:35	1
Chromium	<0.0015		0.0020	0.0015	mg/L		08/28/20 15:10	09/17/20 17:35	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		08/28/20 15:10	09/17/20 17:35	1
Lead	<0.00013		0.0010	0.00013	mg/L		08/28/20 15:10	09/17/20 17:35	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		08/28/20 15:10	09/17/20 17:35	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		08/28/20 15:10	09/17/20 17:35	1
Selenium	<0.0015		0.0050	0.0015	mg/L		08/28/20 15:10	09/17/20 17:35	1
Thallium	<0.00015		0.0010	0.00015	mg/L		08/28/20 15:10	09/17/20 17:35	1
-									

Lab Sample ID: MB 180-327642/1-A

Matrix: Water

Analysis Batch: 330464

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 327642

Result Qualifier RLMDL Unit Dil Fac Analyte Prepared Analyzed 0.080 08/28/20 15:10 09/18/20 12:56 Boron <0.039 0.039 mg/L

MB MB

Lab Sample ID: LCS 180-327642/2-A

Matrix: Water

Analysis Batch: 330300

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Prep Batch: 327642

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	0.250	0.259	-	mg/L		103	80 - 120	
Arsenic	1.00	1.07		mg/L		107	80 - 120	
Barium	1.00	1.04		mg/L		104	80 - 120	
Beryllium	0.500	0.523		mg/L		105	80 - 120	
Cadmium	0.500	0.522		mg/L		104	80 - 120	
Chromium	0.500	0.522		mg/L		104	80 - 120	
Cobalt	0.500	0.520		mg/L		104	80 - 120	
Lead	0.500	0.527		mg/L		105	80 - 120	
Lithium	0.500	0.499		mg/L		100	80 - 120	
Molybdenum	0.500	0.545		mg/L		109	80 - 120	
Selenium	1.00	1.01		mg/L		101	80 - 120	
Thallium	1.00	1.13		ma/L		113	80 - 120	

Lab Sample ID: LCS 180-327642/2-A

Matrix: Water

Analysis Batch: 330464

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 327642

	Spike	LCS	LCS		%Rec.
Analyte	Added	Result	Qualifier Unit	t D %	Rec Limits
Boron	1.25	1.19	mg/	L	95 80 - 120

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Client: Southern Company Job ID: 180-109846-1 Project/Site: CCR - Plant Arkwright

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-109850-1 MS **Matrix: Water**

Analysis Batch: 330300

Client Sample ID: ARGWA-5 Prep Type: Total Recoverable Prep Batch: 327642

Analysis Dateil. 000000									1 16p Daton. 027 042
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	<0.00038		0.250	0.260		mg/L		104	75 - 125
Arsenic	<0.00031		1.00	1.08		mg/L		108	75 ₋ 125
Barium	0.031		1.00	1.08		mg/L		105	75 ₋ 125
Beryllium	<0.00018		0.500	0.516		mg/L		103	75 ₋ 125
Cadmium	<0.00022		0.500	0.526		mg/L		105	75 ₋ 125
Chromium	<0.0015		0.500	0.533		mg/L		107	75 - 125
Cobalt	<0.00013		0.500	0.531		mg/L		106	75 ₋ 125
Lead	0.00013	J	0.500	0.535		mg/L		107	75 ₋ 125
Lithium	< 0.0034		0.500	0.501		mg/L		100	75 ₋ 125
Molybdenum	<0.00061		0.500	0.558		mg/L		112	75 - 125
Selenium	<0.0015		1.00	1.01		mg/L		101	75 - 125
Thallium	0.00021	J	1.00	1.16		mg/L		116	75 ₋ 125
 -						-			

Lab Sample ID: 180-109850-1 MSD

Matrix: Water

Analysis Batch: 330300

Client Sample ID: ARGWA-5 **Prep Type: Total Recoverable**

Prep Batch: 327642

Allalysis Datell. 330300								i ieb De	ILCII. JA	21042	
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.00038		0.250	0.262		mg/L		105	75 - 125	1	20
Arsenic	< 0.00031		1.00	1.06		mg/L		106	75 - 125	2	20
Barium	0.031		1.00	1.08		mg/L		105	75 - 125	0	20
Beryllium	<0.00018		0.500	0.511		mg/L		102	75 - 125	1	20
Cadmium	<0.00022		0.500	0.522		mg/L		104	75 - 125	1	20
Chromium	<0.0015		0.500	0.524		mg/L		105	75 - 125	2	20
Cobalt	<0.00013		0.500	0.524		mg/L		105	75 - 125	1	20
Lead	0.00013	J	0.500	0.527		mg/L		105	75 - 125	2	20
Lithium	< 0.0034		0.500	0.495		mg/L		99	75 - 125	1	20
Molybdenum	<0.00061		0.500	0.544		mg/L		109	75 - 125	3	20
Selenium	<0.0015		1.00	1.00		mg/L		100	75 - 125	1	20
Thallium	0.00021	J	1.00	1.11		mg/L		111	75 - 125	4	20

Lab Sample ID: MB 180-328062/1-A

Matrix: Water

Analysis Batch: 329135

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 328062

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:00	09/10/20 00:30	1
Arsenic	<0.00031		0.0010	0.00031	mg/L		09/01/20 16:00	09/10/20 00:30	1
Barium	<0.0016		0.010	0.0016	mg/L		09/01/20 16:00	09/10/20 00:30	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:00	09/10/20 00:30	1
Boron	<0.039	٨	0.080	0.039	mg/L		09/01/20 16:00	09/10/20 00:30	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:00	09/10/20 00:30	1
Calcium	<0.13		0.50	0.13	mg/L		09/01/20 16:00	09/10/20 00:30	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:00	09/10/20 00:30	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		09/01/20 16:00	09/10/20 00:30	1
Lead	<0.00013		0.0010	0.00013	mg/L		09/01/20 16:00	09/10/20 00:30	1
Lithium	<0.0034		0.0050	0.0034	mg/L		09/01/20 16:00	09/10/20 00:30	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		09/01/20 16:00	09/10/20 00:30	1
Selenium	<0.0015		0.0050	0.0015	mg/L		09/01/20 16:00	09/10/20 00:30	1
Boron Cadmium Calcium Chromium Cobalt Lead Lithium Molybdenum	<0.039 <0.00022 <0.13 <0.0015 <0.00013 <0.00013 <0.00034 <0.00061		0.080 0.0025 0.50 0.0020 0.0025 0.0010 0.0050 0.015	0.039 0.00022 0.13 0.0015 0.00013 0.00013 0.0034 0.00061	mg/L mg/L mg/L mg/L mg/L mg/L mg/L		09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00 09/01/20 16:00	09/10/20 00:30 09/10/20 00:30 09/10/20 00:30 09/10/20 00:30 09/10/20 00:30 09/10/20 00:30 09/10/20 00:30 09/10/20 00:30	1 1 1 1 1 1 1 1

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Job ID: 180-109846-1 Project/Site: CCR - Plant Arkwright

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Matrix: Water

Analysis Batch: 329135

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 328062 MB MB

Result Qualifier Analyte **MDL** Unit Prepared Analyzed Dil Fac Thallium < 0.00015 0.0010 0.00015 mg/L 09/01/20 16:00 09/10/20 00:30

Lab Sample ID: MB 180-328062/1-A

Lab Sample ID: MB 180-328062/1-A

Matrix: Water

Analysis Batch: 329474

Client Sample ID: Method Blank **Prep Type: Total Recoverable** Prep Batch: 328062

MB MB Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac Analyte Boron <0.039 0.080 0.039 mg/L 09/01/20 16:00 09/11/20 22:27 Chromium <0.0015 0.0020 0.0015 mg/L 09/01/20 16:00 09/11/20 22:27

Lab Sample ID: PB 180-326831/1-E

Matrix: Water

Analysis Batch: 329135

Client Sample ID: Method Blank **Prep Type: Total Recoverable** Prep Batch: 328062

PB PB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Antimony <0.00038 0.0020 0.00038 mg/L 09/01/20 16:00 09/10/20 00:37 0.0010 0.00031 mg/L Arsenic < 0.00031 09/01/20 16:00 09/10/20 00:37 Barium < 0.0016 0.010 0.0016 mg/L 09/01/20 16:00 09/10/20 00:37 Beryllium 0.00018 mg/L 09/01/20 16:00 09/10/20 00:37 <0.00018 0.0025 Cadmium 0.00022 mg/L < 0.00022 0.0025 09/01/20 16:00 09/10/20 00:37 Chromium 0.0020 0.0015 mg/L 09/01/20 16:00 09/10/20 00:37 < 0.0015 Cobalt 0.00013 mg/L 09/01/20 16:00 09/10/20 00:37 < 0.00013 0.0025 Lead < 0.00013 0.0010 0.00013 mg/L 09/01/20 16:00 09/10/20 00:37 0.0050 0.0034 mg/L 09/01/20 16:00 09/10/20 00:37 Lithium < 0.0034 Molybdenum <0.00061 0.015 0.00061 mg/L 09/01/20 16:00 09/10/20 00:37 Selenium <0.0015 0.0050 0.0015 mg/L 09/01/20 16:00 09/10/20 00:37 Thallium 0.000185 J 0.0010 0.00015 mg/L 09/01/20 16:00 09/10/20 00:37

Lab Sample ID: LCS 180-328062/2-A

Matrix: Water

Analysis Batch: 329135

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 328062

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	0.250	0.249		mg/L		100	80 - 120	
Arsenic	1.00	0.945		mg/L		95	80 - 120	
Barium	1.00	1.04		mg/L		104	80 - 120	
Beryllium	0.500	0.525		mg/L		105	80 - 120	
Cadmium	0.500	0.483		mg/L		97	80 - 120	
Chromium	0.500	0.478		mg/L		96	80 - 120	
Cobalt	0.500	0.477		mg/L		95	80 - 120	
Lead	0.500	0.486		mg/L		97	80 - 120	
Lithium	0.500	0.484		mg/L		97	80 - 120	
Molybdenum	0.500	0.498		mg/L		100	80 - 120	
Selenium	1.00	0.986		mg/L		99	80 - 120	
Thallium	1.00	0.987		mg/L		99	80 - 120	

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Client: Southern Company Job ID: 180-109846-1 Project/Site: CCR - Plant Arkwright

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-328062/2-A

Matrix: Water

Prep Type: Total Recoverable Analysis Batch: 329571 **Prep Batch: 328062** Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Boron 1.25 80 - 120 1.32 mg/L 105

Lab Sample ID: 180-109930-2 MS

Matrix: Water

Analysis Batch: 329135

Client Sample ID: ARAMW-3 Prep Type: Total Recoverable Prep Batch: 328062

Client Sample ID: Lab Control Sample

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	<0.00038		0.250	0.255		mg/L		102	75 - 125	
Arsenic	< 0.00031		1.00	0.981		mg/L		98	75 - 125	
Barium	0.093		1.00	1.16		mg/L		106	75 - 125	
Beryllium	<0.00018	٨	0.500	0.548	٨	mg/L		110	75 - 125	
Cadmium	<0.00022		0.500	0.492		mg/L		98	75 - 125	
Chromium	<0.0015		0.500	0.489		mg/L		98	75 ₋ 125	
Cobalt	0.00056	J	0.500	0.486		mg/L		97	75 - 125	
Lead	< 0.00013		0.500	0.495		mg/L		99	75 - 125	
Lithium	< 0.0034		0.500	0.505		mg/L		101	75 - 125	
Molybdenum	0.0029	J	0.500	0.513		mg/L		102	75 - 125	
Selenium	<0.0015		1.00	0.983		mg/L		98	75 - 125	
Thallium	<0.00015		1.00	1.00		mg/L		100	75 - 125	

Lab Sample ID: 180-109930-2 MSD

Matrix: Water

Analysis Batch: 329135

Client Sample ID: ARAMW-3 Prep Type: Total Recoverable Prep Batch: 328062

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony <	0.00038		0.250	0.251		mg/L		101	75 - 125	2	20
Arsenic <	0.00031		1.00	0.983		mg/L		98	75 - 125	0	20
Barium	0.093		1.00	1.14		mg/L		105	75 - 125	1	20
Beryllium <	0.00018	٨	0.500	0.543	٨	mg/L		109	75 - 125	1	20
Cadmium <	0.00022		0.500	0.486		mg/L		97	75 - 125	1	20
Chromium	<0.0015		0.500	0.485		mg/L		97	75 - 125	1	20
Cobalt	0.00056	J	0.500	0.483		mg/L		97	75 - 125	1	20
Lead <	0.00013		0.500	0.491		mg/L		98	75 - 125	1	20
Lithium	<0.0034		0.500	0.496		mg/L		99	75 - 125	2	20
Molybdenum	0.0029	J	0.500	0.505		mg/L		100	75 - 125	2	20
Selenium	<0.0015		1.00	0.985		mg/L		98	75 - 125	0	20
Thallium <	0.00015		1.00	0.998		mg/L		100	75 - 125	0	20

Lab Sample ID: MB 180-328065/1-A

Matrix: Water

Analysis Batch: 328773

Client Sample ID: Method Blank **Prep Type: Total Recoverable Prep Batch: 328065**

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00038		0.0020	0.00038	mg/L		09/01/20 16:08	09/04/20 21:35	1
Arsenic	< 0.00031		0.0010	0.00031	mg/L		09/01/20 16:08	09/04/20 21:35	1
Barium	<0.0016		0.010	0.0016	mg/L		09/01/20 16:08	09/04/20 21:35	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		09/01/20 16:08	09/04/20 21:35	1
Cadmium	<0.00022		0.0025	0.00022	mg/L		09/01/20 16:08	09/04/20 21:35	1
Chromium	<0.0015		0.0020	0.0015	mg/L		09/01/20 16:08	09/04/20 21:35	1

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Job ID: 180-109846-1 Project/Site: CCR - Plant Arkwright

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 180-328065/1-A

Matrix: Water

Analysis Batch: 328773

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 328065

, i	MB MB						•	
Analyte Res	ult Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt <0.000	13	0.0025	0.00013	mg/L		09/01/20 16:08	09/04/20 21:35	1
Lead <0.000	13	0.0010	0.00013	mg/L		09/01/20 16:08	09/04/20 21:35	1
Lithium <0.00	34	0.0050	0.0034	mg/L		09/01/20 16:08	09/04/20 21:35	1
Molybdenum <0.000	61	0.015	0.00061	mg/L		09/01/20 16:08	09/04/20 21:35	1
Selenium <0.00	15	0.0050	0.0015	mg/L		09/01/20 16:08	09/04/20 21:35	1
Thallium <0.000	15	0.0010	0.00015	mg/L		09/01/20 16:08	09/04/20 21:35	1

Lab Sample ID: LCS 180-328065/2-A

Matrix: Water

Analysis Batch: 328773

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Prep Batch: 328065

_	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	0.250	0.261		mg/L		105	80 - 120	
Arsenic	1.00	1.04		mg/L		104	80 - 120	
Barium	1.00	1.08		mg/L		108	80 - 120	
Beryllium	0.500	0.479		mg/L		96	80 - 120	
Cadmium	0.500	0.514		mg/L		103	80 - 120	
Chromium	0.500	0.498		mg/L		100	80 - 120	
Cobalt	0.500	0.510		mg/L		102	80 - 120	
Lead	0.500	0.510		mg/L		102	80 - 120	
Lithium	0.500	0.483		mg/L		97	80 - 120	
Molybdenum	0.500	0.522		mg/L		104	80 - 120	
Selenium	1.00	0.995		mg/L		100	80 - 120	
Thallium	1.00	1.03		mg/L		103	80 - 120	

Lab Sample ID: LCS 180-326831/2-E

Matrix: Water

Analysis Batch: 329135

Client Sample ID: Lab Control Sample

Prep Type: Dissolved Prep Batch: 328062

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Antimony 0.250 0.255 mg/L 102 80 - 120 Arsenic 1.00 0.960 mg/L 96 80 - 120 Barium 1.00 1.05 mg/L 105 80 - 120 Beryllium 0.500 0.518 mg/L 104 80 - 120 Boron 1.25 1.08 ^ mg/L 87 80 - 120 0.500 0.482 Cadmium mg/L 96 80 - 120 Calcium 25.0 26.6 mg/L 107 80 - 120 Chromium 0.500 0.492 mg/L 98 80 - 120 Cobalt 0.500 0.477 mg/L 95 80 - 120 Lead 0.500 0.491 mg/L 98 80 - 120 Lithium 0.500 0.480 mg/L 96 80 - 120 Molybdenum 0.500 0.494 mg/L 99 80 - 120 Selenium 1.00 0.977 mg/L 98 80 - 120 Thallium 1.00 0.980 mg/L 98 80 - 120

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Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-1

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-328121/1-A

Matrix: Water

Analysis Batch: 328261

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 328121

Prep Batch: 328121

Prep Batch: 328121

Prep Type: Total/NA

Prep Batch: 328515

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 328516

Prep Type: Total/NA

Prep Batch: 328516

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

%Rec.

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte Prepared <0.00013 ^ 0.00020 09/02/20 05:45 09/02/20 15:07 Mercury 0.00013 mg/L

Lab Sample ID: LCS 180-328121/2-A **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA **Prep Batch: 328121**

Analysis Batch: 328261 Spike LCS LCS %Rec.

Added Result Qualifier Unit D %Rec Limits Analyte 0.00250 0.00297 ^ 80 - 120 Mercury mg/L 119

Lab Sample ID: 180-109846-1 MS Client Sample ID: ARGWA-14 Prep Type: Total/NA

Matrix: Water

Analysis Batch: 328261

Sample Sample Spike MS MS %Rec. Result Qualifier Added Result Qualifier Limits Analyte Unit %Rec Mercury <0.00013 ^ 0.00100 0.00118 ^ 75 - 125 mg/L

Lab Sample ID: 180-109846-1 MSD Client Sample ID: ARGWA-14 **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 328261

Spike MSD MSD %Rec. **RPD** Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit <0.00013 ^ 0.00100 0.00120 ^ 75 - 125 Mercury mg/L 120

Lab Sample ID: MB 180-328515/1-A

Matrix: Water

Analysis Batch: 328649

MR MR

RL **MDL** Unit Analyte Result Qualifier Prepared Analyzed Dil Fac 0.00020 0.00013 mg/L 09/04/20 08:35 09/05/20 09:24 Mercury < 0.00013

Lab Sample ID: LCS 180-328515/2-A

Matrix: Water

Analysis Batch: 328649

Prep Batch: 328515 Spike LCS LCS %Rec. Added Result Qualifier Limits Analyte Unit D %Rec 0.00250 0.00253 80 - 120 Mercury mg/L 101

Lab Sample ID: MB 180-328516/1-A

Matrix: Water

Analysis Batch: 328649

MB MB

Result Qualifier RL **MDL** Unit **Prepared** Dil Fac Analyte Analyzed <0.00013 0.00020 09/04/20 08:35 09/05/20 09:51 Mercury 0.00013 mg/L

LCS LCS

Lab Sample ID: LCS 180-328516/2-A

Matrix: Water

Analysis Batch: 328649

Added Limits Analyte Result Qualifier Unit %Rec Mercury 0.00250 0.00255 80 - 120 mg/L 102

Spike

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Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-1

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-328636/1-A

Matrix: Water

Analysis Batch: 328684

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 328636

Prep Type: Total/NA

Prep Batch: 328636

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte **Prepared** 0.00020 09/05/20 06:15 09/07/20 08:30 Mercury <0.00013 0.00013 mg/L

Lab Sample ID: LCS 180-328636/2-A **Client Sample ID: Lab Control Sample**

0.00250

Matrix: Water

Analyte

Mercury

Analysis Batch: 328684

Spike LCS LCS Added

0.00263

Result Qualifier

Unit mg/L

D %Rec 105

%Rec. Limits 80 - 120

Lab Sample ID: PB 180-326831/1-F **Client Sample ID: Method Blank**

Matrix: Water

Analysis Batch: 328649

PB PB

Analyte Result Qualifier Mercury <0.00013

RL 0.00020

MDL Unit 0.00013 mg/L

MDL Unit

LCS LCS

10 mg/L

Prepared 09/04/20 08:35 09/05/20 10:02

Prepared

Analyzed

Analyzed

08/21/20 11:11

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

%Rec.

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 328516

Dil Fac

Dil Fac

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-326608/2 Client Sample ID: Method Blank Prep Type: Total/NA

RL

10

Matrix: Water

Analysis Batch: 326608

MB MB

Analyte Result Qualifier

Total Dissolved Solids <10

Lab Sample ID: LCS 180-326608/1

Matrix: Water

Analysis Batch: 326608

Analyte Added Result Qualifier Unit Limits Total Dissolved Solids 567 602 mg/L 106 80 - 120

Spike

Lab Sample ID: MB 180-326682/2

Matrix: Water

Analysis Batch: 326682

MB MB

MDL Unit Analyte Result Qualifier RL Prepared Analyzed Dil Fac 10 mg/L 10 08/22/20 08:11 **Total Dissolved Solids** <10

Lab Sample ID: LCS 180-326682/1

Matrix: Water

Analysis Batch: 326682

Total Dissolved Solids

Spike Added 567

LCS LCS Result Qualifier 562

Unit mg/L

%Rec 99 %Rec. Limits 80 - 120

Client Sample ID: Lab Control Sample

Eurofins TestAmerica, Pittsburgh

Client: Southern Company

Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

HPLC/IC

Analysis Batch: 326478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109846-2	ARGWC-15	Total/NA	Water	EPA 300.0 R2.1	
MB 180-326478/18	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-326478/17	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-109846-2 MS	ARGWC-15	Total/NA	Water	EPA 300.0 R2.1	
180-109846-2 MSD	ARGWC-15	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 326777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-1	FB#2	Total/NA	Water	EPA 300.0 R2.1	
180-109918-2	ARGWC-23	Total/NA	Water	EPA 300.0 R2.1	
180-109918-3	DUP-2	Total/NA	Water	EPA 300.0 R2.1	
180-109918-5	ARAMW-2	Total/NA	Water	EPA 300.0 R2.1	
MB 180-326777/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-326777/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 326785

Lab Sample ID 180-109846-1	Client Sample ID ARGWA-14	Prep Type Total/NA	Matrix Water	Method Prep Batch EPA 300.0 R2.1
180-109846-3	ARGWC-16	Total/NA	Water	EPA 300.0 R2.1
180-109918-4	ARAMW-1	Total/NA	Water	EPA 300.0 R2.1
MB 180-326785/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1
LCS 180-326785/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1

Analysis Batch: 326890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109847-3	ARGWA-13	Total/NA	Water	EPA 300.0 R2.1	
180-109847-4	ARGWC-17	Total/NA	Water	EPA 300.0 R2.1	
180-109848-1	ARGWC-10	Total/NA	Water	EPA 300.0 R2.1	
180-109848-2	DUP-1	Total/NA	Water	EPA 300.0 R2.1	
180-109848-3	ARGWC-9	Total/NA	Water	EPA 300.0 R2.1	
180-109850-1	ARGWA-5	Total/NA	Water	EPA 300.0 R2.1	
180-109850-2	ARGWA-3	Total/NA	Water	EPA 300.0 R2.1	
180-109850-3	ARGWC-7	Total/NA	Water	EPA 300.0 R2.1	
180-109851-1	EB#2	Total/NA	Water	EPA 300.0 R2.1	
180-109851-2	ARGWA-19	Total/NA	Water	EPA 300.0 R2.1	
180-109851-3	ARGWA-20	Total/NA	Water	EPA 300.0 R2.1	
180-109851-4	ARGWC-22	Total/NA	Water	EPA 300.0 R2.1	
180-109851-4	ARGWC-22	Total/NA	Water	EPA 300.0 R2.1	
MB 180-326890/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-326890/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-109847-4 MS	ARGWC-17	Total/NA	Water	EPA 300.0 R2.1	
180-109847-4 MSD	ARGWC-17	Total/NA	Water	EPA 300.0 R2.1	
180-109848-1 MS	ARGWC-10	Total/NA	Water	EPA 300.0 R2.1	
180-109848-1 MSD	ARGWC-10	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 326917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method F	rep Batch
180-109847-1	FB#1	Total/NA	Water	EPA 300.0 R2.1	
180-109847-2	ARGWA-12	Total/NA	Water	EPA 300.0 R2.1	
MB 180-326917/18	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-326917/17	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

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QC Association Summary

Client: Southern Company

Job ID: 180-109846-1 Project/Site: CCR - Plant Arkwright

HPLC/IC (Continued)

Analysis Batch: 326917 (Continued)

١	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
	180-109847-2 MS	ARGWA-12	Total/NA	Water	EPA 300.0 R2.1	
	180-109847-2 MSD	ARGWA-12	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 327077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109929-1	ARGWC-8	Total/NA	Water	EPA 300.0 R2.1	
180-109929-2	ARGWC-18	Total/NA	Water	EPA 300.0 R2.1	
180-109930-1	EB#1	Total/NA	Water	EPA 300.0 R2.1	
180-109930-2	ARAMW-3	Total/NA	Water	EPA 300.0 R2.1	
180-109930-3	ARAMW-4	Total/NA	Water	EPA 300.0 R2.1	
MB 180-327077/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-327077/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-109929-1 MS	ARGWC-8	Total/NA	Water	EPA 300.0 R2.1	
180-109929-1 MSD	ARGWC-8	Total/NA	Water	EPA 300.0 R2.1	
180-109930-2 MS	ARAMW-3	Total/NA	Water	EPA 300.0 R2.1	
180-109930-2 MSD	ARAMW-3	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 327578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109970-1	ARAMW-6	Total/NA	Water	EPA 300.0 R2.1	
180-109970-2	ARGWC-21	Total/NA	Water	EPA 300.0 R2.1	
MB 180-327578/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-327578/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-109970-2 MS	ARGWC-21	Total/NA	Water	EPA 300.0 R2.1	
180-109970-2 MSD	ARGWC-21	Total/NA	Water	EPA 300.0 R2.1	

Metals

Filtration Batch: 326831

Lab Sample ID 180-109929-2	Client Sample ID ARGWC-18	Prep Type Dissolved	Matrix Water	Method Prep Batch Filtration
PB 180-326831/1-E	Method Blank	Total Recoverable	Water	Filtration
PB 180-326831/1-F	Method Blank	Dissolved	Water	Filtration
LCS 180-326831/2-E	Lab Control Sample	Dissolved	Water	Filtration

Prep Batch: 327640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109846-1	ARGWA-14	Total Recoverable	Water	3005A	_
180-109846-2	ARGWC-15	Total Recoverable	Water	3005A	
180-109846-3	ARGWC-16	Total Recoverable	Water	3005A	
180-109847-1	FB#1	Total Recoverable	Water	3005A	
180-109847-2	ARGWA-12	Total Recoverable	Water	3005A	
180-109847-3	ARGWA-13	Total Recoverable	Water	3005A	
180-109847-4	ARGWC-17	Total Recoverable	Water	3005A	
180-109848-1	ARGWC-10	Total Recoverable	Water	3005A	
180-109848-2	DUP-1	Total Recoverable	Water	3005A	
180-109848-3	ARGWC-9	Total Recoverable	Water	3005A	
MB 180-327640/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-327640/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-109846-2 MS	ARGWC-15	Total Recoverable	Water	3005A	
180-109846-2 MSD	ARGWC-15	Total Recoverable	Water	3005A	

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QC Association Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright Job ID: 180-109846-1

Metals

Prep Batch: 327642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109850-1	ARGWA-5	Total Recoverable	Water	3005A	
180-109850-2	ARGWA-3	Total Recoverable	Water	3005A	
180-109850-3	ARGWC-7	Total Recoverable	Water	3005A	
180-109851-1	EB#2	Total Recoverable	Water	3005A	
180-109851-2	ARGWA-19	Total Recoverable	Water	3005A	
180-109851-3	ARGWA-20	Total Recoverable	Water	3005A	
180-109851-4	ARGWC-22	Total Recoverable	Water	3005A	
MB 180-327642/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-327642/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-109850-1 MS	ARGWA-5	Total Recoverable	Water	3005A	
180-109850-1 MSD	ARGWA-5	Total Recoverable	Water	3005A	

Prep Batch: 328062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-1	FB#2	Total Recoverable	Water	3005A	
180-109918-2	ARGWC-23	Total Recoverable	Water	3005A	
180-109918-3	DUP-2	Total Recoverable	Water	3005A	
180-109918-4	ARAMW-1	Total Recoverable	Water	3005A	
180-109918-5	ARAMW-2	Total Recoverable	Water	3005A	
180-109929-1	ARGWC-8	Total Recoverable	Water	3005A	
180-109929-2	ARGWC-18	Dissolved	Water	3005A	326831
180-109929-2	ARGWC-18	Total Recoverable	Water	3005A	
180-109930-1	EB#1	Total Recoverable	Water	3005A	
180-109930-2	ARAMW-3	Total Recoverable	Water	3005A	
180-109930-3	ARAMW-4	Total Recoverable	Water	3005A	
MB 180-328062/1-A	Method Blank	Total Recoverable	Water	3005A	
PB 180-326831/1-E	Method Blank	Total Recoverable	Water	3005A	326831
LCS 180-326831/2-E	Lab Control Sample	Dissolved	Water	3005A	326831
LCS 180-328062/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-109930-2 MS	ARAMW-3	Total Recoverable	Water	3005A	
180-109930-2 MSD	ARAMW-3	Total Recoverable	Water	3005A	

Prep Batch: 328065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109970-1	ARAMW-6	Total Recoverable	Water	3005A	
180-109970-2	ARGWC-21	Total Recoverable	Water	3005A	
MB 180-328065/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-328065/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 328121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109846-1	ARGWA-14	Total/NA	Water	7470A	
180-109846-2	ARGWC-15	Total/NA	Water	7470A	
180-109846-3	ARGWC-16	Total/NA	Water	7470A	
180-109847-1	FB#1	Total/NA	Water	7470A	
180-109847-2	ARGWA-12	Total/NA	Water	7470A	
180-109847-3	ARGWA-13	Total/NA	Water	7470A	
180-109847-4	ARGWC-17	Total/NA	Water	7470A	
180-109848-1	ARGWC-10	Total/NA	Water	7470A	
180-109848-2	DUP-1	Total/NA	Water	7470A	
180-109848-3	ARGWC-9	Total/NA	Water	7470A	

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Client: Southern Company

Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Metals (Continued)

Prep Batch: 328121 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109850-1	ARGWA-5	Total/NA	Water	7470A	
180-109850-2	ARGWA-3	Total/NA	Water	7470A	
180-109850-3	ARGWC-7	Total/NA	Water	7470A	
180-109851-1	EB#2	Total/NA	Water	7470A	
180-109851-2	ARGWA-19	Total/NA	Water	7470A	
180-109851-3	ARGWA-20	Total/NA	Water	7470A	
180-109851-4	ARGWC-22	Total/NA	Water	7470A	
MB 180-328121/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-328121/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-109846-1 MS	ARGWA-14	Total/NA	Water	7470A	
180-109846-1 MSD	ARGWA-14	Total/NA	Water	7470A	

Analysis Batch: 328261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109846-1	ARGWA-14	Total/NA	Water	EPA 7470A	328121
180-109846-2	ARGWC-15	Total/NA	Water	EPA 7470A	328121
180-109846-3	ARGWC-16	Total/NA	Water	EPA 7470A	328121
180-109847-1	FB#1	Total/NA	Water	EPA 7470A	328121
180-109847-2	ARGWA-12	Total/NA	Water	EPA 7470A	328121
180-109847-3	ARGWA-13	Total/NA	Water	EPA 7470A	328121
180-109847-4	ARGWC-17	Total/NA	Water	EPA 7470A	328121
180-109848-1	ARGWC-10	Total/NA	Water	EPA 7470A	328121
180-109848-2	DUP-1	Total/NA	Water	EPA 7470A	328121
180-109848-3	ARGWC-9	Total/NA	Water	EPA 7470A	328121
180-109850-1	ARGWA-5	Total/NA	Water	EPA 7470A	328121
180-109850-2	ARGWA-3	Total/NA	Water	EPA 7470A	328121
180-109850-3	ARGWC-7	Total/NA	Water	EPA 7470A	328121
180-109851-1	EB#2	Total/NA	Water	EPA 7470A	328121
180-109851-2	ARGWA-19	Total/NA	Water	EPA 7470A	328121
180-109851-3	ARGWA-20	Total/NA	Water	EPA 7470A	328121
180-109851-4	ARGWC-22	Total/NA	Water	EPA 7470A	328121
MB 180-328121/1-A	Method Blank	Total/NA	Water	EPA 7470A	328121
LCS 180-328121/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	328121
180-109846-1 MS	ARGWA-14	Total/NA	Water	EPA 7470A	328121
180-109846-1 MSD	ARGWA-14	Total/NA	Water	EPA 7470A	328121

Prep Batch: 328515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109930-3	ARAMW-4	Total/NA	Water	7470A	
MB 180-328515/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-328515/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 328516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-1	FB#2	Total/NA	Water	7470A	
180-109918-2	ARGWC-23	Total/NA	Water	7470A	
180-109918-3	DUP-2	Total/NA	Water	7470A	
180-109918-4	ARAMW-1	Total/NA	Water	7470A	
180-109918-5	ARAMW-2	Total/NA	Water	7470A	
180-109929-1	ARGWC-8	Total/NA	Water	7470A	
180-109929-2	ARGWC-18	Dissolved	Water	7470A	326831

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QC Association Summary

Client: Southern Company

Job ID: 180-109846-1 Project/Site: CCR - Plant Arkwright

Metals (Continued)

Prep Batch: 328516 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109929-2	ARGWC-18	Total/NA	Water	7470A	
180-109930-1	EB#1	Total/NA	Water	7470A	
180-109930-2	ARAMW-3	Total/NA	Water	7470A	
MB 180-328516/1-A	Method Blank	Total/NA	Water	7470A	
PB 180-326831/1-F	Method Blank	Dissolved	Water	7470A	326831
LCS 180-328516/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 328636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109970-1	ARAMW-6	Total/NA	Water	7470A	
180-109970-2	ARGWC-21	Total/NA	Water	7470A	
MB 180-328636/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-328636/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 328649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-1	FB#2	Total/NA	Water	EPA 7470A	328516
180-109918-2	ARGWC-23	Total/NA	Water	EPA 7470A	328516
180-109918-3	DUP-2	Total/NA	Water	EPA 7470A	328516
180-109918-4	ARAMW-1	Total/NA	Water	EPA 7470A	328516
180-109918-5	ARAMW-2	Total/NA	Water	EPA 7470A	328516
180-109929-1	ARGWC-8	Total/NA	Water	EPA 7470A	328516
180-109929-2	ARGWC-18	Dissolved	Water	EPA 7470A	328516
180-109929-2	ARGWC-18	Total/NA	Water	EPA 7470A	328516
180-109930-1	EB#1	Total/NA	Water	EPA 7470A	328516
180-109930-2	ARAMW-3	Total/NA	Water	EPA 7470A	328516
180-109930-3	ARAMW-4	Total/NA	Water	EPA 7470A	328515
MB 180-328515/1-A	Method Blank	Total/NA	Water	EPA 7470A	328515
MB 180-328516/1-A	Method Blank	Total/NA	Water	EPA 7470A	328516
PB 180-326831/1-F	Method Blank	Dissolved	Water	EPA 7470A	328516
LCS 180-328515/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	328515
LCS 180-328516/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	328516

Analysis Batch: 328684

Lab Sample ID 180-109970-1	Client Sample ID ARAMW-6	Prep Type Total/NA	Matrix Water	Method EPA 7470A	Prep Batch 328636
180-109970-2	ARGWC-21	Total/NA	Water	EPA 7470A	328636
MB 180-328636/1-A	Method Blank	Total/NA	Water	EPA 7470A	328636
LCS 180-328636/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	328636

Analysis Batch: 328773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method I	Prep Batch
180-109970-1	ARAMW-6	Total Recoverable	Water	EPA 6020B	328065
180-109970-2	ARGWC-21	Total Recoverable	Water	EPA 6020B	328065
MB 180-328065/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	328065
LCS 180-328065/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	328065

Analysis Batch: 329135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-1	FB#2	Total Recoverable	Water	EPA 6020B	328062
180-109918-2	ARGWC-23	Total Recoverable	Water	EPA 6020B	328062

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Client: Southern Company

Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Metals (Continued)

Analysis Batch: 329135 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-3	DUP-2	Total Recoverable	Water	EPA 6020B	328062
180-109918-4	ARAMW-1	Total Recoverable	Water	EPA 6020B	328062
180-109918-5	ARAMW-2	Total Recoverable	Water	EPA 6020B	328062
180-109929-1	ARGWC-8	Total Recoverable	Water	EPA 6020B	328062
180-109929-2	ARGWC-18	Dissolved	Water	EPA 6020B	328062
180-109929-2	ARGWC-18	Total Recoverable	Water	EPA 6020B	328062
180-109930-1	EB#1	Total Recoverable	Water	EPA 6020B	328062
180-109930-2	ARAMW-3	Total Recoverable	Water	EPA 6020B	328062
180-109930-3	ARAMW-4	Total Recoverable	Water	EPA 6020B	328062
MB 180-328062/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	328062
PB 180-326831/1-E	Method Blank	Total Recoverable	Water	EPA 6020B	328062
LCS 180-326831/2-E	Lab Control Sample	Dissolved	Water	EPA 6020B	328062
LCS 180-328062/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	328062
180-109930-2 MS	ARAMW-3	Total Recoverable	Water	EPA 6020B	328062
180-109930-2 MSD	ARAMW-3	Total Recoverable	Water	EPA 6020B	328062

Analysis Batch: 329474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-2	ARGWC-23	Total Recoverable	Water	EPA 6020B	328062
MB 180-328062/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	328062

Analysis Batch: 329571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-328062/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	328062

Analysis Batch: 330300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109846-1	ARGWA-14	Total Recoverable	Water	EPA 6020B	327640
180-109846-2	ARGWC-15	Total Recoverable	Water	EPA 6020B	327640
180-109846-3	ARGWC-16	Total Recoverable	Water	EPA 6020B	327640
180-109847-1	FB#1	Total Recoverable	Water	EPA 6020B	327640
180-109847-2	ARGWA-12	Total Recoverable	Water	EPA 6020B	327640
180-109847-3	ARGWA-13	Total Recoverable	Water	EPA 6020B	327640
180-109847-4	ARGWC-17	Total Recoverable	Water	EPA 6020B	327640
180-109848-1	ARGWC-10	Total Recoverable	Water	EPA 6020B	327640
180-109848-2	DUP-1	Total Recoverable	Water	EPA 6020B	327640
180-109848-3	ARGWC-9	Total Recoverable	Water	EPA 6020B	327640
180-109850-1	ARGWA-5	Total Recoverable	Water	EPA 6020B	327642
180-109850-2	ARGWA-3	Total Recoverable	Water	EPA 6020B	327642
180-109850-3	ARGWC-7	Total Recoverable	Water	EPA 6020B	327642
180-109851-1	EB#2	Total Recoverable	Water	EPA 6020B	327642
180-109851-2	ARGWA-19	Total Recoverable	Water	EPA 6020B	327642
180-109851-3	ARGWA-20	Total Recoverable	Water	EPA 6020B	327642
180-109851-4	ARGWC-22	Total Recoverable	Water	EPA 6020B	327642
MB 180-327640/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	327640
MB 180-327642/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	327642
LCS 180-327640/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	327640
LCS 180-327642/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	327642
180-109846-2 MS	ARGWC-15	Total Recoverable	Water	EPA 6020B	327640
180-109846-2 MSD	ARGWC-15	Total Recoverable	Water	EPA 6020B	327640
180-109850-1 MS	ARGWA-5	Total Recoverable	Water	EPA 6020B	327642

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QC Association Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-1

Metals (Continued)

Analysis Batch: 330300 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109850-1 MSD	ARGWA-5	Total Recoverable	Water	EPA 6020B	327642

Analysis Batch: 330464

Lab Sample ID 180-109851-4	Client Sample ID ARGWC-22	Prep Type Total Recoverable	Matrix Water	Method EPA 6020B	Prep Batch 327642
MB 180-327642/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	327642
LCS 180-327642/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	327642

Analysis Batch: 330720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-3	DUP-2	Total Recoverable	Water	EPA 6020B	328062

General Chemistry

Analysis Batch: 326608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109851-1	EB#2	Total/NA	Water	SM 2540C	
180-109851-4	ARGWC-22	Total/NA	Water	SM 2540C	
MB 180-326608/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-326608/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 326682

Lab Sample ID 180-109918-1	Client Sample ID FB#2	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
180-109918-2	ARGWC-23	Total/NA	Water	SM 2540C	
180-109918-3	DUP-2	Total/NA	Water	SM 2540C	
MB 180-326682/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-326682/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 326626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109846-1	ARGWA-14	Total/NA	Water	Field Sampling	
180-109846-2	ARGWC-15	Total/NA	Water	Field Sampling	
180-109846-3	ARGWC-16	Total/NA	Water	Field Sampling	
180-109847-2	ARGWA-12	Total/NA	Water	Field Sampling	
180-109847-3	ARGWA-13	Total/NA	Water	Field Sampling	
180-109847-4	ARGWC-17	Total/NA	Water	Field Sampling	
180-109848-1	ARGWC-10	Total/NA	Water	Field Sampling	
180-109848-2	DUP-1	Total/NA	Water	Field Sampling	
180-109848-3	ARGWC-9	Total/NA	Water	Field Sampling	
180-109850-1	ARGWA-5	Total/NA	Water	Field Sampling	
180-109850-2	ARGWA-3	Total/NA	Water	Field Sampling	
180-109850-3	ARGWC-7	Total/NA	Water	Field Sampling	
180-109851-2	ARGWA-19	Total/NA	Water	Field Sampling	
180-109851-3	ARGWA-20	Total/NA	Water	Field Sampling	
180-109851-4	ARGWC-22	Total/NA	Water	Field Sampling	

Analysis Batch: 327279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-2	ARGWC-23	Total/NA	Water	Field Sampling	

Eurofins TestAmerica, Pittsburgh

Page 67 of 95 9/24/2020

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QC Association Summary

Client: Southern Company

Job ID: 180-109846-1

Project/Site: CCR - Plant Arkwright

Field Service / Mobile Lab (Continued)

Analysis Batch: 327279 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-3	DUP-2	Total/NA	Water	Field Sampling	
180-109918-4	ARAMW-1	Total/NA	Water	Field Sampling	
180-109918-5	ARAMW-2	Total/NA	Water	Field Sampling	
180-109929-1	ARGWC-8	Total/NA	Water	Field Sampling	
180-109929-2	ARGWC-18	Total/NA	Water	Field Sampling	
180-109930-2	ARAMW-3	Total/NA	Water	Field Sampling	
180-109930-3	ARAMW-4	Total/NA	Water	Field Sampling	
180-109970-1	ARAMW-6	Total/NA	Water	Field Sampling	
180-109970-2	ARGWC-21	Total/NA	Water	Field Sampling	

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Company

Chain of Custody Record

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

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Return To Client Risposal By Lab Archive For. Month =6,62 1 = 6,47 - Amehior - Assorbic Acid - DI Water C-EDTA - ED4 180-109846 Chain of Custody Total Number of containors Analysis Requested Special Instructions/QC Requirements (AOTH ?) H+ (OSOS) H DHEWEZZZE ELM Hea ASherdits Brown, Shall Parone old Filtered Sample (Yes or No) Gegrab) serting Auto Preservation Code: Metrix August, Company 3 3 (C=comp, Radiological Sample 00 SIBI/ OX/61/8 1005 1205 8/19/20 1355 Unknown (AT Requested (days): Due Date Requested: Sample Date 18020201 SSOA# Poison B Skin Imitant Defiverable Requested: I, II, III, IV, Other (specify) Pitisburgh, PA 15238 Phone (412) 963-7058 Fax (412) 963-2468 ARGWC-15 ARGWC-16 ARGWA-14 Possible Hazard Identification

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Chain of Custody Record

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Phone (412) 963-7058 Fax (412) 953-2468

244- ATLANTA

0 - AsNaO2 P - Na2O4S 0 - Na2O4S S - H2SO4 S - H2SO4 U - Acetone V - MCA4 W - PH 4-5 Z - Other (specify) Special Instructions/Note: Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Sisposal By Lab Archive For. Month 3 pH=6.48 reservation Codes: Total Number of containers 180-109847 Chain of Custody Analysis Requested ooler Temperature(s) "C and Other Remarks Special Instructions/QC Requirements App II mark 60208 + H5 74701 Flugside 300 2006 FM 2880) Rakina 226/228(4315/9320) eceived by: eceived by. Sampler D. He ward E Guillen, ASharek-ABrown, Shali WassErIS id Filtered Sample (Yes or No) Preservation Code 3 3 3 Radiological | Type (C=comp, G=grab) Sample 1450 1445 8/18/20 1100 Sample Standard Unknown TAT Requested (days) Due Date Requested: 8/18/20 Sample Date Project # 18020201 SSOW# Poison B Skin Imtant Custody Seal No. ARGWA-12 ARGWA-13 ARGWC-17 Possible Hazard Identification Hamil Lthan 241 Ralph McGill Blvd SE ustody Seals Intact. A Yes A No Client Information Sample Identification roject Name. 2CR - Plant Arkwright 404-506-7116(Tel) SCS Contacts CS Contacts quished by. State, Zip. G.A., 30308 GA Power Allanta

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Eurofins TestAmerica, Pittsburgh

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Eurofins TestAmerica, Pittsburgh

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Phone (412) 963-7058 Fax (412) 963-2468

244- ATLANTA

TSP Dodecahyd Special Instructions/Note: unpany pH= 6.33 180-109918 Chain of Custody MMMM Total Number of containners Analysis Requested Special Instructions/QC Requirements D Kodium 226/728(9315/1300)

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				Cooler Temperature(s) [§] C and Other Remarks:	

N - Nons 0 - ARNBOZ 0 - NBZOJ4S 0 - NBZSOJ3 R - NBZSOJ3 S - NBZSOJ4 T - TSP Dodecahyarano Ver. 01/16/2019 Special Instructions/Note: 244- ATLANTA Sample Disposal (A fee may be assessed if samples are retained forger than 1 month)

Return To Client Cisposal By Lab Archive For. Month TT:3= H0 PH=6,24 Preservation Codes: 180-109930 Chain of Custody 1-31 Archive For Total Mumber of containers Muy well Analysis Requested oplar Temperature(s) *C and Dear Remarks Special Instructions/QC Requirements Return To Client (300) Received by. (407H7/21E P/255/25) 0H+2 yd bawede ecained by Chain of Custody Record Engler Coulton Andreas Sherid & Brown, Shall Time: (ON TO COY) CRAISH GITOTAR! Doo Co Field Filtered Sample (Yes or No.) Gagrab) arrane And Preservation Code: Matrix Company 33 3 Radiological Sample 8/20/20/1840 1745 8/20/20 0930 Saniple Unknown TAT Requested (days): Due Date Requested: Sample Date 18020201 SSOA# Poison B Skin Imtant iverable Requested: I. II, III, IV, Other (specify) Custody Seal No. Phone (412) 963-7058 Fax (412) 963-2468 ARAMW-3 ARAMW-4 Sable Hazard Identification mpty Kit Relinquished by: 301 Alpha Drive RIDC Park 4ddress 241 Ralph McGill Blwd SE E8# Sustady Seals Intact. Client Information ample Identification June Dy Pittsburgh, PA 15238 CR - Plant Arkwright 404-508-7116(Tel) SCS Contacts CS Contacts state of the state State, 7p. GA, 30308 GA Power Atlanta

Eurofins TestAmerica, Pittsburgh

Chain of Custody Record

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

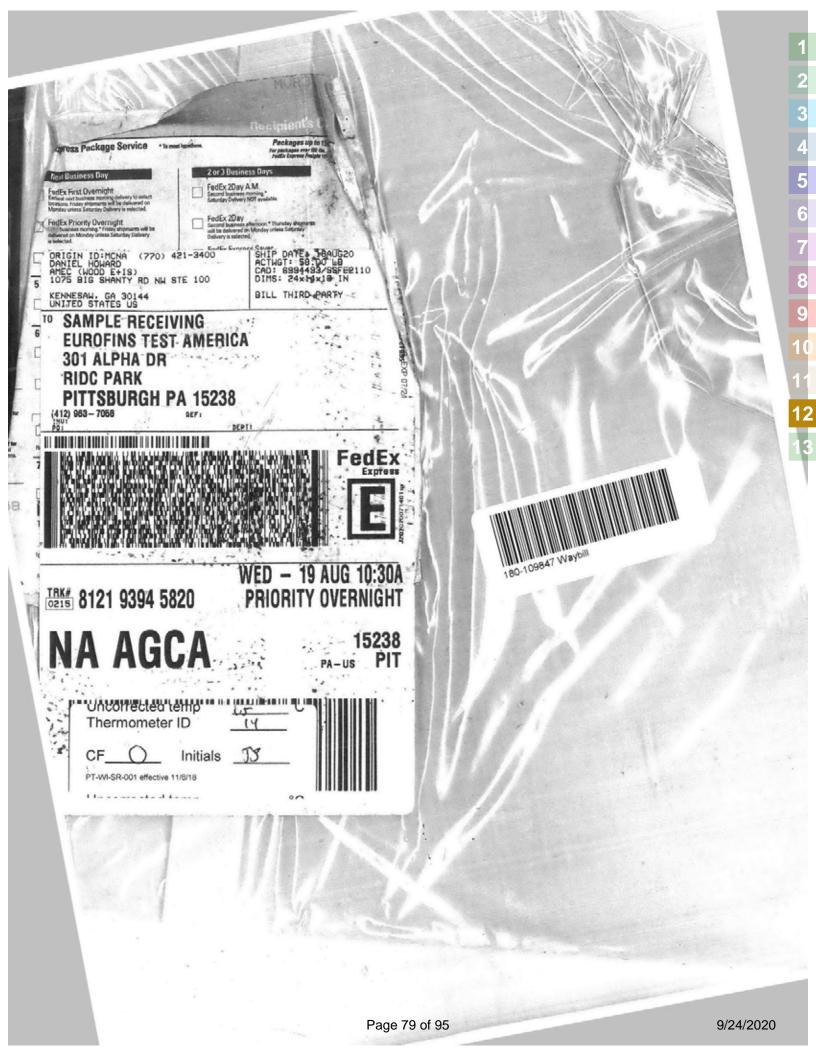
Phone (412) 953-7058 Fax (412) 963-2468

244- ATLANTA

Special Instructions/Note: Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Sisposal By Leb Archive For Month 180-109970 Chain of Custody whiten Analysis Requested coler Temperature(s) *C and Other Remarks Special Instructions/QC Requirements ceived by. करमीर+सि (६०२०वा स्थातक) स्थापन Lab PM Brown, Shali E-Mail Shall. Matrix ompany Radiologica! (C=comp, G=grab) Sample Type Ottowerd, Ashoredits 00 2/21/20/13/5 8/21/208945 Sample Standard Unknown TAT Requested (days): Due Date Requested Sample Date Project #. 18020201 SSO/W#. Poison B Skin Imitant Deliverable Requested: I, III, IV. Other (specify) Custody Seal No. Home L Horney Possible Hazard Identification ARAMW-6 ARG WC-21 mpty Kit Relinquished by. 241 Ralph McGill Blvd SE Custody Seals Intact: Client Information Sample Identification Project Name: CCR - Plant Arkwright 404-508-7116(Tel) SCS Contacts SCS Contacts ushed by Atlanta State, Ztp. GA, 30308 GA Power









E S

ORIGIN ID:MCNA (770) 421-940 DANIEL HOWARD AMEC (WOOD E-IS) 1075 BIG SHANTY RD NW STE 109 SHIP DATE: 18AUG20 ACTWGT: 42.15 LB CAD: 6994493/SSFE2110 DIMS: 24x13x14 IN

BILL THIRD PARTY

KENNESAW, GA 3014 UNITED_STATES US

SAMPLE RECEIVING EUROFINS TEST AMERICA 301 ALPHA DR RIDC PARK PITTSBURGH PA 15238

(412) 963 - 7068



TRK# 8121 9394 5830

WED - 19 AUG 10:30A PRIORITY OVERNIGHT

15238

PA-US

NA AGCA

2 Ty



Thermometer ID

CF O Initials

PT-WI-SR-001 effective 11/8/18



Align Open End of FedEx Pouch Here





10:30

RD NH STE 100

THIRD PARTY

EUROFINS TEST AMERICA 301 ALPHA DR

PITTSBURGH PA 15238





TRK# 8121 9394 5841

THU - 20 AUG 10:30A PRIORITY OVERNIGHT

15238



uncorrected temp Thermometer ID





9/24/2020





180-109930 Waybill

84102 SIVINESO MENV PERCS/1100/02VS

Uncorrected remp

EUROFINS TEST AMERICA EUROFINS TEST AMERICA

900:SF YADRUTAS THOINTHOUSENIGHT

BILL THIRD PARTY

8121 9394 5348



Job Number: 180-109846-1

Login Number: 109846

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-109846-1

Login Number: 109847

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-109846-1

Login Number: 109848 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-109846-1

Login Number: 109850 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

ordator: Matoon, Bobbio		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-109846-1

Login Number: 109851 List Source: Eurofin

List Number: 1

Cleator. Watson, Debble		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company Job Number: 180-109846-1

Login Number: 109918 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator. Watson, Debbie		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-109846-1

Login Number: 109929 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

ordator: Matoon, Bobbio		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-109846-1

Login Number: 109930 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-109846-1

Login Number: 109970

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-109846-2

Client Project/Site: CCR - Plant Arkwright

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham

Authorized for release by: 10/8/2020 5:03:16 PM

Shali Brown, Project Manager II (615)301-5031

Shali.Brown@Eurofinset.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

Client: Southern Company Project/Site: CCR - Plant Arkwright Laboratory Job ID: 180-109846-2

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Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-2

Job ID: 180-109846-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-109846-2

Comments

No additional comments.

Receipt

The samples were received on 8/20/2020 9:30 AM, 8/21/2020 9:45 AM and 8/22/2020 10:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 9 coolers at receipt time were 1.1° C, 1.2° C, 1.5° C, 1.6° C, 2.1° C, 2.4° C, 2.6° C, 2.7° C and 3.6° C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): ARGWC-10 (180-109848-1). The container labels list an id of GWC-10 while the COC lists ARGWC-10. The id's on the Coc were used.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): ARGWC-9 (180-109848-3). The container labels list an id of GWC-9 while the COC lists ARGWC-9. The id's on the Coc were used.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): ARGWA-5 (180-109850-1). The container labels list an id of GWA-5 while the COC lists ARGWA-5. The id's on the Coc were used.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): ARGWA-3 (180-109850-2). The container labels list an id of GWA-3 while the COC lists ARGWA-3. The id's on the Coc were used.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): ARGWC-7 (180-109850-3). The container labels list an id of GWC-7 while the COC lists ARGWC-7. The id's on the Coc were used.

RAD

Methods 903.0, 9315: Radium-226 prep batch 160-480640:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

ARGWA-14 (180-109846-1), ARGWC-15 (180-109846-2), ARGWC-16 (180-109846-3), FB#1 (180-109847-1), ARGWA-12 (180-109847-2), ARGWA-13 (180-109847-3), ARGWC-17 (180-109847-4), ARGWC-10 (180-109848-1), DUP-1 (180-109848-2), ARGWC-9 (180-109848-3), (LCS 160-480640/1-A) and (MB 160-480640/24-A)

Method 9315: Radium-226 prep batch 160-480684:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

ARGWA-5 (180-109850-1), ARGWA-3 (180-109850-2), ARGWC-7 (180-109850-3), EB#2 (180-109851-1), ARGWA-19 (180-109851-2), ARGWA-20 (180-109851-3), ARGWC-22 (180-109851-4), (LCS 160-480684/1-A), (LCSD 160-480684/2-A) and (MB 160-480684/10-A)

Methods 903.0, 9315: Radium-226 prep batch 160-481082:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

FB#2 (180-109918-1), ARGWC-23 (180-109918-2), DUP-2 (180-109918-3), ARAMW-1 (180-109918-4), ARAMW-2 (180-109918-5), ARGWC-8 (180-109929-1), ARGWC-18 (180-109929-2), ARAMW-6 (180-109970-1), ARGWC-21 (180-109970-2), (LCS 160-481082/1-A), (LCSD 160-481082/2-A) and (MB 160-481082/24-A)

Methods 903.0, 9315: Radium-226 prep batch 160-481232:

7

9

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1

Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-2

Job ID: 180-109846-2 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EB#1 (180-109930-1), ARAMW-3 (180-109930-2), ARAMW-4 (180-109930-3), (LCS 160-481232/1-A) and (MB 160-481232/23-A)

Methods 904.0, 9320: Radium-228 prep batch 160-481237:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EB#1 (180-109930-1), ARAMW-3 (180-109930-2), ARAMW-4 (180-109930-3), (LCS 160-481237/1-A) and (MB 160-481237/23-A)

Methods 904.0, 9320: Radium-228 prep batch 160-480651:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

ARGWA-14 (180-109846-1), ARGWC-15 (180-109846-2), ARGWC-16 (180-109846-3), FB#1 (180-109847-1), ARGWA-12 (180-109847-2), ARGWA-13 (180-109847-3), ARGWC-17 (180-109847-4), ARGWC-10 (180-109848-1), DUP-1 (180-109848-2), ARGWC-9 (180-109848-3), (LCS 160-480651/1-A) and (MB 160-480651/24-A)

Method 9320: Radium-228 prep batch 160-480689:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EB#2 (180-109851-1), (LCS 160-480689/1-A), (LCSD 160-480689/2-A) and (MB 160-480689/10-A)

Method 9320: Ra228 160-480689

The laboratory control sample (LCS) recovery (137%) was high, outside acceptance criteria 75-125% indicating a potential high bias to sample activity. Activity in the sample was less than the MDC and is reported with this narrative.

Methods 904.0, 9320: Radium-228 prep batch 160-481085:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

FB#2 (180-109918-1), ARGWC-23 (180-109918-2), ARAMW-1 (180-109918-4), ARAMW-2 (180-109918-5), ARGWC-8 (180-109929-1), ARGWC-18 (180-109929-2), ARAMW-6 (180-109970-1), ARGWC-21 (180-109970-2), (LCS 160-481085/1-A), (LCSD 160-481085/2-A) and (MB 160-481085/24-A)

Method 9320: Radium-228 prep batch 160-482400:

The method blank (MB) associated with the preparation batch 160-482400 and analytical batch 160-483126, has activity above the MDC and RL. Per client request, the data has been reported with this narrative.

Method 9320: Radium-228 prep batch 160-482400:

The Radium-228 laboratory control sample duplicate (LCSD) recovery (134%) associated with the following samples is outside the standard upper QC limit (125%) indicating a potential positive bias for that analyte. However the recovery falls within in house statistical limits (upper limit 138%). Per client request, the data have been reported with this narrative. ARGWA-5 (180-109850-1), ARGWA-3 (180-109850-2), ARGWC-7 (180-109850-3), ARGWA-19 (180-109851-2), ARGWA-20 (180-109851-3), ARGWC-22 (180-109851-4), (LCS 160-482400/1-A), (LCSD 160-482400/2-A) and (MB 160-482400/9-A)

Method 9320: Radium-228 prep batch 160-482400:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

ARGWA-5 (180-109850-1), ARGWA-3 (180-109850-2), ARGWC-7 (180-109850-3), ARGWA-19 (180-109851-2), ARGWA-20 (180-109851-3), ARGWC-22 (180-109851-4), (LCS 160-482400/1-A), (LCSD 160-482400/2-A) and (MB 160-482400/9-A)

Eurofins TestAmerica, Pittsburgh 10/8/2020

Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-2

Job ID: 180-109846-2 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

Method 9320: Radium-228 prep batch 160-483141:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

DUP-2 (180-109918-3), (LCS 160-483141/1-A), (LCSD 160-483141/2-A) and (MB 160-483141/4-A)

Method PrecSep 0: Radium 228 Prep Batch 160-480689:

Insufficient sample volume was available to perform a sample duplicate for the following samples: ARGWA-5 (180-109850-1), ARGWA-3 (180-109850-2), ARGWC-7 (180-109850-3), EB#2 (180-109851-1), ARGWA-19 (180-109851-2), ARGWA-20 (180-109851-3) and ARGWC-22 (180-109851-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep 0: Radium 228 Prep Batch 160-481237:

Samples 240-135743-1 and 240-135511-2 were prepared at a reduced aliquot due to yellow discoloration and a cloudy appearance: EB#1 (180-109930-1), ARAMW-3 (180-109930-2) and ARAMW-4 (180-109930-3). All samples were prepared at a reduced aliquot to insure sufficient volume remains if needed for analysis: <CommaMerge>.

Method PrecSep 0: Radium 228 Prep Batch 160-482400:

The following samples were prepared at a reduced aliquot to insure sufficient volume remains if needed for analysis: ARGWA-5 (180-109850-1), ARGWA-3 (180-109850-2), ARGWC-7 (180-109850-3), ARGWA-19 (180-109851-2), ARGWA-20 (180-109851-3) and ARGWC-22 (180-109851-4).

Method PrecSep_0: Radium 228 Prep Batch 160-482400:

Insufficient sample volume was available to perform a sample duplicate for the following samples: ARGWA-5 (180-109850-1), ARGWA-3 (180-109850-2), ARGWC-7 (180-109850-3), ARGWA-19 (180-109851-2), ARGWA-20 (180-109851-3) and ARGWC-22 (180-109851-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep_0: Radium 228 Prep Batch 160-483141:

Insufficient sample volume was available to perform a sample duplicate for the following sample: DUP-2 (180-109918-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep 0: Radium 228 Prep Batch 160-483141:

The following sample was prepared at a reduced aliquot due to re-prep: DUP-2 (180-109918-3).

Method PrecSep-21: Radium 226 Prep Batch 160-480684:

Insufficient sample volume was available to perform a sample duplicate for the following samples: ARGWA-5 (180-109850-1), ARGWA-3 (180-109850-2), ARGWC-7 (180-109850-3), EB#2 (180-109851-1), ARGWA-19 (180-109851-2), ARGWA-20 (180-109851-3) and ARGWC-22 (180-109851-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium 226 Prep Batch 160-481232:

Samples 240-135743-1 and 240-135511-2 were prepared at a reduced aliquot due to yellow discoloration and a cloudy appearance: EB#1 (180-109930-1), ARAMW-3 (180-109930-2) and ARAMW-4 (180-109930-3). All samples were prepared at a reduced aliquot to insure sufficient volume remains if needed for analysis: <CommaMerge>.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Definitions/Glossary

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Qualifiers

R	а	d

Qualifier **Qualifier Description** LCS or LCSD is outside acceptance limits.

U Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly	used abbreviations ma	v or mav r	not be prese	nt in this report
ADDIGNICION	THESE COMMISSIONS	, useu abbievialions ina	y Oi iiiay i	IOL DE PIESE	III III UIII I IOPOI L

¤ Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery **CFL** Contains Free Liquid Colony Forming Unit CFU **CNF** Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

Detection Limit (DoD/DOE) DΙ

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

Decision Level Concentration (Radiochemistry) DLC

EDL Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit ML Minimum Level (Dioxin) Most Probable Number MPN MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit**

PRES Presumptive QC **Quality Control**

Relative Error Ratio (Radiochemistry) RER

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) **TEQ**

TNTC Too Numerous To Count

Accreditation/Certification Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-2

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	10-05-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

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Sample Summary

Client: Southern Company

180-109930-3

180-109970-1

180-109970-2

ARAMW-4

ARAMW-6

ARGWC-21

Project/Site: CCR - Plant Arkwright

Lab Sample ID Client Sample ID Matrix Collected Received Asset ID 180-109846-1 ARGWA-14 Water 08/19/20 13:55 08/20/20 09:30 180-109846-2 ARGWC-15 Water 08/19/20 10:05 08/20/20 09:30 180-109846-3 ARGWC-16 Water 08/19/20 12:05 08/20/20 09:30 180-109847-1 FB#1 Water 08/18/20 11:00 08/20/20 09:30 180-109847-2 ARGWA-12 Water 08/18/20 13:00 08/20/20 09:30 08/18/20 14:50 08/20/20 09:30 Water 180-109847-3 ARGWA-13 ARGWC-17 Water 08/18/20 14:45 08/20/20 09:30 180-109847-4 180-109848-1 ARGWC-10 Water 08/19/20 11:35 08/20/20 09:30 180-109848-2 DUP-1 Water 08/19/20 00:00 08/20/20 09:30 180-109848-3 ARGWC-9 Water 08/19/20 14:25 08/20/20 09:30 180-109850-1 ARGWA-5 Water 08/18/20 11:35 08/20/20 09:30 180-109850-2 ARGWA-3 Water 08/18/20 13:20 08/20/20 09:30 180-109850-3 ARGWC-7 Water 08/18/20 15:25 08/20/20 09:30 EB#2 Water 08/19/20 09:15 08/20/20 09:30 180-109851-1 180-109851-2 ARGWA-19 Water 08/19/20 10:56 08/20/20 09:30 ARGWA-20 180-109851-3 Water 08/19/20 13:44 08/20/20 09:30 180-109851-4 ARGWC-22 Water 08/19/20 15:32 08/20/20 09:30 180-109918-1 FB#2 Water 08/20/20 10:45 08/21/20 09:45 180-109918-2 ARGWC-23 Water 08/20/20 12:15 08/21/20 09:45 180-109918-3 DUP-2 Water 08/20/20 00:00 08/21/20 09:45 Water 180-109918-4 ARAMW-1 08/20/20 14:36 08/21/20 09:45 180-109918-5 ARAMW-2 Water 08/20/20 16:35 08/21/20 09:45 ARGWC-8 Water 08/20/20 10:35 08/21/20 09:45 180-109929-1 180-109929-2 ARGWC-18 Water 08/20/20 17:05 08/21/20 09:45 180-109930-1 EB#1 Water 08/20/20 09:30 08/21/20 09:45 180-109930-2 ARAMW-3 Water 08/20/20 14:45 08/21/20 09:45

Water

Water

Water

08/20/20 11:45 08/21/20 09:45

08/21/20 09:45 08/22/20 10:00

08/21/20 10:36 08/22/20 10:00

Job ID: 180-109846-2

Method Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

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1:

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-14

Date Collected: 08/19/20 13:55

Lab Sample ID: 180-109846-1

Matrix: Water

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.10 mL	1.0 g	480640	08/24/20 15:59	AVB	TAL SL
Total/NA	Analysis	9315 nt ID: GFPCRED		1			482515	09/15/20 11:21	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.10 mL	1.0 g	480651	08/24/20 18:23	AVB	TAL SL
Total/NA	Analysis	9320		1			482102	09/10/20 12:19	SCB	TAL SL
	Instrumer	nt ID: GFPCBLUE								
Total/NA	Analysis	Ra226_Ra228		1			482641	09/17/20 10:50	CAH	TAL SL
	Instrumer	nt ID: NOEQUIP								

Client Sample ID: ARGWC-15

Date Collected: 08/19/20 10:05

Date Received: 08/20/20 09:30

Lab Sample ID: 180-109846-2

Lab Sample ID: 180-109846-3

Matrix: Water

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.48 mL	1.0 g	480640	08/24/20 15:59	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			482515	09/15/20 11:21	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.48 mL	1.0 g	480651	08/24/20 18:23	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			482102	09/10/20 12:19	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			482641	09/17/20 10:50	CAH	TAL SL

Client Sample ID: ARGWC-16

Date Collected: 08/19/20 12:05

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.56 mL	1.0 g	480640	08/24/20 15:59	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			482515	09/15/20 11:22	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.56 mL	1.0 g	480651	08/24/20 18:23	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			482102	09/10/20 12:20	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			482641	09/17/20 10:50	CAH	TAL SL

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Client Sample ID: FB#1	Lab Sample ID: 180-109847-1
Date Collected: 08/18/20 11:00	Matrix: Water
Date Received: 08/20/20 09:30	
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	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.98 mL	1.0 g	480640	08/24/20 15:59	AVB	TAL SL
Total/NA	Analysis	9315		1			482515	09/15/20 11:22	SCB	TAL SL
	Instrumer	t ID: GFPCRED								

Eurofins TestAmerica, Pittsburgh

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Client: Southern Company Project/Site: CCR - Plant Arkwright

Client Sample ID: FB#1

Lab Sample ID: 180-109847-1

Matrix: Water

Date Collected: 08/18/20 11:00 Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			1000.98 mL	1.0 g	480651	08/24/20 18:23	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			482102	09/10/20 12:20	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			482641	09/17/20 10:50	CAH	TAL SL

Client Sample ID: ARGWA-12 Lab Sample ID: 180-109847-2

Date Collected: 08/18/20 13:00 Matrix: Water

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.27 mL	1.0 g	480640	08/24/20 15:59	AVB	TAL SL
Total/NA	Analysis	9315 nt ID: GFPCRED		1			482515	09/15/20 11:22	SCB	TAL SL
Total/NA	Prep	PrecSep 0			999.27 mL	1.0 g	480651	08/24/20 18:23	Λ\/D	TAL SL
Total/NA	Analysis	9320 ot ID: GFPCBLUE		1	999.27 IIIL	1.0 g	482102	09/10/20 12:20		TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			482641	09/17/20 10:50	CAH	TAL SL

Client Sample ID: ARGWA-13 Lab Sample ID: 180-109847-3

Date Collected: 08/18/20 14:50 Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.64 mL	1.0 g	480640	08/24/20 15:59	AVB	TAL SL
Total/NA	Analysis	9315		1			482515	09/15/20 11:22	SCB	TAL SL
	Instrumer	nt ID: GFPCRED								
Total/NA	Prep	PrecSep_0			999.64 mL	1.0 g	480651	08/24/20 18:23	AVB	TAL SL
Total/NA	Analysis	9320		1			482102	09/10/20 12:20	SCB	TAL SL
	Instrumer	nt ID: GFPCBLUE								
Total/NA	Analysis	Ra226_Ra228		1			482641	09/17/20 10:50	CAH	TAL SL
	Instrumer	nt ID: NOEQUIP								

Client Sample ID: ARGWC-17 Lab Sample ID: 180-109847-4

Date Collected: 08/18/20 14:45 Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.83 mL	1.0 g	480640	08/24/20 15:59	AVB	TAL SL
Total/NA	Analysis	9315		1			482515	09/15/20 11:22	SCB	TAL SL
	Instrumer	t ID: GFPCRED								
Total/NA	Prep	PrecSep_0			999.83 mL	1.0 g	480651	08/24/20 18:23	AVB	TAL SL
Total/NA	Analysis	9320		1			482102	09/10/20 12:20	SCB	TAL SL
	Instrumer	t ID: GFPCBLUE								

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Matrix: Water

Project/Site: CCR - Plant Arkwright

Client: Southern Company

Client Sample ID: ARGWC-17

Lab Sample ID: 180-109847-4

Date Collected: 08/18/20 14:45 **Matrix: Water** Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1			482641	09/17/20 10:50	CAH	TAL SL

Client Sample ID: ARGWC-10

Lab Sample ID: 180-109848-1 Date Collected: 08/19/20 11:35 **Matrix: Water**

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.89 mL	1.0 g	480640	08/24/20 15:59	AVB	TAL SL
Total/NA	Analysis	9315		1			482515	09/15/20 11:23	SCB	TAL SL
	Instrumer	nt ID: GFPCRED								
Total/NA	Prep	PrecSep_0			1000.89 mL	1.0 g	480651	08/24/20 18:23	AVB	TAL SL
Total/NA	Analysis	9320		1			482071	09/10/20 12:22	SCB	TAL SL
	Instrumer	nt ID: GFPCPURPLE								
Total/NA	Analysis	Ra226_Ra228		1			482641	09/17/20 10:50	CAH	TAL SL
	Instrumer	nt ID: NOEQUIP								

Lab Sample ID: 180-109848-2 **Client Sample ID: DUP-1**

Date Collected: 08/19/20 00:00 **Matrix: Water**

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.10 mL	1.0 g	480640	08/24/20 15:59	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			482515	09/15/20 11:23	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.10 mL	1.0 g	480651	08/24/20 18:23	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			482071	09/10/20 12:22	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			482641	09/17/20 10:50	CAH	TAL SL

Lab Sample ID: 180-109848-3 **Client Sample ID: ARGWC-9**

Date Collected: 08/19/20 14:25 Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.50 mL	1.0 g	480640	08/24/20 15:59	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 at ID: GFPCRED		1			482515	09/15/20 13:55	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.50 mL	1.0 g	480651	08/24/20 18:23	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCPURPLE		1			482071	09/10/20 12:22	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			482641	09/17/20 10:50	CAH	TAL SL

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Client: Southern Company

Project/Site: CCR - Plant Arkwright

Lab Sample ID: 180-109850-1 **Client Sample ID: ARGWA-5**

Date Collected: 08/18/20 11:35 **Matrix: Water**

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.23 mL	1.0 g	480684	08/25/20 11:29	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCPURPLE	Ē	1			482643	09/16/20 08:04	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.08 mL	1.0 g	482400	09/14/20 10:14	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			483126	09/21/20 11:52	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			484497	10/02/20 17:53	СММ	TAL SL

Client Sample ID: ARGWA-3 Lab Sample ID: 180-109850-2

Date Collected: 08/18/20 13:20 **Matrix: Water**

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.90 mL	1.0 g	480684	08/25/20 11:29	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCPURPLE		1			482643	09/16/20 09:50	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.34 mL	1.0 g	482400	09/14/20 10:14	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			483126	09/21/20 11:52	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			484497	10/02/20 17:53	СММ	TAL SL

Client Sample ID: ARGWC-7 Lab Sample ID: 180-109850-3 Date Collected: 08/18/20 15:25

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.96 mL	1.0 g	480684	08/25/20 11:29	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			482613	09/16/20 09:49	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.00 mL	1.0 g	482400	09/14/20 10:14	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			483126	09/21/20 11:53	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			484497	10/02/20 17:53	СММ	TAL SL

Client Sample ID: EB#2 Lab Sample ID: 180-109851-1

Date Collected: 08/19/20 09:15

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.44 mL	1.0 g	480684	08/25/20 11:29	AVB	TAL SL
Total/NA	Analysis	9315		1			482613	09/16/20 09:50	SCB	TAL SL
	Instrumen	t ID: GFPCBLUE								

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Matrix: Water

Client: Southern Company Project/Site: CCR - Plant Arkwright

Lab Sample ID: 180-109851-1 Client Sample ID: EB#2

Matrix: Water

Date Collected: 08/19/20 09:15 Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			999.44 mL	1.0 g	480689	08/25/20 12:41	AVB	TAL SL
Total/NA	Analysis	9320		1			481799	09/09/20 13:23	SCB	TAL SL
	Instrumer	t ID: GFPCPROTE	AN							
Total/NA	Analysis	Ra226_Ra228		1			484497	10/02/20 17:53	CMM	TAL SL
	Instrumer	nt ID: NOEQUIP								

Lab Sample ID: 180-109851-2 **Client Sample ID: ARGWA-19**

Date Collected: 08/19/20 10:56 **Matrix: Water**

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.35 mL	1.0 g	480684	08/25/20 11:29	AVB	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1			482613	09/16/20 12:20	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.87 mL	1.0 g	482400	09/14/20 10:14	AVB	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCBLUE		1			483126	09/21/20 11:53	SCB	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228		1			484497	10/02/20 17:53	СММ	TAL SL

Lab Sample ID: 180-109851-3 **Client Sample ID: ARGWA-20**

Date Collected: 08/19/20 13:44 Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.17 mL	1.0 g	480684	08/25/20 11:29	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 at ID: GFPCBLUE		1			482613	09/16/20 12:21	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.41 mL	1.0 g	482400	09/14/20 10:14	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCBLUE		1			483126	09/21/20 11:53	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			484497	10/02/20 17:53	СММ	TAL SL

Client Sample ID: ARGWC-22 Lab Sample ID: 180-109851-4

Date Collected: 08/19/20 15:32 Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.16 mL	1.0 g	480684	08/25/20 11:29	AVB	TAL SL
Total/NA	Analysis	9315		1			482613	09/16/20 14:43	SCB	TAL SL
	Instrumen	t ID: GFPCBLUE								
Total/NA	Prep	PrecSep_0			750.49 mL	1.0 g	482400	09/14/20 10:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483126	09/21/20 11:53	SCB	TAL SL
	Instrumen	t ID: GFPCBLUE								

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Matrix: Water

Matrix: Water

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Client: Southern Company

Project/Site: CCR - Plant Arkwright

Lab Sample ID: 180-109851-4 Client Sample ID: ARGWC-22 Date Collected: 08/19/20 15:32

Matrix: Water

Date Received: 08/20/20 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1			484497	10/02/20 17:53	CMM	TAL SL

Client Sample ID: FB#2 Lab Sample ID: 180-109918-1 Date Collected: 08/20/20 10:45 **Matrix: Water**

Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.65 mL	1.0 g	481082	08/28/20 16:42	AVB	TAL SL
Total/NA	Analysis Instrumen	9315 nt ID: GFPCRED		1			483033	09/21/20 10:52	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.65 mL	1.0 g	481085	08/28/20 17:17	AVB	TAL SL
Total/NA	Analysis Instrumen	9320 nt ID: GFPCPURPLE		1			482946	09/18/20 11:58	SCB	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 nt ID: NOEQUIP		1			483465	09/23/20 12:33	СММ	TAL SL

Lab Sample ID: 180-109918-2 **Client Sample ID: ARGWC-23**

Date Collected: 08/20/20 12:15 Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.18 mL	1.0 g	481082	08/28/20 16:42	AVB	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			483033	09/21/20 10:52	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.18 mL	1.0 g	481085	08/28/20 17:17	AVB	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1			482957	09/18/20 11:59	SCB	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228		1			483465	09/23/20 12:33	СММ	TAL SL

Lab Sample ID: 180-109918-3 **Client Sample ID: DUP-2**

Date Collected: 08/20/20 00:00 Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.21 mL	1.0 g	481082	08/28/20 16:42	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 at ID: GFPCRED		1			483033	09/21/20 10:52	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.11 mL	1.0 g	483141	09/21/20 14:11	RBR	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCBLUE		1			484399	09/30/20 12:41	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			483465	09/23/20 12:33	CMM	TAL SL

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Matrix: Water

Matrix: Water

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Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright **Client Sample ID: ARAMW-1**

Lab Sample ID: 180-109918-4

Matrix: Water

Date Collected: 08/20/20 14:36 Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.06 mL	1.0 g	481082	08/28/20 16:42	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			483033	09/21/20 10:52	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.06 mL	1.0 g	481085	08/28/20 17:17	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			482957	09/18/20 12:00	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			483465	09/23/20 12:33	СММ	TAL SL

Client Sample ID: ARAMW-2 Lab Sample ID: 180-109918-5

Date Collected: 08/20/20 16:35 **Matrix: Water**

Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.58 mL	1.0 g	481082	08/28/20 16:42	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 at ID: GFPCRED		1			483033	09/21/20 12:46	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.58 mL	1.0 g	481085	08/28/20 17:17	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCBLUE		1			482957	09/18/20 12:00	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			483465	09/23/20 12:33	СММ	TAL SL

Lab Sample ID: 180-109929-1 **Client Sample ID: ARGWC-8** Date Collected: 08/20/20 10:35 **Matrix: Water**

Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.96 mL	1.0 g	481082	08/28/20 16:42	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			483033	09/21/20 12:46	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.96 mL	1.0 g	481085	08/28/20 17:17	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			482957	09/18/20 12:00	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			483465	09/23/20 12:33	СММ	TAL SL

Client Sample ID: ARGWC-18 Lab Sample ID: 180-109929-2

Date Collected: 08/20/20 17:05 Date Received: 08/21/20 09:45

Instrument ID: GFPCRED

_										
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.67 mL	1.0 g	481082	08/28/20 16:42	AVB	TAL SL
Total/NA	Analysis	9315		1			483033	09/21/20 12:46	SCB	TAL SL

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Client: Southern Company Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-18

Date Collected: 08/20/20 17:05 Date Received: 08/21/20 09:45

Lab Sample ID: 180-109929-2

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			1000.67 mL	1.0 g	481085	08/28/20 17:17	AVB	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1			482957	09/18/20 12:00	SCB	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			483465	09/23/20 12:33	CMM	TAL SL

Client Sample ID: EB#1 Date Collected: 08/20/20 09:30

Date Received: 08/21/20 09:45

Lab Sample ID: 180-109930-1

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.85 mL	1.0 g	481232	08/31/20 13:50	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			483161	09/22/20 09:54	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.85 mL	1.0 g	481237	08/31/20 14:14	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			481801	09/09/20 13:13	CMM	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			484496	10/02/20 17:52	СММ	TAL SL

Client Sample ID: ARAMW-3

Date Collected: 08/20/20 14:45

Date Received: 08/21/20 09:45

Lab Sample ID: 180-109930-2 **Matrix: Water**

Lab Sample ID: 180-109930-3

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.36 mL	1.0 g	481232	08/31/20 13:50	AVB	TAL SL
Total/NA	Analysis	9315		1			483161	09/22/20 09:55	SCB	TAL SL
	Instrumer	nt ID: GFPCRED								
Total/NA	Prep	PrecSep_0			750.36 mL	1.0 g	481237	08/31/20 14:14	AVB	TAL SL
Total/NA	Analysis	9320		1			481801	09/09/20 13:14	CMM	TAL SL
	Instrumer	nt ID: GFPCPURPLE								
Total/NA	Analysis	Ra226_Ra228		1			484496	10/02/20 17:52	CMM	TAL SL
	Instrumer	nt ID: NOEQUIP								

Client Sample ID: ARAMW-4

Date Collected: 08/20/20 11:45

Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.18 mL	1.0 g	481232	08/31/20 13:50	AVB	TAL SL
Total/NA	Analysis	9315		1			483161	09/22/20 09:55	SCB	TAL SL
	Instrumen	t ID: GFPCRED								
Total/NA	Prep	PrecSep_0			749.18 mL	1.0 g	481237	08/31/20 14:14	AVB	TAL SL
Total/NA	Analysis	9320		1	1.0 mL	1.0 mL	481801	09/09/20 13:14	CMM	TAL SL
	Instrumen	t ID: GFPCPURPLE								

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Lab Chronicle

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-4 Lab Sample ID: 180-109930-3

Date Collected: 08/20/20 11:45 **Matrix: Water** Date Received: 08/21/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1			484496	10/02/20 17:52	CMM	TAL SL

Client Sample ID: ARAMW-6

Lab Sample ID: 180-109970-1 Date Collected: 08/21/20 09:45 **Matrix: Water**

Date Received: 08/22/20 10:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.25 mL	1.0 g	481082	08/28/20 16:42	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			483033	09/21/20 12:46	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.25 mL	1.0 g	481085	08/28/20 17:17	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			482957	09/18/20 12:00	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			483465	09/23/20 12:33	СММ	TAL SL

Lab Sample ID: 180-109970-2 Client Sample ID: ARGWC-21 **Matrix: Water**

Date Collected: 08/21/20 10:36 Date Received: 08/22/20 10:00

	Batch	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Prep Type	Туре									
Total/NA	Prep	PrecSep-21			999.57 mL	1.0 g	481082	08/28/20 16:42	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			483033	09/21/20 12:46	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.57 mL	1.0 g	481085	08/28/20 17:17	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			482957	09/18/20 12:00	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			483465	09/23/20 12:33	СММ	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Prep

AVB = Amber Bleem

RBR = Rachael Ratcliff

Batch Type: Analysis

CAH = Chris Hough

CMM = Chelsea Mazariegos

SCB = Sarah Bernsen

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-14

Lab Sample ID: 180-109846-1 Date Collected: 08/19/20 13:55

Matrix: Water

Date Received: 08/20/20 09:30

Method: 9315 - Rac	dium-226 (GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0256	U	0.0765	0.0765	1.00	0.144	pCi/L	08/24/20 15:59	09/15/20 11:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					08/24/20 15:59	09/15/20 11:21	1

Method: 9320 -	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0805	U	0.258	0.258	1.00	0.480	pCi/L	08/24/20 18:23	09/10/20 12:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					08/24/20 18:23	09/10/20 12:19	1
Y Carrier	85.2		40 - 110					08/24/20 18:23	09/10/20 12:19	1

Method: Ra226_Ra2	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0549	U	0.269	0.269	5.00	0.480	pCi/L		09/17/20 10:50	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-15

Lab Sample ID: 180-109846-2

Matrix: Water

Date Collected: 08/19/20 10:05 Date Received: 08/20/20 09:30

Method: 9315 - Rad	dium-226 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0702	Ū	0.0795	0.0798	1.00	0.129	pCi/L	08/24/20 15:59	09/15/20 11:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					08/24/20 15:59	09/15/20 11:21	1

Method: 9320 - F	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.468		0.260	0.264	1.00	0.391	pCi/L	08/24/20 18:23	09/10/20 12:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					08/24/20 18:23	09/10/20 12:19	1
Y Carrier	81.5		40 - 110					08/24/20 18:23	09/10/20 12:19	1

Method: Ra226_Ra	228 - Com	bined Rad	dium-226 a	nd Radium	1-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.538		0.272	0.276	5.00	0.391	pCi/L		09/17/20 10:50	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-16

Lab Sample ID: 180-109846-3 Date Collected: 08/19/20 12:05

Matrix: Water

Date Received: 08/20/20 09:30

Method: 9315 - R	adium-226 (GFPC)								
	·		Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.161	·	0.0973	0.0983	1.00	0.124	pCi/L	08/24/20 15:59	09/15/20 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.4		40 - 110					08/24/20 15:59	09/15/20 11:22	1

Method: 9320 -		, ,	Count Uncert.	Total Uncert.						
Analyte	Posult	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Allalyte		Qualifier	(20+1-)	(20+/-)	NL _	IVIDC	OIIIL	Fiepaieu	Allalyzeu	Dil Fac
Radium-228	0.144	U	0.269	0.269	1.00	0.459	pCi/L	08/24/20 18:23	09/10/20 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.4		40 - 110					08/24/20 18:23	09/10/20 12:20	1
Y Carrier	83.0		40 - 110					08/24/20 18:23	09/10/20 12:20	1

Method: Ra226_Ra2	228 - Con	bined Ra	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.306	U	0.286	0.286	5.00	0.459	pCi/L		09/17/20 10:50	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: FB#1 Lab Sample ID: 180-109847-1

Matrix: Water

Date Collected: 08/18/20 11:00 Date Received: 08/20/20 09:30

Method: 9315 - Ra	dium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
			Officert.	Officert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00971	U	0.0738	0.0738	1.00	0.144	pCi/L	08/24/20 15:59	09/15/20 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					08/24/20 15:59	09/15/20 11:22	1
_										

Method: 9320 - F	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.533		0.333	0.337	1.00	0.515	pCi/L	08/24/20 18:23	09/10/20 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					08/24/20 18:23	09/10/20 12:20	1
Y Carrier	83.4		40 - 110					08/24/20 18:23	09/10/20 12:20	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.543		0.341	0.345	5.00	0.515	pCi/L		09/17/20 10:50	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-12

Lab Sample ID: 180-109847-2

Matrix: Water

Date Collected: 08/18/20 13:00 Date Received: 08/20/20 09:30

Method: 9315 - Ra	dium-226 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.110	U	0.0818	0.0824	1.00	0.111	pCi/L	08/24/20 15:59	09/15/20 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.0		40 - 110					08/24/20 15:59	09/15/20 11:22	1

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.477	U	0.335	0.338	1.00	0.521	pCi/L	08/24/20 18:23	09/10/20 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.0		40 - 110					08/24/20 18:23	09/10/20 12:20	1
Y Carrier	77.4		40 - 110					08/24/20 18:23	09/10/20 12:20	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.587		0.345	0.348	5.00	0.521	pCi/L		09/17/20 10:50	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-13 Lab Sample ID: 180-109847-3

Date Collected: 08/18/20 14:50 **Matrix: Water**

Date Received: 08/20/20 09:30

Method: 9315 - Rac	lium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0366	U	0.0581	0.0582	1.00	0.101	pCi/L	08/24/20 15:59	09/15/20 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110					08/24/20 15:59	09/15/20 11:22	1

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.344	U	0.261	0.263	1.00	0.410	pCi/L	08/24/20 18:23	09/10/20 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110					08/24/20 18:23	09/10/20 12:20	1
Y Carrier	83.7		40 - 110					08/24/20 18:23	09/10/20 12:20	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.380	U	0.267	0.269	5.00	0.410	pCi/L		09/17/20 10:50	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-17

Lab Sample ID: 180-109847-4

Matrix: Water

Date Collected: 08/18/20 14:45 Date Received: 08/20/20 09:30

Method: 9315 - I	Radium-226 ((GFPC)								
	·		Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0989	U	0.0751	0.0756	1.00	0.104	pCi/L	08/24/20 15:59	09/15/20 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					08/24/20 15:59	09/15/20 11:22	1
_										

Method: 9320 - I	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.324	U	0.246	0.248	1.00	0.386	pCi/L	08/24/20 18:23	09/10/20 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					08/24/20 18:23	09/10/20 12:20	1
Y Carrier	83.4		40 - 110					08/24/20 18:23	09/10/20 12:20	1

Method: Ra226_Ra	228 - Con	bined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.423		0.257	0.259	5.00	0.386	pCi/L		09/17/20 10:50	1

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10/8/2020

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-10

Lab Sample ID: 180-109848-1 Date Collected: 08/19/20 11:35

Matrix: Water

Date Received: 08/20/20 09:30

Method: 9315 - Rad	dium- <mark>226</mark> (GFPC)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0672	U	0.0665	0.0668	1.00	0.102	pCi/L	08/24/20 15:59	09/15/20 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.1		40 - 110					08/24/20 15:59	09/15/20 11:23	1

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0942	U	0.245	0.245	1.00	0.451	pCi/L	08/24/20 18:23	09/10/20 12:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.1		40 - 110					08/24/20 18:23	09/10/20 12:22	1
Y Carrier	81.9		40 - 110					08/24/20 18:23	09/10/20 12:22	1

Method: Ra226_Ra2	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0271	U	0.254	0.254	5.00	0.451	pCi/L		09/17/20 10:50	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: DUP-1 Lab Sample ID: 180-109848-2

Matrix: Water

Date Collected: 08/19/20 00:00 Date Received: 08/20/20 09:30

Method: 9315 - Ra	dium-226 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0617	U	0.0657	0.0659	1.00	0.103	pCi/L	08/24/20 15:59	09/15/20 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					08/24/20 15:59	09/15/20 11:23	1

	- "	o 115	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.285	U	0.231	0.233	1.00	0.464	pCi/L	08/24/20 18:23	09/10/20 12:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					08/24/20 18:23	09/10/20 12:22	1
Y Carrier	79.3		40 - 110					08/24/20 18:23	09/10/20 12:22	1

Method: Ra226_Ra2	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.224	U	0.240	0.242	5.00	0.464	pCi/L		09/17/20 10:50	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-9

Lab Sample ID: 180-109848-3

Matrix: Water

Date Collected: 08/19/20 14:25 Date Received: 08/20/20 09:30

Method: 9315 - R		GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0965		0.0703	0.0708	1.00	0.0930	pCi/L	08/24/20 15:59	09/15/20 13:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					08/24/20 15:59	09/15/20 13:55	1
_										

Method: 9320 - I	Radium-228 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0279	U	0.272	0.272	1.00	0.479	pCi/L	08/24/20 18:23	09/10/20 12:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					08/24/20 18:23	09/10/20 12:22	1
Y Carrier	81.5		40 - 110					08/24/20 18:23	09/10/20 12:22	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.124	U	0.281	0.281	5.00	0.479	pCi/L		09/17/20 10:50	1

Client: Southern Company Project/Site: CCR - Plant Arkwright Job ID: 180-109846-2

Client Sample ID: ARGWA-5

Lab Sample ID: 180-109850-1

Matrix: Water

Date Collected:	08/18/20 11:35
Date Received:	08/20/20 09:30

m-226 ((GFPC)								
		Count	Total						
		Uncert.	Uncert.						
Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
0.0111	U	0.0550	0.0550	1.00	0.109	pCi/L	08/25/20 11:29	09/16/20 08:04	1
%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
91.2		40 - 110					08/25/20 11:29	09/16/20 08:04	1
	Result 0.0111 %Yield	Result Qualifier 0.0111 U **Yield Qualifier 91.2	Result 0.0111 Qualifier Qualifier (2σ+/-) 0.0550 %Yield Qualifier Qualifier Limits	Result 0.0111 Qualifier Qualifier (2σ+/-) (2σ+/-) (2σ+/-) (2σ+/-) %Yield Qualifier Limits	Result 0.0111 Qualifier Qualifier (2σ+/-) (2σ+/-) (2σ+/-) (1.00 RL (1.00) %Yield Qualifier Limits	Count Total Uncert. Uncert. Uncert. O.0111 U O.0550 O.05	Count Uncert. Uncer	Count Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Count Uncert. Uncert. Count Uncert. Count Uncert. Count Uncert. Count Uncert. Count Uncert. Count Uncert. Count	Count Uncert. Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Uncert. Count Uncert. Uncert. Count Uncert. Prepared Analyzed Analyzed Sylid Qualifier Limits Limits Prepared Analyzed Analyzed Prepared Analyzed

Method: 9320 - F	Radium-228 ((GFPC)	0	T-4-1						
Analyte	Pocult	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analvzed	Dil Fac
Analyte	Result	Qualifier	(20+/-)	(20+/-)	KL .	MIDC	Unit	Frepareu	Allalyzeu	DII Fac
Radium-228	1.11	*	0.432	0.444	1.00	0.597	pCi/L	09/14/20 10:14	09/21/20 11:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					09/14/20 10:14	09/21/20 11:52	1
Y Carrier	81.9		40 - 110					09/14/20 10:14	09/21/20 11:52	1

Method: Ra226_Ra	228 - Con	bined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.12		0.435	0.447	5.00	0.597	pCi/L		10/02/20 17:53	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Date Received: 08/20/20 09:30

Client Sample ID: ARGWA-3 Lab Sample ID: 180-109850-2

Date Collected: 08/18/20 13:20

Matrix: Water

Method: 9315 - Ra	dium-226 ((GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0283	U	0.0621	0.0622	1.00	0.114	pCi/L	08/25/20 11:29	09/16/20 09:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analvzed	Dil Fac
Ba Carrier	05.0		40 - 110					08/25/20 11:29	09/16/20 09:50	
Da Carrier	85.8		40 - 110					00/23/20 11.29	09/10/20 09.50	ı

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.104	U *	0.299	0.299	1.00	0.520	pCi/L	09/14/20 10:14	09/21/20 11:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/14/20 10:14	09/21/20 11:52	1
Y Carrier	82.6		40 - 110					09/14/20 10:14	09/21/20 11:52	1

Method: Ra226_Ra2	28 - Con	bined Ra	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.132	U	0.305	0.305	5.00	0.520	pCi/L		10/02/20 17:53	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-7

Date Received: 08/20/20 09:30

Lab Sample ID: 180-109850-3 Date Collected: 08/18/20 15:25

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0331	U	0.0879	0.0880	1.00	0.159	pCi/L	08/25/20 11:29	09/16/20 09:49	1
Carrier Ba Carrier	% Yield 87.3	Qualifier	Limits 40 - 110					Prepared 08/25/20 11:29	Analyzed 09/16/20 09:49	Dil Fac

Method: 9320 - R	Radium-228 (GFPC)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.343	U *	0.360	0.362	1.00	0.588	pCi/L	09/14/20 10:14	09/21/20 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		40 - 110					09/14/20 10:14	09/21/20 11:53	1
Y Carrier	81.9		40 - 110					09/14/20 10:14	09/21/20 11:53	1

Methou. Nazzo_Naz	20 - CUII	ibilieu Ka	ululli-220 a	iiu Kaululi	-220					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.376	U	0.371	0.373	5.00	0.588	pCi/L		10/02/20 17:53	1

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Eurofins TestAmerica, Pittsburgh

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: EB#2 Lab Sample ID: 180-109851-1

Matrix: Water

Date Collected: 08/19/20 09:15 Date Received: 08/20/20 09:30

Method: 9315 - Ra	dium-226 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0278	U	0.0658	0.0658	1.00	0.121	pCi/L	08/25/20 11:29	09/16/20 09:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					08/25/20 11:29	09/16/20 09:50	1

Method: 9320 - I	Radium-228 ((GFPC)								
	_ "		Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0971	U *	0.314	0.314	1.00	0.546	pCi/L	08/25/20 12:41	09/09/20 13:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					08/25/20 12:41	09/09/20 13:23	1
Y Carrier	78.5		40 - 110					08/25/20 12:41	09/09/20 13:23	1

Method: Ra226_Ra2	28 - Con	bined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.125	U	0.321	0.321	5.00	0.546	pCi/L	_	10/02/20 17:53	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-19

Lab Sample ID: 180-109851-2

Matrix: Water

Date Collected: 08/19/20 10:56 Date Received: 08/20/20 09:30

lium-226 ((GFPC)								
	,	Count Uncert.	Total Uncert.						
Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
0.0997	U	0.100	0.100	1.00	0.159	pCi/L	08/25/20 11:29	09/16/20 12:20	1
%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
86.4		40 - 110					08/25/20 11:29	09/16/20 12:20	1
	Result 0.0997 %Yield	Result Qualifier 0.0997 U %Yield Qualifier 86.4	Count Uncert.	Count Total Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. (2σ+/-)	Count Total Uncert. Uncert. Uncert. Uncert. Uncert. O.0997 U O.100 O.10	Count Total Uncert.	Count Total Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Uncert. Count Uncert. Uncert. Count Count Uncert. Uncert. Count Uncert. Count Uncert. Count Uncert. Uncert. Count Uncert. Count Uncert. Count Uncert. Uncer	Count Uncert. Uncert. Uncert. Count Uncer	Count Total Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Uncert. Count Uncert. Count Uncert. Count Uncert. Count Uncert. Prepared Analyzed Analyzed MDC Unit Prepared O8/25/20 11:29 O9/16/20 12:20 WYield Qualifier Limits Prepared Analyzed Analyzed Count

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.194	U *	0.371	0.372	1.00	0.632	pCi/L	09/14/20 10:14	09/21/20 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.0		40 - 110					09/14/20 10:14	09/21/20 11:53	1
Y Carrier	84.1		40 - 110					09/14/20 10:14	09/21/20 11:53	1

Method: Ra226_Ra2	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.294	U	0.384	0.385	5.00	0.632	pCi/L		10/02/20 17:53	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWA-20

Lab Sample ID: 180-109851-3 Date Collected: 08/19/20 13:44

Matrix: Water

Date Received: 08/20/20 09:30

Method: 9315 - F	Radium-226 (GFPC)								
	·	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.100	U	0.0809	0.0814	1.00	0.119	pCi/L	08/25/20 11:29	09/16/20 12:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					08/25/20 11:29	09/16/20 12:21	1

	Radium-228 ((GFPC)								
Acceleda	D 14	O sell'Essa	Count Uncert.	Total Uncert.	D.		114	Domina	Austral	D!! 5
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.840	*	0.402	0.409	1.00	0.582	pCi/L	09/14/20 10:14	09/21/20 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110					09/14/20 10:14	09/21/20 11:53	1
Y Carrier	81.1		40 - 110					09/14/20 10:14	09/21/20 11:53	1

Method: Ra226 Ra	228 - Com	bined Rad	dium-226 a	nd Radiun	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.940		0.410	0.417	5.00	0.582	pCi/L		10/02/20 17:53	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-22

Lab Sample ID: 180-109851-4 Date Collected: 08/19/20 15:32

Matrix: Water

Date Received: 08/20/20 09:30

Γ	Method: 9315 - Rad	lium-226 (GFPC)								
		·	•	Count Uncert.	Total Uncert.						
	Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Radium-226	0.0279	U	0.0970	0.0970	1.00	0.178	pCi/L	08/25/20 11:29	09/16/20 14:43	1
	Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
L	Ba Carrier	75.2		40 - 110					08/25/20 11:29	09/16/20 14:43	1

		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.560	U *	0.458	0.461	1.00	0.731	pCi/L	09/14/20 10:14	09/21/20 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.1		40 - 110					09/14/20 10:14	09/21/20 11:53	1
Y Carrier	78.9		40 - 110					09/14/20 10:14	09/21/20 11:53	1

Method: Ra226_Ra2	28 - Con	bined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.587	U	0.468	0.471	5.00	0.731	pCi/L		10/02/20 17:53	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: FB#2 Lab Sample ID: 180-109918-1 Date Collected: 08/20/20 10:45

Matrix: Water

Date Received: 08/21/20 09:45

Г	Method: 9315 - Rad	lium-226 ((GFPC)								
			•	Count Uncert.	Total Uncert.						
1	Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Ī	Radium-226	0.117	U	0.101	0.101	1.00	0.146	pCi/L	08/28/20 16:42	09/21/20 10:52	1
(Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
L	Ba Carrier	80.4		40 - 110					08/28/20 16:42	09/21/20 10:52	1

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.312	U	0.367	0.368	1.00	0.605	pCi/L	08/28/20 17:17	09/18/20 11:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.4		40 - 110					08/28/20 17:17	09/18/20 11:58	1
Y Carrier	72.9		40 - 110					08/28/20 17:17	09/18/20 11:58	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.429	U	0.381	0.382	5.00	0.605	pCi/L		09/23/20 12:33	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-23 Lab Sample ID: 180-109918-2

. Matrix: Water

Date Collected: 08/20/20 12:15 Date Received: 08/21/20 09:45

Metho	od: 9315 - Rad	lium-226 ((GFPC)								
			•	Count Uncert.	Total Uncert.						
Analyte)	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium	-226	0.101	U	0.102	0.102	1.00	0.159	pCi/L	08/28/20 16:42	09/21/20 10:52	1
Carrier		%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Cari	rier	91.1		40 - 110					08/28/20 16:42	09/21/20 10:52	1

Method: 9320 - I	Radium-228 ((GFPC)	Count	Total						
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.141	U	0.263	0.263	1.00	0.447	pCi/L	08/28/20 17:17	09/18/20 11:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.1		40 - 110					08/28/20 17:17	09/18/20 11:59	1
Y Carrier	81.1		40 - 110					08/28/20 17:17	09/18/20 11:59	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.242	U	0.282	0.282	5.00	0.447	pCi/L		09/23/20 12:33	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: DUP-2 Lab Sample ID: 180-109918-3

Matrix: Water

Date Collected: 08/20/20 00:00 Date Received: 08/21/20 09:45

Method: 9315 - R	adium-226 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.130	U	0.115	0.115	1.00	0.173	pCi/L	08/28/20 16:42	09/21/20 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.4		40 - 110					08/28/20 16:42	09/21/20 10:52	1

Method: 9320 -		(OFF 0)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.266	U	0.400	0.401	1.00	0.670	pCi/L	09/21/20 14:11	09/30/20 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					09/21/20 14:11	09/30/20 12:41	1
Y Carrier	89.3		40 - 110					09/21/20 14:11	09/30/20 12:41	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.396	U	0.416	0.417	5.00	0.670	pCi/L		09/23/20 12:33	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-1

Lab Sample ID: 180-109918-4 Date Collected: 08/20/20 14:36

Matrix: Water

Date	Received:	08/21/20	09:45

Method: 9315 - F	Radium-226 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.121	U	0.104	0.105	1.00	0.155	pCi/L	08/28/20 16:42	09/21/20 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.4		40 - 110					08/28/20 16:42	09/21/20 10:52	1
_										

Method: 9320 -		(0.1.0)	Count Uncert.	Total Uncert.						
Amalusta	Danult	O			D.	MDC	11:4	Duamanad	A a l a al	D:: F
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.406	U	0.321	0.323	1.00	0.509	pCi/L	08/28/20 17:17	09/18/20 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.4		40 - 110					08/28/20 17:17	09/18/20 12:00	1
Y Carrier	75.5		40 - 110					08/28/20 17:17	09/18/20 12:00	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.527		0.337	0.340	5.00	0.509	pCi/L		09/23/20 12:33	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-2 Lab Sample ID: 180-109918-5

Date Collected: 08/20/20 16:35

Matrix: Water

Date Received: 08/21/20 09:45

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.516		0.150	0.157	1.00	0.109	pCi/L	08/28/20 16:42	09/21/20 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					08/28/20 16:42	09/21/20 12:46	1

Method: 9320 - F	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.61		0.462	0.569	1.00	0.413	pCi/L	08/28/20 17:17	09/18/20 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					08/28/20 17:17	09/18/20 12:00	1
Y Carrier	80.4		40 - 110					08/28/20 17:17	09/18/20 12:00	1

Method: Ra226_Ra	228 - Con	bined Ra	dium-226 a	nd Radium	-228					
_			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.13		0.486	0.590	5.00	0.413	pCi/L		09/23/20 12:33	1

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Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-8 Lab Sample ID: 180-109929-1

Date Collected: 08/20/20 10:35

Matrix: Water

Date Received: 08/21/20 09:45

Method: 9315 - Ra	adium- <mark>226</mark> ((GFPC)								
			Count Uncert.	Total Uncert.						
			Oncert.	Oncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.136		0.0990	0.0997	1.00	0.136	pCi/L	08/28/20 16:42	09/21/20 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					08/28/20 16:42	09/21/20 12:46	1

Method: 9320 -	Radium-228 ((GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00477	U	0.249	0.249	1.00	0.444	pCi/L	08/28/20 17:17	09/18/20 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					08/28/20 17:17	09/18/20 12:00	1
Y Carrier	82.6		40 - 110					08/28/20 17:17	09/18/20 12:00	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.140	U	0.268	0.268	5.00	0.444	pCi/L		09/23/20 12:33	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-18 Lab Sample ID: 180-109929-2

Date Collected: 08/20/20 17:05

Date Received: 08/21/20 09:45

Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0554	U	0.0711	0.0713	1.00	0.117	pCi/L	08/28/20 16:42	09/21/20 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		40 - 110					08/28/20 16:42	09/21/20 12:46	1

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.136	U	0.233	0.233	1.00	0.395	pCi/L	08/28/20 17:17	09/18/20 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		40 - 110					08/28/20 17:17	09/18/20 12:00	1
Y Carrier	84.5		40 - 110					08/28/20 17:17	09/18/20 12:00	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.191	U	0.244	0.244	5.00	0.395	pCi/L		09/23/20 12:33	1

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10/8/2020

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: EB#1 Lab Sample ID: 180-109930-1 Date Collected: 08/20/20 09:30

Matrix: Water

Date Red	ceived: (08/21/20	09:45

Method: 9315 - Rad	dium-226 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0471	U	0.0764	0.0765	1.00	0.133	pCi/L	08/31/20 13:50	09/22/20 09:54	1
Carrier Ba Carrier	%Yield 88.1	Qualifier	Limits 40 - 110					Prepared 08/31/20 13:50	Analyzed 09/22/20 09:54	Dil Fac

Method: 9320 -	Kaululli-220 (GFPC)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.106	U	0.348	0.348	1.00	0.609	pCi/L	08/31/20 14:14	09/09/20 13:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.1		40 - 110					08/31/20 14:14	09/09/20 13:13	1
Y Carrier	82.6		40 - 110					08/31/20 14:14	09/09/20 13:13	1

Method: Ra226_Ra2	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.154	U	0.356	0.356	5.00	0.609	pCi/L		10/02/20 17:52	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Date Received: 08/21/20 09:45

Client Sample ID: ARAMW-3 Lab Sample ID: 180-109930-2

Date Collected: 08/20/20 14:45

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0239	U	0.0600	0.0600	1.00	0.141	pCi/L	08/31/20 13:50	09/22/20 09:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					08/31/20 13:50	09/22/20 09:55	

Mothodi 0220 Podium 229 (CEDC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.113	U	0.381	0.382	1.00	0.707	pCi/L	08/31/20 14:14	09/09/20 13:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					08/31/20 14:14	09/09/20 13:14	1
Y Carrier	79.6		40 - 110					08/31/20 14:14	09/09/20 13:14	1

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.137	U	0.386	0.387	5.00	0.707	pCi/L		10/02/20 17:52	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-4

Lab Sample ID: 180-109930-3 Date Collected: 08/20/20 11:45

Matrix: Water

Date Received: 08/21/20 09:45	
Method: 9315 - Radium-226 (GFPC	;

Method: 9315 - Rad	dium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.204		0.110	0.112	1.00	0.135	pCi/L	08/31/20 13:50	09/22/20 09:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.3		40 - 110					08/31/20 13:50	09/22/20 09:55	1

Method: 9320 - I	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.419	U	0.434	0.436	1.00	0.708	pCi/L	08/31/20 14:14	09/09/20 13:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.3		40 - 110					08/31/20 14:14	09/09/20 13:14	1
Y Carrier	87.5		40 - 110					08/31/20 14:14	09/09/20 13:14	1

Method: Ra226_Ra2	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.624	U	0.448	0.450	5.00	0.708	pCi/L		10/02/20 17:52	1

10/8/2020

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARAMW-6

Lab Sample ID: 180-109970-1 Date Collected: 08/21/20 09:45

Matrix: Water Date Received: 08/22/20 10:00

Method: 9315 - I	Radium-226 ((GFPC)								
	·	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142	U	0.120	0.121	1.00	0.179	pCi/L	08/28/20 16:42	09/21/20 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					08/28/20 16:42	09/21/20 12:46	1

Method: 9320 - I	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.143	U	0.295	0.295	1.00	0.505	pCi/L	08/28/20 17:17	09/18/20 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					08/28/20 17:17	09/18/20 12:00	1
Y Carrier	80.4		40 - 110					08/28/20 17:17	09/18/20 12:00	1

Method: Ra226_Ra2	28 - Con	bined Ra	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.285	U	0.318	0.319	5.00	0.505	pCi/L		09/23/20 12:33	1

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Client Sample ID: ARGWC-21 Lab Sample ID: 180-109970-2

Date Collected: 08/21/20 10:36

Matrix: Water

Date Received: 08/22/20 10:00

Method: 9315 - F	Radium-226 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0115	U	0.0905	0.0905	1.00	0.176	pCi/L	08/28/20 16:42	09/21/20 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		40 - 110					08/28/20 16:42	09/21/20 12:46	1

Method: 9320 - F	Radium-228 ((GFPC)								
Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analvzed	Dil Fac
Radium-228	0.461	Qualifier	0.264	0.267	1.00	0.394		08/28/20 17:17	09/18/20 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		40 - 110					08/28/20 17:17	09/18/20 12:00	1
Y Carrier	79.6		40 - 110					08/28/20 17:17	09/18/20 12:00	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radiun	1-228					
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.472		0.279	0.282	5.00	0.394	pCi/L		09/23/20 12:33	1

2

Job ID: 180-109846-2

Client: Southern Company Project/Site: CCR - Plant Arkwright

Flojeci/Site. CCR - Flant Arkwright

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-480640/24-A

Lab Sample ID: LCS 160-480640/1-A

Matrix: Water

Analysis Batch: 482515

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 480640

MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 0.04136 Ū 0.0641 0.0642 1.00 0.111 pCi/L 08/24/20 17:59 09/15/20 13:55

Total

Count

MB MB

MB MB

 Carrier
 %Yield
 Qualifier
 Limits

 Ba Carrier
 92.1
 40 - 110

08/24/20 17:59 09/15/20 13:55

Prepared

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Dil Fac

10

Prep Batch: 480640

Analyzed

Total LCS LCS %Rec. **Spike** Uncert. Analyte Added Result Qual $(2\sigma + / -)$ RL %Rec Limits MDC Unit Radium-226 11.3 10.31 1.14 1.00 0.135 pCi/L 75 - 125

LCS LCS

Analysis Batch: 482515

Lab Sample ID: MB 160-480684/10-A Client Sample ID: Method Blank

Matrix: Water

Matrix: Water

Analysis Batch: 482613

Prep Type: Total/NA

Prep Batch: 480684

			Count	Total						
	MB	MB	Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01097	U	0.0590	0.0590	1.00	0.116	pCi/L	08/25/20 11:29	09/16/20 14:43	1

 Carrier
 %Yield Ba Carrier
 Qualifier 87.6
 Limits 40 - 110
 Prepared 08/25/20 11:29
 Analyzed 09/16/20 14:43
 Dil Factorial Fa

Lab Sample ID: LCS 160-480684/1-A

Matrix: Water

Analysis Batch: 482613

Client Sample ID: Lab Control Sample

Prop Batch: 480684

Prep Batch: 480684

Total Spike LCS LCS Uncert. %Rec. Analyte Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits Radium-226 11.3 9.909 1.06 1.00 0.157 pCi/L 87 75 - 125

LCS LCS

 Carrier
 %Yield Ba Carrier
 Qualifier 89.1
 Limits 40 - 110

Lab Sample ID: LCSD 160-480684/2-A Client Sample ID: Lab Control Sample Dup

Matrix: Water

Analysis Batch: 482613

Prep Type: Total/NA

Prep Batch: 480684

				Total						
	Spike	LCSD	LCSD	Uncert.				%Rec.		RER
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC Unit	%Rec	Limits	RER	Limit
Radium-226	11.3	10.37		1.10	1.00	0.119 pCi/L	91	75 - 125	0.21	1

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10

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-2

Prep Type: Total/NA

Prep Batch: 480684

Prep Type: Total/NA

Prep Batch: 481082

0.07

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCSD 160-480684/2-A

Matrix: Water

Analysis Batch: 482613

LCSD LCSD

Carrier **%Yield Qualifier** Limits Ba Carrier 86 1 40 - 110

Lab Sample ID: MB 160-481082/24-A

Matrix: Water

Analysis Batch: 483033

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 481082

Client Sample ID: Lab Control Sample Dup

MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 0.04354 0.0772 0.0773 1.00 0.137 pCi/L 08/28/20 16:42 09/21/20 12:46

Total

MB MB

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 93.6 40 - 110 08/28/20 16:42 09/21/20 12:46

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 160-481082/1-A **Matrix: Water** Prep Type: Total/NA **Analysis Batch: 483033 Prep Batch: 481082**

Total

Spike LCS LCS %Rec. Uncert. Analyte Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits 75 - 125 Radium-226 11.3 9.948 1.12 1.00 0.128 pCi/L 88

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 84.1 40 - 110

Lab Sample ID: LCSD 160-481082/2-A Client Sample ID: Lab Control Sample Dup

10.11

Count

0.0728

11.3

Count

Matrix: Water

Analysis Batch: 483033

Total **Spike** LCSD LCSD Uncert. %Rec. **RER** Added Result Qual RL **MDC** Unit %Rec Limits Analyte $(2\sigma + / -)$ RER Limit Radium-226 75 - 125

1.14

1.00

0.109 pCi/L

0.151 pCi/L

89

LCSD LCSD

Carrier %Yield Qualifier Limits 40 - 110 Ba Carrier 82.9

Lab Sample ID: MB 160-481232/23-A **Client Sample ID: Method Blank**

Matrix: Water

Radium-226

Prep Type: Total/NA Analysis Batch: 483161 **Prep Batch: 481232**

Total

0.0732

MB MB Uncert. Uncert. Analyte Result Qualifier **MDC** Unit $(2\sigma + / -)$ $(2\sigma + / -)$ RL Prepared Analyzed Dil Fac

1.00

ΜB MΒ

U

0.08056

%Yield Qualifier Limits Prepared Dil Fac Carrier Analyzed Ba Carrier 40 - 110 08/31/20 13:50 09/22/20 11:59 94.8

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08/31/20 13:50 09/22/20 11:59

Total

10

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Job ID: 180-109846-2

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-481232/1-A

Matrix: Water

Analysis Batch: 483161

Client Sample ID: Lab Control Sample

%Rec.

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 481232

Prep Type: Total/NA

Prep Batch: 480651

Spike LCS LCS Uncert.

Analyte Added Result Qual $(2\sigma + / -)$ RL

MDC Unit %Rec Limits Radium-226 15.1 13.59 1.42 1.00 0.121 pCi/L 75 ₋ 125

LCS LCS

Carrier %Yield Qualifier Limits Ba Carrier 84.1 40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-480651/24-A

Analysis Batch: 482071

Matrix: Water

Count Total MB MB Uncert. Uncert.

Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit

Prepared Analyzed Dil Fac Radium-228 0.414 pCi/L 08/24/20 18:23 09/10/20 12:22 0.01611 0.232 0.232 1.00

> MΒ MΒ

Analyzed Carrier %Yield Qualifier Limits Prepared Dil Fac 40 - 110 Ba Carrier 92.1 08/24/20 18:23 09/10/20 12:22 Y Carrier 85.2 40 - 110 08/24/20 18:23 09/10/20 12:22

Lab Sample ID: LCS 160-480651/1-A

Matrix: Water

Analysis Batch: 482102

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 480651

Total

Spike LCS LCS Uncert. %Rec. Added Result Qual $(2\sigma + / -)$ RL**MDC** Unit Limits **Analyte** %Rec Radium-228 7.82 8.153 1.08 1.00 0.560 pCi/L 104 75 - 125

LCS LCS

Carrier %Yield Qualifier Limits 74.3 Ba Carrier 40 - 110

Y Carrier 79.6 40 - 110

Lab Sample ID: MB 160-480689/10-A

Matrix: Water

Analysis Batch: 481811

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 480689

Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-228 -0.03910 U 0.226 0.226 1.00 0.418 pCi/L 08/25/20 12:41 09/09/20 13:26

> MB MB

Dil Fac Carrier %Yield Qualifier Limits Prepared Analyzed Ba Carrier 87.6 40 - 110 08/25/20 12:41 09/09/20 13:26 Y Carrier 86.0 40 - 110 08/25/20 12:41 09/09/20 13:26

Client: Southern Company

Radium-228

Job ID: 180-109846-2 Project/Site: CCR - Plant Arkwright

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-480689/1-A Client Sample ID: Lab Control Sample

Matrix: Water Analysis Batch: 481799

Prep Type: Total/NA **Prep Batch: 480689**

75 ₋ 125

137

Total Spike LCS LCS Uncert. %Rec. **MDC** Unit Analyte Added Result Qual $(2\sigma + / -)$ RL%Rec Limits

7.82 10.69 1.30 1.00 0.596 pCi/L

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 89.1 40 - 110 Y Carrier 76.6 40 - 110

Lab Sample ID: LCSD 160-480689/2-A **Client Sample ID: Lab Control Sample Dup**

Matrix: Water

Prep Type: Total/NA **Analysis Batch: 481799 Prep Batch: 480689** Total

Spike LCSD LCSD Uncert. %Rec. **RER** Limits Added RL **MDC** Unit %Rec Analyte Result Qual $(2\sigma + / -)$ RER Limit 1.00 Radium-228 7.82 9.539 1.19 0.634 pCi/L 122 75 - 1250.46

LCSD LCSD Carrier %Yield Qualifier Limits 40 - 110 Ba Carrier 86.1 Y Carrier 82.2 40 - 110

Lab Sample ID: MB 160-481085/24-A **Client Sample ID: Method Blank**

Matrix: Water Prep Type: Total/NA **Analysis Batch: 482957 Prep Batch: 481085** Count Total

MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-228 0.1718 U 0.210 0.210 1.00 0.347 pCi/L 08/28/20 17:17 09/18/20 12:00

MB ΜB Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 93.6 40 - 110 08/28/20 17:17 09/18/20 12:00 Y Carrier 88.6 08/28/20 17:17 09/18/20 12:00 40 - 110

Lab Sample ID: LCS 160-481085/1-A **Client Sample ID: Lab Control Sample**

Matrix: Water Prep Type: Total/NA **Analysis Batch: 482946 Prep Batch: 481085**

Total Spike LCS LCS Uncert. %Rec. Added Analyte Result Qual $(2\sigma + / -)$ RL MDC Unit %Rec Limits Radium-228 1.05 7.80 8.379 1.00 0.503 pCi/L 107 75 - 125

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 84.1 40 - 110 Y Carrier 82.2 40 - 110

10

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Job ID: 180-109846-2

Client: Southern Company Project/Site: CCR - Plant Arkwright

Method: 9320 - Radium-228 (GFPC) (Continued)

Spike

Added

7.80

LCSD LCSD

Result Qual

7.434

Lab Sample ID: LCSD 160-481085/2-A Client Sample ID: Lab Control Sample Dup

0.978

1.00

Matrix: Water

Analyte

Radium-228

Analysis Batch: 482946

Prep Type: Total/NA **Prep Batch: 481085**

0.47

Total Uncert. %Rec. **RER** $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits RER Limit

0.518 pCi/L

LCSD LCSD

Carrier %Yield Qualifier Limits Ba Carrier 82.9 40 - 110 Y Carrier 79.3 40 - 110

Lab Sample ID: MB 160-481237/23-A Client Sample ID: Method Blank

Matrix: Water

Analysis Batch: 481838

75 - 125

Prep Type: Total/NA

Prep Batch: 481237

			Count	iotai						
	MB	MB	Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.006322	U	0.314	0.314	1.00	0.564	pCi/L	08/31/20 14:14	09/09/20 13:16	1

MB MB

Carrier **%Yield Qualifier** Limits Prepared Analyzed Dil Fac Ba Carrier 40 - 110 08/31/20 14:14 09/09/20 13:16 94.8 40 - 110 08/31/20 14:14 09/09/20 13:16 Y Carrier 84.5

Lab Sample ID: LCS 160-481237/1-A **Client Sample ID: Lab Control Sample**

Matrix: Water

Analysis Batch: 481801

Prep Type: Total/NA

Prep Batch: 481237

Total

	Spike	LCS	LCS	Uncert.				%Rec.	
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC Unit	%Rec	Limits	
Radium-228	10.4	10.82		1.39	1.00	0.707 pCi/L	104	75 - 125	

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 84.1 40 - 110 Y Carrier 82.6 40 - 110

Lab Sample ID: MB 160-482400/9-A **Client Sample ID: Method Blank**

Matrix: Water

Analysis Batch: 483126

Prep Type: Total/NA

Prep Batch: 482400

			Count	Total						
	MB	MB	Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.266		0.458	0.473	1.00	0.620	pCi/L	09/14/20 10:14	09/21/20 11:53	1

	МВ	МВ				
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110	09/14/20 10:14	09/21/20 11:53	1
Y Carrier	81.5		40 - 110	09/14/20 10:14 0	09/21/20 11:53	1

10

Job ID: 180-109846-2

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-482400/1-A Client Sample ID: Lab Control Sample

Matrix: Water

Analysis Batch: 483126

Prep Type: Total/NA

Prep Batch: 482400

Total Spike LCS LCS Uncert. %Rec. **MDC** Unit Analyte Added Result Qual $(2\sigma + / -)$ RL%Rec Limits Radium-228 10.4 12.18 1.46 1.00 0.526 pCi/L 117 75 - 125

LCS LCS

Carrier %Yield Qualifier Limits Ba Carrier 81.0 40 - 110 Y Carrier 86.0 40 - 110

Lab Sample ID: LCSD 160-482400/2-A **Client Sample ID: Lab Control Sample Dup**

Matrix: Water

Analysis Batch: 483126

Prep Type: Total/NA

10

Prep Batch: 482400

Total Spike LCSD LCSD Uncert. %Rec. **RER** Limits Added RL **MDC** Unit %Rec Analyte Result Qual $(2\sigma + / -)$ RER Limit 13.89 1.00 Radium-228 10.4 1.69 0.690 pCi/L 134 75 - 1250.54

LCSD LCSD

Carrier %Yield Qualifier Limits 40 - 110 Ba Carrier 70.9 Y Carrier 83.4 40 - 110

Lab Sample ID: MB 160-483141/4-A **Client Sample ID: Method Blank**

Matrix: Water

Analysis Batch: 484399

Prep Type: Total/NA

Prep Batch: 483141

Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-228 0.1677 U 0.434 0.435 1.00 0.752 pCi/L 09/21/20 14:11 09/30/20 12:43

MB ΜB Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 63.9 40 - 110 09/21/20 14:11 09/30/20 12:43 Y Carrier 85.2 09/21/20 14:11 09/30/20 12:43 40 - 110

Lab Sample ID: LCS 160-483141/1-A

Matrix: Water

Analysis Batch: 484399

Client Sample ID: Lab Control Sample

Prep Type: Total/NA **Prep Batch: 483141**

Total

Spike LCS LCS Uncert. %Rec. Analyte Added Result Qual $(2\sigma + / -)$ RL MDC Unit %Rec Limits Radium-228 10.4 11.05 1.41 1.00 0.674 pCi/L 107 75 - 125

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 81.3 40 - 110 Y Carrier 80.4 40 - 110

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QC Sample Results

Client: Southern Company Job ID: 180-109846-2

Project/Site: CCR - Plant Arkwright

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-483141/2-A **Client Sample ID: Lab Control Sample Dup**

Matrix: Water

Analysis Batch: 484399

Prep Type: Total/NA

Prep Batch: 483141

				iotai							
	Spike	LCSD	LCSD	Uncert.					%Rec.		RER
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC	Unit	%Rec	Limits	RER	Limit
Radium-228	10.4	10.75		1.39	1.00	0.640	pCi/L	104	75 - 125	0.11	1

LCSD LCSD

Carrier	%Yield	Qualifier	Limits			
Ba Carrier	80.7		40 - 110			
Y Carrier	78.9		40 - 110			

QC Association Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright

Prep Batch: 480640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109846-1	ARGWA-14	Total/NA	Water	PrecSep-21	
180-109846-2	ARGWC-15	Total/NA	Water	PrecSep-21	
180-109846-3	ARGWC-16	Total/NA	Water	PrecSep-21	
180-109847-1	FB#1	Total/NA	Water	PrecSep-21	
180-109847-2	ARGWA-12	Total/NA	Water	PrecSep-21	
180-109847-3	ARGWA-13	Total/NA	Water	PrecSep-21	
180-109847-4	ARGWC-17	Total/NA	Water	PrecSep-21	
180-109848-1	ARGWC-10	Total/NA	Water	PrecSep-21	
180-109848-2	DUP-1	Total/NA	Water	PrecSep-21	
180-109848-3	ARGWC-9	Total/NA	Water	PrecSep-21	
MB 160-480640/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-480640/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 480651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109846-1	ARGWA-14	Total/NA	Water	PrecSep_0	
180-109846-2	ARGWC-15	Total/NA	Water	PrecSep_0	
180-109846-3	ARGWC-16	Total/NA	Water	PrecSep_0	
180-109847-1	FB#1	Total/NA	Water	PrecSep_0	
180-109847-2	ARGWA-12	Total/NA	Water	PrecSep_0	
180-109847-3	ARGWA-13	Total/NA	Water	PrecSep_0	
180-109847-4	ARGWC-17	Total/NA	Water	PrecSep_0	
180-109848-1	ARGWC-10	Total/NA	Water	PrecSep_0	
180-109848-2	DUP-1	Total/NA	Water	PrecSep_0	
180-109848-3	ARGWC-9	Total/NA	Water	PrecSep_0	
MB 160-480651/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-480651/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 480684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109850-1	ARGWA-5	Total/NA	Water	PrecSep-21	
180-109850-2	ARGWA-3	Total/NA	Water	PrecSep-21	
180-109850-3	ARGWC-7	Total/NA	Water	PrecSep-21	
180-109851-1	EB#2	Total/NA	Water	PrecSep-21	
180-109851-2	ARGWA-19	Total/NA	Water	PrecSep-21	
180-109851-3	ARGWA-20	Total/NA	Water	PrecSep-21	
180-109851-4	ARGWC-22	Total/NA	Water	PrecSep-21	
MB 160-480684/10-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-480684/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-480684/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 480689

Lab Sample ID 180-109851-1	Client Sample ID EB#2	Prep Type Total/NA	Matrix Water	Method PrecSep_0	Prep Batch
MB 160-480689/10-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-480689/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-480689/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 481082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-1	FB#2	Total/NA	Water	PrecSep-21	

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Job ID: 180-109846-2

QC Association Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright

Rad (Continued)

Prep Batch: 481082 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-2	ARGWC-23	Total/NA	Water	PrecSep-21	
180-109918-3	DUP-2	Total/NA	Water	PrecSep-21	
180-109918-4	ARAMW-1	Total/NA	Water	PrecSep-21	
180-109918-5	ARAMW-2	Total/NA	Water	PrecSep-21	
180-109929-1	ARGWC-8	Total/NA	Water	PrecSep-21	
180-109929-2	ARGWC-18	Total/NA	Water	PrecSep-21	
180-109970-1	ARAMW-6	Total/NA	Water	PrecSep-21	
180-109970-2	ARGWC-21	Total/NA	Water	PrecSep-21	
MB 160-481082/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-481082/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-481082/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 481085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-1	FB#2	Total/NA	Water	PrecSep_0	
180-109918-2	ARGWC-23	Total/NA	Water	PrecSep_0	
180-109918-4	ARAMW-1	Total/NA	Water	PrecSep_0	
180-109918-5	ARAMW-2	Total/NA	Water	PrecSep_0	
180-109929-1	ARGWC-8	Total/NA	Water	PrecSep_0	
180-109929-2	ARGWC-18	Total/NA	Water	PrecSep_0	
180-109970-1	ARAMW-6	Total/NA	Water	PrecSep_0	
180-109970-2	ARGWC-21	Total/NA	Water	PrecSep_0	
MB 160-481085/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-481085/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-481085/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep 0	

Prep Batch: 481232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109930-1	EB#1	Total/NA	Water	PrecSep-21	
180-109930-2	ARAMW-3	Total/NA	Water	PrecSep-21	
180-109930-3	ARAMW-4	Total/NA	Water	PrecSep-21	
MB 160-481232/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-481232/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 481237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109930-1	EB#1	Total/NA	Water	PrecSep_0	- <u> </u>
180-109930-2	ARAMW-3	Total/NA	Water	PrecSep_0	
180-109930-3	ARAMW-4	Total/NA	Water	PrecSep_0	
MB 160-481237/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-481237/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 482400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109850-1	ARGWA-5	Total/NA	Water	PrecSep_0	
180-109850-2	ARGWA-3	Total/NA	Water	PrecSep_0	
180-109850-3	ARGWC-7	Total/NA	Water	PrecSep_0	
180-109851-2	ARGWA-19	Total/NA	Water	PrecSep_0	
180-109851-3	ARGWA-20	Total/NA	Water	PrecSep_0	
180-109851-4	ARGWC-22	Total/NA	Water	PrecSep_0	
MB 160-482400/9-A	Method Blank	Total/NA	Water	PrecSep_0	

Eurofins TestAmerica, Pittsburgh

10/8/2020

Page 56 of 94

Job ID: 180-109846-2

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1.

QC Association Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright Job ID: 180-109846-2

Rad (Continued)

Prep Batch: 482400 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-482400/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-482400/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 483141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-109918-3	DUP-2	Total/NA	Water	PrecSep_0	
MB 160-483141/4-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-483141/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-483141/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

301 Alpha Drive RIDC Park

Chain of Custody Record

244- ATLANTA

Pittsbur	rgh,	PA 153	238		
Phone	(412)	963-70	058 Fax	(412)	963-2468

Client Information	DHeward, EGail	en Ashered	Lab Ptv Brown	n, Shali		Carrier Tracking No(s)		000 No
teat Contact CS Contacts	Phane	7			ourofosoi som			Page:
ungang .			SHORE	-cura igg	eurofinset com		-	Job #
SA Power					The second second	nalysis Requested		
direse 41 Ralph McGill Blvd SE	Due Date Requested:		i	13	53			Preservation Codes:
y	TAT Requested (days):			11:	2 6			A - HCL M - Hexane B - NaOH N - None
fianta			1	1 1	19			C - Zn Acetate O - AsNaO2
ate 2ip A, 30308				1	23			D - Nitric Acid P - Na204S E - NaMS04 Q - Na2S03
hone	PO#.			1	\$763 \$1			F - MeOH R - Na2S2O3
04-508-7116(Tel)				0	+ 3			H - Ascorbic Acid T - TSP DodecahyJrate
ruit CS Contacts	NO#.			r No)	3,2			I - Ide U - Adelone J - Dt Water V - MCAA
ojed Name:	Project #			D o	3.30		1 60	K-EDTA W-pH 4-5
CR - Plant Arkwright	18020201			ole ole	37.8		2	
na Seorgia	SSOA#			E C	Hope V metalk (6020) + Hg (7 + 10H) Ka diam 226/228 (9315/9320) Flueride (300)		00 00	Other:
party of the same			Matrix	S Policy	4 4 5		1 1 2	
		Sample Type	Marketon.	E 1	3 3 E		Total Number	
	Sample	110	Shuild, Drivingthiol,	101	2 4 7		Z	
ample Identification	Sample Date Time	G=grab) s					Tot	Special Instructions/Note:
		Preservation	on Code:	$\mathbb{X}\mathbb{X}$	DDI		LX	
ARGWA-14 ARGWC-15 ARGWC-16	8/19/20 1355	-	W	1 /2	XXX		3	p# = 6,62 pH = 6,47 pH = 5,24
ARGWC-15	1 100	SG	W	1	XXX		3	0H=6,47
ARGWC -16	1 1205		W		XXX		13	- H - 5.741
ANGICATO	120	,		11				P11-0124
				+				
				++	+	1000000		MARKET HE STATE OF THE STATE OF
							8 8 8 8 8	
							11011111	
					+++	180-1098	46 Chain of	Custody
Possible Hazard Identification		_		Sam		A fee may be assessed if samp.	es are retain	ed longer than 1 month)
X Non-Hazard Flammable Skin limitan	Poison B Unknown	Radiological		L-	Return To Clie	ent Disposal By Lab	Arch	ive FarMonths
Deliverable Requested: I, II, III, IV, Other (specify)				Spac	cial Instructions/	QC Requirements:		
Empty Kit Relinquished by:	Date:	ALCOHOLD COMPANY		Time:	ON BOTH OWNERS	Method of Ship:	rent.	
2000	Oste/Time:	11.	опрану	F	deceived by	111. 1112 Ara Date	/lime /	2 n. 20 000 1.00
Daniel L Howard	8/19/20/1	815	0.000			elle Waters Des	01	30.20 FT ANG
Relinquished by	Usterline."	ľ	опрану	b	leceive (84)	Dak	Time	9,30 Company
Recipushed by	CaleTime		опрату	5	leceived by:	Date	firme:	Company
Custody Seals Intact. Custody Seal No.:				16	coder Temperature;	(s) °C and Cover Remarks:		

10/8/2020

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301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Chain of Custody Record

244- ATLANTA

Client Information	DHoward E	Gulle	A.A.Sho	Bro	wn, Sha	di		Carrier Tracking No(s):		COC No.
Client Contact SCS Contacts	Phone:		′	2.00	21.		finset com			Page 1 5F 1
Company GA Power							Anal	lysis Requested		Job#:
odress 241 Ralph McGill Blvd SE	Due Date Requested:					Q.				Preservation Codes:
Oly. Atlanta	TAT Requested (days	s :				7	2 2			A - HCL M - Hexane B - NaOH N - None
State, Zip:	Standa	-1				27	76			C - Zn Acetate
GA, 3030B Prione	POR				- 1	+	3.15			E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3
404-506-7116(Tel) Email	WO#				(ON	80	5 5			G - Amphilor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrah
SCS Contacts					No or	20	28		E	I - loe U - Acetona J - Dt Water V - MCAA K - EDTA W - pH 4-5
Project Name: CCR - Plant Arkwright	Project #. 18020201				16 (Ye	3	000		containers	L - EDA Z - other (specify)
Sna: Georgia	S\$0.4#				Field Filtered Sample (Yes or No)	4	Lac 306_016FM 28D		of cor	Other:
			Sample	Matrix	MS/M	F	Radium 27		X Total Number of	
		Sample	Type (C=comp,	(Wirwater, Sresold,	d Filt	ASPET	3-3		2	
Samp/e Identification	Sample Date	Time	G=grab)	Orwasteloil, ET+Tissue, A+Air	Par	AI	Tex		Tota	Special Instructions/Note:
Found		><		ation Code	XX		I D		X	
FB#1	8/18/201		G	W	4	1			3	pH=6.48 pH=6.15 pH=5.07
ARGWA-12 ARGWA-13 ARGWC-17		300		W	11		1 1		3	pt = 6.48
ARGWA-13		450		W	11	-	1 1		3	oH = 6.15
ARGWC-17		445	G	W		1	111		3	0H=5.07
									100	
									DESCRIPTION OF THE PERSON OF T	
					T				WW	
									WW	
								180-109847 Chain of C	ustody	
					T			180-103047 01-0-1		
Possible Hazard Identification					Sa	mple D	Disposal (A fee	e may be assessed if samples a	e retair	ed longer than 1 month)
Non-Hazard Flammable Skin Imital Deliverable Requested: I, II, III, IV, Other (specify)	nt Paisan B Unknow	10 F	Padiologica				um To Client structions/QC F		Arch	ive ForMonths
Empty Kit Relinquished by:	In	lata:		-		OVIDI III	asi ucuunar QO i			
		late:		Company	Time:	Receive	ed by:	Method of Shipment:	1	7/1 > a Company . A
Daniel & Hours	8/18/20 /	17.	30	Woodl	415		150	Welle Walk	8	SUDO ETATI
	Determe,			Company		Receive	ed by:	Date/Time		430 Company
Refriquished by	Date/Time:			Сотралу		Receive	ed hu:	Date/Time		Company

10/8/2020

Ver. 01/16/2019









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301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Chain of Custody Record

244- ATLANTA

Client Information	DHoward, EGiller, Ashorsh	Lab PM. Brown, Shali	Cantisr Tracking No(s).	COC No.
Zeit Contact SCS Contacts	Plione	E-Mail shall brown @eurofinset.com		Page
oneary SA Power			Requested	300 #.
otress 41 Ralph McGill Blvd SE	Due Date Requestod:	I I I		Preservation Codes:
y klianta	IAT flequested (days):	77.75		A - HOL M - Hexane B - NaOH N - None C - 2n Acetate O - AsNaO2
(de, 2)); (4, 30308) (one:	POF	H 729		D - Nitric Apid P - Na2048 E - Na1904 Q - Na2903 F - MeOH R - Na28203
04-506-7116(Tel)		19195		G - Amethor S - H2SO4 H - Assorbic Acid T - TSP Dodecahydrat
CS Contacts	VIO #	(COS OT NO) (COS OT NO) (COS OT NO) (COS OT NO) (COS OT NO)		I - Ibe U - Acetoire p J - Di Water V - MCAA
rojest Name CCR - Plant Arkwright ce	Project # 18920201 SSOA#	2 2 2		K - EDTA
eorgia	*	MASS OF LAST		50
Sample Identification	Sample Matter Type Sample (C=Comp.) George Sample Date Time G=grab) assured	A POLITICAN MAN		Special Instructions/Note:
10010000	Proservation Co			X
AKGWC-10	8 19/20 1135 G W			3 pH= 1.06
DU7-1	- G W			3 pH = 7.06
ARGWC-16 DUP-1 ARGWC-9	1425 G N) X X X		3 pH=7.06 3 pH=7.06 3 pH=7.21
			180-109848 CF	nain of Custody
				-
Possible Hazard Identification Non-Hazard Flammable Skin Imitant Deliverable Requested: I, II, III, IV, Other (specify)	Poison B Unknown Radiological .	Sample Disposal (A fee may Return To Client Special Instructions/QC Requir	tie assessed if samples are re Disposal By Lab	stained longer than 1 month) inchine For. Months
Empty Kit Relinquished by:	Date: Compar	Time:	Method of Shipment.	
Daniel & Howard	8/19/20/1815 Compar	Ethi	to Water Deleting	20-20 Company
riel quaret ty	Date/Time: Compar	Nacewed by.	DateFinite	Company
Custody Seals Intact. Custody Seal No.:		Coaler Temperature(s) °C and O	iva: Remarks	

10/8/2020

A Yes A No

17 2 9 8 7

Ver. 01/16/2019

Phone (412) 963-7058 Fax (412) 963-2468

301 Alpha Drive RIDC Park Pittsburgh, PA 15238

Client Information

Chain of Custody Record

OHoused, EGuillen, Ashord to Brown, Shali

Date/Time:

244- ATLANTA

Carrier Tracking No(s):

Clerk Contact SCS Contacts	Phone		at Il brawnigeurofinset com	Page 1 of 1
Company GA Power			Analysis Reque	Jib‡:
4.31 ess	Oue Date Requested:			Preservation Codes:
241 Ralph McGill Blvd SE	IAT Requested (days):		Finish Filtered Sample (Yes or No) Perform MSIMSD (Yes or No) Perform MSIMSD (Yes or No) Perform MSIMSD (Yes or No) Flux - ick 300 086FM 28D Radium 226/228(9315/9320)	A - HCL M - Hexane
Atlanta	The Progression (asys).		12 15	B - NaOH N - None C - Zn Acetate O - AsNaO2
State, 7(p) GA, 30308			25 55	D - Ntric And P - Na204S E - NaHS04 Q - Na2S03
Phone. 404-506-7116(Tell)	PO#		+ 8 5	F - MeOH R - Na2S2O3 G - Amchior S - H2SO4
Enrai	WO F.		N	H - Ascurbic Acid T - TSP Dodecshydrate I - Ice U - Acetone
SCS Contacts Project Name	Project#		1000	U J Dr Water V - MSAA K - EDTA W - pt 4-5 L - EDA Z - other (specify) Char:
CCR - Plant Arkwright	18020201		33	L - EDA Z - other (specify)
Site Georgia	SSO/A#	Sample Matrix Type (wwater, section of control of contr	Rod I was 300.	S Other:
		Sample Matrix	Daily Standard	Special Instructions/Note:
		Type (Www.ist,	The state of the s	N N
Sample Identification	Sample Date Time	(C=comp, orwastrot	हु कु मळ	Special Instructions/Note:
		Preservation Code:	XX	X
ARGWA-5 ARGWA-3 ARGWC-7	8/18/20 1135	G W	1 1 1 1 1	3 pH = 6,18 3 pH = 6,47 3 pH = 6.70
ARGWA-3	1320	1 1 4 1	1111	3 AH = 6.47
ARGWC-7	V 1525		1111	3 oH = 6.70
THORE	7 1020	0		p= 0.70
		-	+++++++	+++++
			1111111	+++++
		-		
				180-109850 Chain of Custody
				180-109850 Chairi di Cusico,
Passible Hazard Identification			Sample Disposal (A fee may be ass	sessed if samples are retained longer than 1 month)
Non-Hazard Flammable Skin Imitan	Poison B Unknown	Radiological .	Return To Client Ois	posal By Lab Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requirements	×
Empty Kit Relinquished by:	Date:		Time:	Method of Shipment
A will How O	8/18/20/173	O WoodE	TIS Received by Delling A	Jalon 8-30. 20 Company AAH
Relinquished by.	Olisia I	Company	Received by.	Deletine OV 1 2 Company

Сопралу

10/8/2020

Custody Seals Intact.

A Yes A No

Custody Seal No.:

Ver. 01/16/2019

Coolar Temperature(s) ⁶C and Other Remarks

Received by:



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Phone (412) 963-7058 Fax (412) 963-2468

301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Chain of Custody Record

244- ATLANTA

Client Information	DH-ward, EGuille	AShardtta Brow	wn, Shali	Camer Tracking No(s).	OOC 165.
Clavit Contact	Phone:	E-M3	ii.		Page:
SCS Contacts		Shigh	trown@eurofnset.com		
GA Power			Analysis i	Requested	Job ⊭
4-offress 241 Ralph McGill Blvd SE	Due Date Requested:		Pan P		Preservation Codes:
Aflanta State 50	TAT Requested (days):		9+ H (74 m 28 (93/3) 5. Kte 3218		A - HCL M - Hexane B - NaCH N - Nane C - Zn Acetate O - AsNaO2 D - Nitric And P - Na2O4S
G4, 30308			文 日		D - Nitric Aord P - Na204S E - NaHS04 Q - Na2S03 F - MeOH R - Na2S203
Phone 404-506-7116(Tel)	PO#.				G - Amohtor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahyutrate
Enral SCS Contacts	WO #.		26/2 26/2 (300)		J - Dt Water V - MCAA
Project Name. CCR - Plant Arkwright.	Project# 18020201		722 (Yen or 722 (3)		E K-EDTA W-pH 4-5 L-ED4 Z-other(specify)
Sie Georgia	SSOW#		Mets (Year of AZ AZ AZ (Bh le (3)		0 00arr
Sample Identification	Sample Date Time	Sample Matrix Type (prestar, 5-474) (C=comp, prestat, G=grab) st-turne A-tri Preservation Code:	Helder Eller of the state of th		Special Instructions/Note:
FR#2	8/19/20 0915	<u></u>	XXXX		3
ARGWA-19	1 1056	GW	XXX		3 oH=6.25
ARGWA-20	1344	4	XXX		3 pH = 6.16
E8#2 ARGWA-19 ARGWA-20 ARGWC-22	1532	GW	XXXX		3 pH = 6.25 3 pH = 6.16 3 pH = 6.21
				180-109851	Chain of Custody
Possible Hazard Identification Non-Hazard Flammable Skin Imitant Deliverable Requested I, II, III, IV, Other (specify)	Poison B Unknown	Radiological .	Sample Disposal (A fee may Return To Client Special Instructions/QC Requir	Oisposal By Lab	Archive Far. Months
Empty Kit Relinquished by:	Date		Time:	Method of Shipment	
		Company	1	DataSiana	f all and Company (1)
Daniel Howard	8/19/20/18	Company	Received by	Osto Tine	7:36 Company
Reliquishadby	Date/Time	Company	Received by:	Date/Irne	Company
Custody Seals Intact. Custody Seal No.:			Cooler Temperature(s) °C and Cr	rior Remarks	

A Yes A No

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Chain of Custody Record

244- ATLANTA

Phone (412) 963-7058 Fax (412) 963-2468	and the suprementation of the suprementation												1 4 1 1 /
Client Information	DHoward			Lab F Brov	wn, St	nali				Carrier Tracking No	(S):	DOC No:	
Clear Contact SCS Contacts	Phone:			E-Ma		vo Piese	unnfins	et com				Page:	
SCS Contacts People in GA Power					T				nelmin	Daywooted		Job #:	
Alless	Due Date Requests	od:			1	13		7	Hellysis	Requested		Preservation Co	wise:
241 Ralph McGitt Blvd SE					1	12	0	\sim				A -HCI	M - Hexane
Cry Atlanta	TAT Requested (da	iysj:			-	Ċ	37	(300)				B - NaOH C - Zh Acatate	N - None O - AsNaO2
State, 7/p. GA, 30308					11	I	5	6				D - Netic And E - NaHS04	P - Na204S Q - Na2S03
Paone. 404-596-7116(Tel)	PO #.				No)	3	226/228(4315/9320)	ric				F - MeOH G - Arrightor H - Ascarbic Acid	R - Na2S3O3 S - H2SO4 T - TSP Dodecahydrate
Email SCS Contacts	WO#.					16028	28	当っ	00			I - Ice J - Di Water	U - Acetona W - MCAA
Project Name. CCR - Plant Arkweight	Pagediá				Cros	1	27	47	3			K - EDTA L - EDA	W - pH 4-5 Z - other (strepty)
CCR - Piert Arkwinght	18020201 SSOW#:				aldu		22	The M	12		contr	Other:	
Georgia				-	Sal	1	6 3	3	7		rof		
Sampte Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Nonce, Smoot Ownered ST-Take, A-Co)		V COTTO		5)T.			Total Number	Special	Instructions/Note:
		><		tion Code:	M	O	D	エエ	I				-
FR#2	8/20/20	1045	G	W	Ш	X	X	XX			3		
FB#2 ARGWC-23 DUP-2 ARAMW-1 ARAMW-2		1215	G	W.Bo	1	X	X	メン			3	PH=	6.33
NUP-2			6	W. Be		X	(X	XX					6,33
ARAMW-1		1436		W	-	X	X		X		3	pH=	6.09
ARAMW-2		1635	G	W	-	X	X		X		3	PH=	5.99
					-								
										10000			
							T						
							T						
										180-10	09918 Chain of	Custody	
					П		T				1 1 1		
Possible Hazard Identification									A fee may	the assessed if sam	ples are retain		
Non-Hazard Flammable Skin Imitant Deliverable Requested: I, II, III, IV, Other (specify)	Paison B Unkn	Over	Radiological		-			To Clis	QC Requi	Disposal By Lab	Arch	ive For-	Months
Empty Kit Relinquished by		Date:		-	Tim	e:	-	******************	-	Method of St	sipment		
Production 1 1 1	Date(firma:	1.00	10	Woo	0	Re	belied	0		Watom	late/lime: 🗸 🖚	2/20	Comment
Daniel L Howard	8/20/20 Date/Time	718-	10	Company	00	Re	ceived	tel	lle-		lata/Time:	40	Gripany VIII W
Ren quantity	Date/Time			Company		Re	Levisor	by:			eto/firme	1.45	Company
						_					/	110	
Custody Seals Intact. Custody Seal No.:						Co	iolar Ter	ncerature	(s) Caulo	icho Remaks			

10/8/2020





301 Alpha Drive RiDC Park Pittsburgh. PA 15238

Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

244- ATLANTA

Ever Gillen A Shored tole		COC No:
Phone: E-I	Va.	Page
	Analysis Requested	Job #:
Due Oate Requested:	20 5	Preservation Codes:
TAT Requested [days]:	S RAZA	A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2
	27 730	D - Ntric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3
PO#	1 3 % CET	F - MeOH R - Na2S203 G - Amchlor S - H2S04 H - Ascorbic Acid T - TSP Dodecahydrats
WO#.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	I - loe U - Acatons J - DI Water V - MCAA
Project ≠ 18020201	1	E K - EDTA W - pH 4-5 L - EDA Z - other (specify)
SSOW#	Towns of the state	Other:
Sample Matrix Type Sample (C=comp, overside, C=comp, overside, C=comp, overside)	Radius Flugt	Special Instructions/Note:
Preservation Code	OT QUX	Special instructions indice.
8/20/20 1035 G W	XXX	3 ot = 6.34
8/20/20 1705 G W	Y xxxx	3 pH = 6.34 4 pH = 6.43
	180	-109929 Chain of Custody
Poison B Unknown Radiciogical	Return To Client Disposal By Lab Special Instructions/QC Requirements	etained longer than 1 month) Archive For Months
Date:	Time: Method of Shipment	
8/20/20/1840 Woo	A Received by Date Water Date Time	-31-30 Company
		/ 1/
	Due Date Requested: TAT Requested (days): PO # WO # Project # 18020201 SSOW# Sample Time Sample (Type (means for soid of ownship) (C=comp, G=grab) (Destribute in the complete in the com	Proces Proces California Share

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301 Alpha Drive RIDC Park

Pittsburgh, PA 15238 Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

244- ATLANTA

Client Information	EverGuille	n Andrews	Show Brow	u n, Shali	Camer Tracking No(s):	COC No:
ed Contact CS Contacts	Phone	a fineros	1000	brown@eurofinset.com		Page
Vinpany .			12/19/1			Job #
A Power Stress	Due Date Requested			Analysis	Requested	
41 Ralph McGill Blvd SE	Due bate Regressor			X Field Filtered Sample (res or No) X Porton William 126/228/8 315/9728 H Fly Ori de (300)		Preservation Codes: A - HCL M - Hexane
y flanta	TAT Requested (day	s):		7.2		B - NaOH N - None
tate Zip				188		C - 2m Apetate
A, 30308				2007		E - NaHSO4
none. 84-506-7116(Tel)	PO#.			33		G - American S - H2S/04
na):	WO#.			Sample (res or No) retals + Ha retals (300)		H - Assorbic Acid T - TSP Dodeca'nyd I - Ibe U - Acetone
CS Contacts				natals +H		g J - DE Water V - MCAA K - EDIA W - pH 4-5 L - EDA Z - other (specify) Dister:
lojest Name CCR - Plant Arkwright	Project # 18020201			1 5 C		E L-EDA Z-other (specify)
ld .	\$\$0.4#			कि के कि		5 Osier:
ierrgia				St. St.		1 6
		Sampl		P. P. P. P. P. P. P. P. P. P. P. P. P. P		Special Instructions/Note:
		Type Sample (C=con		200		2
Sample Identification	Sample Date		(P) Dewarts (s). (b) Et et usea Ansir)	1 4 4 4 T		Special Instructions/Note:
		>< Press	evation Code:	XX UD I		I X
EB# 1 ARAMW-3 ARAMW-4	8/20/20	930 G	W	XXX		
ARAMW-3		445 G	W	XXX		pH=6,24 pH=5.77
A DA MINI - LI		145 G	W	XXX		AH=5:27
L Dilling -		12		HITTO		- pii - 2. 11
			-			
					180-10993	30 Chain of Custody
Possible Hazard Identification				Sample Disposal (A fee may	he assessed if samples a	are retained longer than 1 month)
Non-Hazard Flammable Skin Imita	nt Poison B Unknow	m Radiolog	ical -	Return To Client	Disposal By Lab	are retained longer than 1 month) Archive For. Months
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requir		
Empty Kit Relinquished by:	7	iale:		Time:	Method of Shipment	
Chapt. 0 4 71	8/20/20 /	14112	Сопрасу	A Received by.	www. Ostorist	8-21-30 COMPAN
Danil LHoward	8/10/10/	1070	Woo	Received by:	OsleTin	e QUY Company
			1			e 943 Company
Reliquished by	Detaffine		Company	Received by:	Date/first	e Company
Custody Seals Intact. Custody Seal No.:				Cooler Temperature(s) °C and D	- Penate	

10/8/2020

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

Pitisburgh, PA 15238 Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

244- ATLANTA

Client Information	BHoverd	Ashor	edits		wn, Shali		Carrier Tracking No(s):	COC No.
Clent Contact: SCS Contacts	Phone:			E-Ma		Deurofinset.com		Page 1 of 1
Company GA Power Address						Analysis	Requested	Job#.
Address 241 Ralph McGill Blvd SE	Oue Date Request	ed:				(Va)		Preservation Codes:
Dig.	TAT Requested (d.	ays):				App II metals+Hg (6020Bl 7+120A) Radium 226/228931519320 Flueride (300)		A - HOL M - Hexane B - NaOH N - None
Atlanta State, 2p	Stand	land				200		C - Zn Apetale
GA, 30308 Phone:	PO#				- 18	18		E - NaHSO4 O - Na2SO3 F - MeOH R - Na2S2O3
404-508-7116(Tel)					(0)	3.5		G - Amortor S - H2SO4 H - Ascorbic Acid T - TSP Dodecarrydrate
mar SCS Contacts Project Name.	WO#				No.	長2		J - Di Water V - MCAA
Project Name. DCR - Plant Arkwright	Project #: 18020201				(Ye)	+ 90		K-EDTA W-pH 4-5 L-EDA Z-other (specify)
Ste	SSOW#.	-		MARKET THE PARTY OF THE	MS/MSD (Ves	ब्रु हुन		L - EDA Z - other (specify) Other:
Georgia	-			Matrix	S S D S	W Wind		jo re
			Sample Type	Matrix (Whater, Short of One attribute 27 Marson Antir	m MS	日音等		Number
Daniel Marketonia	Committee Parks	Sample	(C=comp,	Shelf d. Droy scholas	error	200		at a land
Sample Identification	Sample Date	Time	G=grab) Preserva	abon Coda	TX D	DDI		Special Instructions/Note:
ARAMMI-6	8/21/20	1945	G	W	TT	XXX		20H=632
ARAMW-6 ARG WC-21	1.	1036	G	W		XXX		3 pH=6.32 3 pH=5.89
AIG WC ZI	V	1036	0		+++	^^^		5611-2.07
					+++			
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							120 10007	Chain of Custody
							160-10397	O O I DIT OF OUT IN
Possible Hazard Identification		F-7		-	San	nple Disposal (A fee ma)	be assessed if samples are reta	eined longer than 1 month)
Non-Hazard Flammable Skin-Imitant Po Deliverable Requested: I, II, III, IV, Other (specify)	sison B Unka	OWN P	Radiologica			Return To Client cial Instructions/QC Requi		chive For Months
						dai iristructionsi que Requi		
Empty Kit Relinquished by:	Data(Tima:	Date:		Company	Time:	Received by A. 1	Method of Shipment	
David & Hovard	8/21/20	/13	15	Company		Mulli	Waton Breton .	22 20 PTAPA
Relinquished by:	Data Time:	•		Company		Received by.	DateTime	10:0 Company
Reinquished by:	Date/Time:			Company		Received by:	DateTime	Company
Custody Seals Intact: Custody Seal No.:						Cooler Temperature(s) °C and C	ther Remarks.	

10/8/2020

Ver: 01/16/2019









301 Alpha Drive RIDC Park Pittsburgh, PA 15238

Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler.				PM: DWIL S	hali					C	arrier Traci	ing No(s):			COC No: 180-408215.1	
Client Contact: Shipping/Receiving	Phone			E-M Sh	tait. ali.Bro	wn@	Euro	finset	com			ate of Origi	in:			Page 1 of 1	
Company. TestAmerica Laboratories, Inc.									(See not	作						Job#:	
Address:	Due Date Request	ed			+	_	_	_							_	180-109846-2	
13715 Rider Trail North, .	9/23/2020								Ana	alysis	Requ	ested				Preservation Co.	
City: Earth City State, Zip:	TAT Requested (d	ays):							П	T	П					A - HCL B - NaOH C - Zn Apetate D - Nitric Acid	M - Hexane N - None O - AsNaO2 P - Na2O4S
MO, 63045 Phone:					л	ш.		1				11	- 1 1			E - NaHSO4 F - MeOH	Q - Na2SO3
314-298-8566(Tel) 314-298-8757(Fax)	PO#:				2				П							G - Amother H - Ascerbic Acid	R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate
Email:	WO#:				ž	or No) Radium 226	m 226		ш							1+lce J - DI Water	U - Acetone V - MCAA
Project Name: CCR - Plant Arkwright	Project #: 18020201				imple (Yes or No)				П						containers	K-EDTA L-EDA	W - pH 4-5 Z - other (specify)
Ste: Arkwright	SSOW#				1214	Soc	Sep	2	П						of con	Other:	
		Sample	Sample Type (C=comp, G=grab)	Matrix (Www. Snadd, Orwasiahid,	id Filtered S	Parform MS/MSD (Yes	0 Ra228/PrecSep 0								Number		
Sample Identification - Client ID (Lab ID)	Sample Date	Time	G=grab)	ST-Tissue, A-As		2 2	9320	Ray	\perp	_		\perp			Total	Special In	nstructions/Note:
	_><	13:55	Preservat	ion Code:	X	X	10						5 54		M	Part of the second	
ARGWA-14 (180-109846-1)	8/19/20	Eastern		Water	Π	X	X	X							1		
ARGWC-15 (180-109846-2)	8/19/20	10:05 Eastern		Water	П	×	X	X							1		
ARGWC-16 (180-109846-3)	8/19/20	12:05 Eastern		Water	\prod	×	×	×	П	-					1		
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					Ħ							$\dagger \dagger$	\forall				
					#	+	1					П	П				
					H	+	+	+			+	+	+	+			
Note: Since laboratory accreditations are subject to change, Eurofins Tes maintain accreditation in the State of Origin listed above for analysis heats TestAmerica attention immediately. If all requested accreditations are our										es. This structions	sample s will be p	hipment is rovided. A	forwarded ny change	under cha	ain-of-o ditation	custody. If the labor n status should be b	atory does not currently rought to Eurofins
Possible Hazard Identification			,	and the special section is a section of the section						e mav	be ass	essed if	samples	s are re	taine	d longer than 1	month)
Unconfirmed					- 1		Retu	m To	Client	1	10000	oosal By				ive For	Months
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Delivera	able Rank:	2		S	pecia	l Inst	ructio	ns/QC	Require		Josef Dy	100		- SEGIR	ie rui	MUNITAS
Empty Kit Relinquished by:		Date:			Time	90	-					Method	of Shipme	nE	-		
Relinquished by:	27717	OY	2001	Compagno	1	Rec	beived	by F	ell	¢			Date/T	ime:			Company
Reinquished by: Fed Ex	DOMESTICAL CO		,-0	conseq!	4	Rec	eived	30	G.	20)		Date/T	Parl	2-	08:30	ETASTL
Relinquished by:	Date/Time:		C	ompany		Rec	eved	J	~ >	JX.			Date/Ti	TE CI	ت	08.30	Company
Custody Seals Intact: Custody Seal No.:						Coc	oler Te	mperal	ture(s) °C	and Oth	er Remar	ks:	-		-		





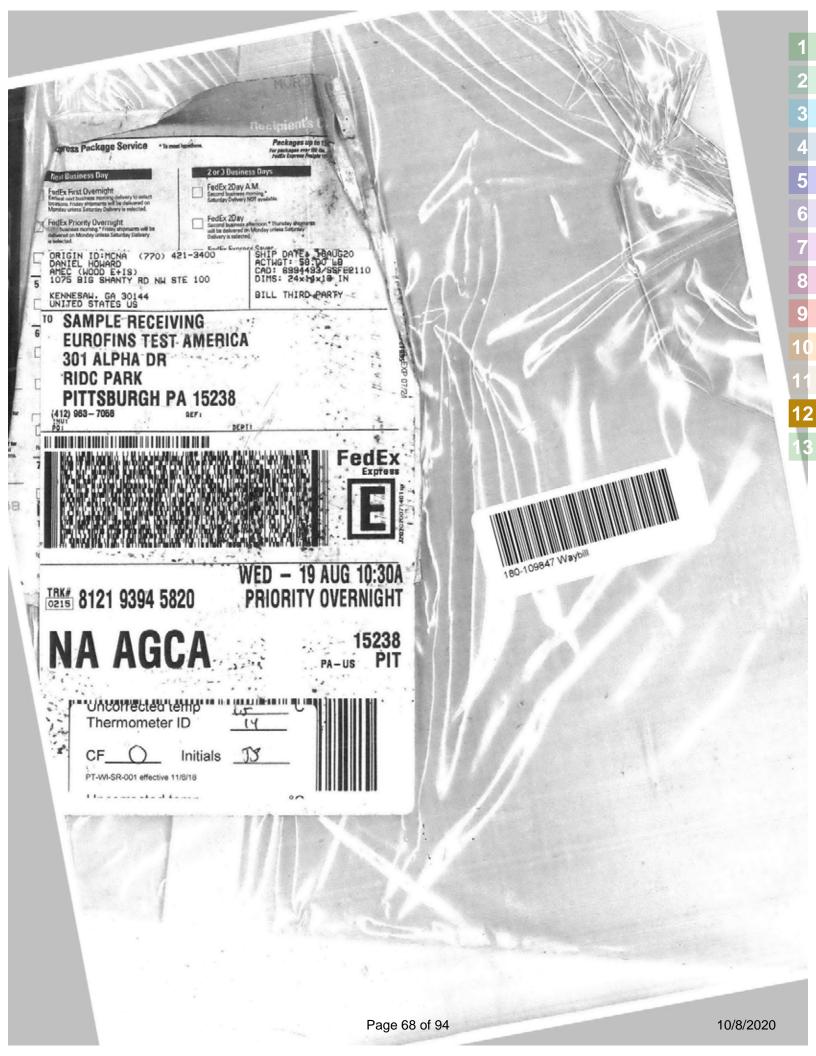






Ver. 01/16/2019









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BILL THIRD PARTY

PITTSBURGH PA 15238



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15238

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SAMPLE RECIEVING EUROFINS TEST AMERICA 301 ALPHA DR

PITTSBURGH PA 15238

FedEx Express

TRK# 8121 9394 5841

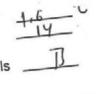
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THU - 20 AUG 10:30A PRIORITY OVERNIGHT DSR

15238

PA-US PI





Page 71 of 94







180-109930 Waybill





Login Number: 109846 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey neter.</td <td>N/A</td> <td></td>	N/A	
Γhe cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or ampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is 6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Number: 109846 List Number: 2 List Source: Eurofins TestAmerica, St. Louis

List Creation: 08/22/20 12:41 PM

Creator: Boyd, Jacob C

Creator. Boyu, Jacob C		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Number: 109847 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator. Watson, Debbie		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Number: 109847 List Number: 2 List Source: Eurofins TestAmerica, St. Louis

List Creation: 08/22/20 12:41 PM

Creator: Boyd, Jacob C

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Number: 109848 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Number: 109848

List Number: 2

Creator: Boyd, Jacob C

List Source: Eurofins TestAmerica, St. Louis

List Creation: 08/22/20 12:41 PM

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Number: 109850 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator. Watson, Debbie		
Question	Answer	Comment
Radioactivity wasn't checked or is $ background as measured by a survey meter.$	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Number: 109850

List Source: Eurofins TestAmerica, St. Louis List Number: 2

List Creation: 08/22/20 12:41 PM

Creator: Boyd, Jacob C

ordator. Boya, datob o		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company

Job Number: 180-109846-2

Login Number: 109851

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Orcator. Watson, Debbie		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Number: 109851

List Source: Eurofins TestAmerica, St. Louis

List Number: 2

List Creation: 08/22/20 12:41 PM

Creator: Boyd, Jacob C

orcator. Boya, vacob o		
Question	Answer	Comment
Radioactivity wasn't checked or is $<$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company

Job Number: 180-109846-2

Login Number: 109918

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Answer	Comment
N/A	
True	
True	
True	
True	
True	
True	
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N/A	
	N/A True True True True True True True Tru

Login Number: 109918 List Number: 2 List Source: Eurofins TestAmerica, St. Louis

List Creation: 08/25/20 02:54 PM

Creator: Boyd, Jacob C

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Number: 109929 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator. Watson, Debbie		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Number: 109929 List Number: 2 List Source: Eurofins TestAmerica, St. Louis

List Creation: 08/25/20 02:54 PM

Creator: Boyd, Jacob C

oreator. Boyu, Jacob o		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company

Job Number: 180-109846-2

Login Number: 109930

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Creator: watson, Debbie		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company Job Number: 180-109846-2

Login Number: 109930

List Source: Eurofins TestAmerica, St. Louis

List Number: 2

List Creation: 08/25/20 02:54 PM

Creator: Boyd, Jacob C

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company Job Number: 180-109846-2

Login Number: 109970 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Creator. Watson, Debbie		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company Job Number: 180-109846-2

Login Number: 109970

List Source: Eurofins TestAmerica, St. Louis

List Number: 2

List Creation: 08/25/20 02:54 PM

Creator: Boyd, Jacob C

Creator. Boyu, Jacob C		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Date: 2020-08-18 13:19:42

Project Information: Pump Information:

Operator Name Pump Model/Type Ever Guillen **QED** dedicated Company Name WOOD Tubing Type **HDPE** Project Name Plant Arkwright AP3 CCR **Tubing Diameter** 0.17 in Tubing Length Site Name ARGWA-3 40.5 ft

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 459710

Turbidity Make/Model HACH 2100Q Pump placement from TOC 35.5 ft

Well Information: Pumping Information:

Well ID Final Pumping Rate 200 mL/min ARGWA-3 Well diameter Total System Volume 0.6607687 L 2 in 40.5 ft Calculated Sample Rate Well Total Depth 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water 34.66 ft **Total Volume Pumped** 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:58:03	1800.03	19.44	6.40	74.91	7.46	34.82	6.83	87.78
Last 5	13:03:03	2099.88	19.40	6.42	74.39	6.51	34.82	6.83	87.12
Last 5	13:08:03	2399.88	19.50	6.43	74.70	5.67	34.82	6.84	87.28
Last 5	13:13:03	2699.97	19.56	6.46	74.51	4.86	34.82	6.85	86.59
Last 5	13:18:03	2999.91	19.50	6.47	74.21	4.52	34.82	6.87	86.81
Variance 0			0.11	0.02	0.31			0.01	0.17
Variance 1			0.05	0.03	-0.20			0.01	-0.70
Variance 2			-0.05	0.01	-0.30			0.02	0.22

Notes

Sample time=1320

Date: 2020-08-18 11:35:20

Project Information: Pump Information:

Operator Name Pump Model/Type Ever Guillen **QED** dedicated Company Name WOOD Tubing Type HDPE Project Name Plant Arkwright AP3 CCR **Tubing Diameter** 0.17 in Tubing Length Site Name ARGWA-5 30.00 ft

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 459710

Turbidity Make/Model HACH 2100Q Pump placement from TOC 25.00 ft

Well Information: Pumping Information:

Well ID Final Pumping Rate 200 mL/min ARGWA-5 Well diameter Total System Volume 0.6139027 L 2 in Calculated Sample Rate Well Total Depth 30.00 ft 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water 23.03 ft **Total Volume Pumped** 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cmTurb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:11:57	899.88	17.79	6.08	80.72	1.78	23.15	6.92	96.22
Last 5	11:16:57	1199.88	17.92	6.08	82.27	2.33	23.15	6.62	92.38
Last 5	11:21:57	1499.87	17.74	6.09	82.27	1.72	23.15	6.48	88.89
Last 5	11:26:57	1799.88	17.77	6.16	80.48	1.19	23.15	6.46	87.97
Last 5	11:31:57	2099.88	17.73	6.18	81.33	0.77	23.15	6.36	86.39
Variance 0			-0.18	0.00	0.01			-0.15	-3.49
Variance 1			0.03	0.07	-1.80			-0.02	-0.92
Variance 2			-0.04	0.02	0.85			-0.11	-1.58

Notes

Sample time= 1135

Date: 2020-08-18 13:03:49

Project Information:

Pump Information:

Operator Name Company Name

Daniel Howard Wood E&IS Plant Arkwright CCR

Pump Model/Type QED Micropurge dedicated

Project Name Site Name Latitude

ARGWA-12 00 0' 0" 00 0' 0"

Tubing Type HDPE Tubing Diameter .25 in Tubing Length 35 ft

Longitude Sonde SN

407447

Turbidity Make/Model Hach 2100Q

Pump placement from TOC

29.2 ft

Well Information:

Well ID Well diameter Well Total Depth Screen Length Depth to Water

ARGWA-12 2 in 35.2 ft 12 ft

15.1 ft

Pumping Information:

Final Pumping Rate 200 mL/min Total System Volume 0.8178456 L Calculated Sample Rate 300 sec Stabilization Drawdown 0.02 in **Total Volume Pumped** 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:39:02	900.38	21.13	6.55	189.97	6.79	15.47	2.94	118.38
Last 5	12:44:02	1200.38	21.09	6.53	189.48	5.23	15.48	2.92	115.30
Last 5	12:49:02	1500.38	21.24	6.49	189.25	4.93	15.48	2.90	113.38
Last 5	12:54:02	1800.39	21.29	6.49	188.48	3.51	15.49	2.87	112.30
Last 5	12:59:02	2100.39	21.25	6.48	188.26	3.85	15.49	2.87	112.79
Variance 0			0.15	-0.03	-0.23			-0.02	-1.92
Variance 1			0.05	-0.01	-0.77			-0.03	-1.09
Variance 2			-0.04	-0.01	-0.22			-0.00	0.49

Notes

ARGWA-12 sample time 1300.

Date: 2020-08-18 14:50:59

Project Information:

Pump Information:

Operator Name Company Name Project Name Daniel Howard Wood E&IS Pump Model/Type Tubing Type QED Micropurge dedicated HDPE

Project Name
Site Name
Latitude
Longitude

Plant Arkwright CCR ARGWA-13 0° 0' 0" 0° 0' 0" 407447 Tubing Type
Tubing Diameter
Tubing Length

.25 in 43.3 ft

Turbidity Make/Model

407447 Hach 2100Q

Pump placement from TOC

38.3 ft

Well Information:

Sonde SN

Well ID
Well diameter
Well Total Depth
Screen Length
Depth to Water

ARGWA-13 2 in 43.31 ft 10 ft 23.34 ft Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.8979633 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:27:20	900.03	19.68	6.20	1147.97	1.92	23.79	1.39	101.39
Last 5	14:32:20	1200.03	19.63	6.19	1150.71	1.39	23.79	1.25	98.01
Last 5	14:37:20	1500.02	19.69	6.18	1145.85	1.58	23.79	1.20	96.51
Last 5	14:42:20	1800.02	19.69	6.16	1142.28	1.32	23.79	1.16	95.28
Last 5	14:47:20	2100.02	19.61	6.15	1136.43	1.01	23.79	1.12	94.29
Variance 0			0.06	-0.01	-4.86			-0.06	-1.49
Variance 1			-0.00	-0.02	-3.57			-0.04	-1.23
Variance 2			-0.07	-0.00	-5.85			-0.04	-0.99

Notes

ARGWA-13 sample time 1450.

Date: 2020-08-19 14:06:51

Project Information: Pump Information:

Operator Name Andreas Shoredits Pump Model/Type QED dedicated

Company NameWoodTubing TypeLDPEProject NamePlant Arkwright AP3 CCRTubing Diameter0.17 inSite NameARGWA-14Tubing Length55 ft

Site Name ARGWA-14 Tubing Length 5
Latitude 32° 54' 8.95"

Longitude -83° -40' -57.63" Sonde SN 369323

Turbidity Make/Model HACH 2100Q Pump placement from TOC 53.45 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID ARGWA-14 80 mL/min Total System Volume 0.7254883 L Well diameter 2.00 in Calculated Sample Rate Well Total Depth 58.45 ft 300 sec Screen Length Stabilization Drawdown 32.6 in 10 ft Depth to Water 44.44 ft **Total Volume Pumped** 2.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	/cmTurb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 20
Last 5	13:28:00	600.02	22.87	6.40	431.03	0.75	45.52	4.38	143.63
Last 5	13:33:00	900.15	22.25	6.60	449.71	0.66	46.07	4.09	126.50
Last 5	13:38:00	1200.48	22.24	6.63	425.95	0.64	46.71	5.05	143.18
Last 5	13:43:00	1500.46	22.39	6.64	401.34	0.58	47.18	5.36	149.79
Last 5	13:48:00	1800.45	22.35	6.56	327.32	0.56	47.55	5.70	158.84
Variance 0			-0.01	0.03	-23.75			0.97	16.68
Variance 1			0.14	0.01	-24.61			0.31	6.60
Variance 2			-0.04	-0.08	-74.03			0.33	9.05

Notes

Start purging well @ 13:20, stop @ 13:48; Initial purge rate of 90 ml/min reduced to 80 ml/min @ 13:34; Sample collected @ 13:55 prior to water level drawing below sand pack; pH @ sampling is 6.45; Weather is overcast 29 degrees C

Grab Samples ARGWA-14 Groundwater sample

Date: 2020-08-18 15:25:00

On anatan Mana	From Cuillan	D Ma alal/T a
Project Information:		Pump Information:

QED dedicated **Operator Name** Pump Model/Type Ever Guillen Company Name Tubing Type WOOD HDPE Project Name Plant Arkwright AP3 CCR **Tubing Diameter** 0.17 in Tubing Length Site Name ARGWC-7 50.2 ft

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 459710

Turbidity Make/Model HACH 2100Q Pump placement from TOC 45.2 ft

Well Information: Pumping Information:

Well ID Final Pumping Rate 200 mL/min ARGWC-7 Well diameter Total System Volume 0.7040638 L 2 in 50.2 ft Calculated Sample Rate Well Total Depth 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water 8 L 22.18 ft **Total Volume Pumped**

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:02:12	1201.03	19.48	6.55	143.61	2.43	22.43	3.65	93.21
Last 5	15:07:12	1501.03	19.36	6.62	144.43	1.31	22.43	3.65	92.80
Last 5	15:12:12	1801.03	19.36	6.64	143.78	0.96	22.43	3.62	91.74
Last 5	15:17:12	2101.02	19.29	6.67	143.46	0.57	22.43	3.64	94.47
Last 5	15:22:12	2401.49	19.24	6.70	143.93	0.51	22.43	3.65	89.26
Variance 0			0.00	0.03	-0.65			-0.02	-1.06
Variance 1			-0.08	0.03	-0.32			0.02	2.73
Variance 2			-0.05	0.03	0.47			0.01	-5.21

Notes

Sample time=1525

Date: 2020-08-20 10:34:42

Project Information: Pump Information:

Operator Name Pump Model/Type Ever Guillen **QED** dedicated Company Name Tubing Type WOOD **HDPE** Project Name Tubing Diameter Plant Arkwright AP3 CCR 0.17 in Site Name Tubing Length ARGWC-8 43.23 ft

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407447

Turbidity Make/Model HACH 2100Q Pump placement from TOC 38.23 ft

Well Information: Pumping Information:

Well ID Final Pumping Rate 200 mL/min ARGWC-8 Well diameter Total System Volume 0.6729538 L 2 in 43.22 ft Calculated Sample Rate Well Total Depth 300 sec Stabilization Drawdown Screen Length 10 ft 0 in Depth to Water 9 L 26.15 ft **Total Volume Pumped**

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	/cmTurb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:11:45	1500.03	20.29	6.45	451.83	8.48	26.63	0.12	98.71
Last 5	10:16:45	1800.03	20.38	6.66	451.37	7.85	26.63	0.12	90.86
Last 5	10:21:45	2100.03	20.26	6.36	450.06	6.82	26.63	0.12	99.72
Last 5	10:26:45	2400.03	20.31	6.33	452.06	5.64	26.63	0.11	97.98
Last 5	10:31:45	2700.03	20.30	6.34	451.67	4.06	26.63	0.12	97.12
Variance 0			-0.12	-0.30	-1.31			-0.00	8.87
Variance 1			0.05	-0.03	2.00			-0.00	-1.74
Variance 2			-0.00	0.02	-0.39			0.00	-0.87

Notes

Sample time=1035

Date: 2020-08-19 14:24:49

Project I	nformation:			Pump	o Info	rmation:
_		_				

QED dedicated **Operator Name** Pump Model/Type Ever Guillen Company Name Tubing Type WOOD HDPE Plant Arkwright AP3 CCR Project Name **Tubing Diameter** 0.17 in Tubing Length Site Name ARGWC-9 38.2 ft

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 459710

Turbidity Make/Model HACH 2100Q Pump placement from TOC 33.2 ft

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWC-9 Well diameter Total System Volume 0.6505027 L 2 in 38.2 ft Calculated Sample Rate Well Total Depth 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water 20.78 ft **Total Volume Pumped** 35 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cmTurb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:03:02	4499.88	19.38	7.16	70.87	8.79	21.13	6.39	74.47
Last 5	14:08:03	4800.73	19.37	7.18	70.86	7.67	21.13	6.39	73.99
Last 5	14:13:03	5100.73	19.44	7.20	70.81	6.59	21.13	6.36	75.07
Last 5	14:18:03	5400.73	19.37	7.18	70.91	5.21	21.13	6.35	73.54
Last 5	14:23:03	5700.73	19.42	7.21	70.90	4.62	21.13	6.35	72.85
Variance 0			0.07	0.02	-0.05			-0.03	1.08
Variance 1			-0.07	-0.02	0.11			-0.01	-1.54
Variance 2			0.04	0.02	-0.01			0.00	-0.68

Notes

Sample time = 1425

Date: 2020-08-19 11:36:18

Project Information: Pump Information:

Operator Name Pump Model/Type Ever Guillen **QED** dedicated Company Name WOOD Tubing Type HDPE Project Name Plant Arkwright AP3 CCR **Tubing Diameter** 0.17 in Tubing Length Site Name ARGWC-10 38.35 ft

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 459710

Turbidity Make/Model HACH 2100Q Pump placement from TOC 33.35 ft

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWC-10 Well diameter Total System Volume 0.6511722 L 2 in 38.35 ft Calculated Sample Rate Well Total Depth 300 sec Stabilization Drawdown Screen Length 10 ft 0 in Depth to Water 21.27 ft **Total Volume Pumped** 33 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:11:20	8700.58	19.32	7.04	91.75	6.18	21.63	4.34	71.18
Last 5	11:16:20	9000.59	19.42	7.05	92.13	5.84	21.63	4.39	70.59
Last 5	11:21:20	9300.58	19.59	7.07	91.64	5.11	21.63	4.39	71.20
Last 5	11:26:20	9600.58	19.32	7.08	91.40	5.10	21.73	4.40	70.66
Last 5	11:31:20	9900.58	19.32	7.06	91.17	4.89	21.63	4.34	70.41
Variance 0			0.17	0.01	-0.49			0.00	0.61
Variance 1			-0.27	0.01	-0.24			0.01	-0.54
Variance 2			0.01	-0.02	-0.23			-0.06	-0.25

Notes

Sample time =1135

Date: 2020-08-19 10:13:39

Project Information: Pump Information:

Operator Name Andreas Shoredits Pump Model/Type QED dedicated Company Name Wood Tubing Type LDPE Project Name Plant Arkwright AP3 CCR Tubing Diameter 0.17 in

Site Name

ARGWC-15

Latitude

ARGWC-15

Tubing Length

39 ft

Longitude -83° -40' -57.63"

Sonde SN 369323

Turbidity Make/Model HACH 2100Q Pump placement from TOC 38 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID ARGWC-15 90 mL/min Total System Volume 0.6540735 L Well diameter 2.00 in Calculated Sample Rate Well Total Depth 43 ft 300 sec Screen Length Stabilization Drawdown 332 in 10 ft Depth to Water 28.22 ft **Total Volume Pumped** 3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	/cmTurb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 20
Last 5	09:36:56	1200.03	20.91	6.85	210.84	3.53	30.42	4.08	185.92
Last 5	09:41:56	1500.02	21.04	6.69	211.19	2.74	30.79	4.08	185.88
Last 5	09:46:56	1799.91	21.10	6.60	211.99	2.05	31.17	4.01	185.38
Last 5	09:51:56	2099.91	21.27	6.55	213.17	1.45	31.42	3.87	183.61
Last 5	09:56:56	2399.91	21.08	6.51	214.46	1.48	31.72	3.77	185.10
Variance 0			0.06	-0.09	0.79			-0.07	-0.49
Variance 1			0.17	-0.05	1.19			-0.13	-1.77
Variance 2			-0.19	-0.04	1.29			-0.10	1.49

Notes

Start purging well @ 09:18, stop @ 09:57; Purge rate held constant @ 90 ml/min; Collect sample @ 10:05; pH pre sample collection is 6.47; Weather is sunny 23 degrees C

Grab Samples ARGWC-15

Date: 2020-08-19 12:11:47

Project Information: Pump Information:

Operator Name Andreas Shoredits Pump Model/Type QED dedicated Company Name Wood Tubing Type LDPE

Project Name Plant Arkwright AP3 CCR Tubing Diameter 0.17 in Site Name ARGWC-16 Tubing Length 32 ft

Latitude 32° 54' 8.95" Longitude -83° -40' -57.63"

Sonde SN 369323

Turbidity Make/Model HACH 2100Q Pump placement from TOC 29.5 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID ARGWC-16 220 mL/min Total System Volume Well diameter 0.6228296 L 2.00 in Calculated Sample Rate Well Total Depth 34.52 ft 300 sec Screen Length Stabilization Drawdown 0.2 in 10 ft Depth to Water 20.12 ft **Total Volume Pumped** 7.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 20
Last 5	11:39:07	900.02	20.50	5.32	540.99	0.90	20.14	0.99	241.55
Last 5	11:44:08	1200.40	20.31	5.27	539.22	0.46	20.14	0.78	239.15
Last 5	11:49:08	1500.38	20.28	5.26	539.12	0.32	20.14	0.71	236.07
Last 5	11:54:08	1800.37	20.21	5.25	538.76	0.37	20.14	0.69	233.66
Last 5	11:59:08	2100.38	20.16	5.25	538.94	0.20	20.14	0.68	231.19
Variance 0			-0.03	-0.01	-0.10			-0.07	-3.08
Variance 1			-0.08	-0.01	-0.36			-0.02	-2.41
Variance 2			-0.04	-0.00	0.19			-0.01	-2.47

Notes

Start purging well @ 11:25, stop @ 11:59; Purge rate held steady @ 220 ml/min; Collect sample @12:05; pH @ sample collection time is 5.24; Weather is partly cloudy 27 degrees C

Grab Samples ARGWC-16

Date: 2020-08-18 15:14:41

Project Information:		Pump Information:
	 - I II.	

Operator Name Pump Model/Type **QED** dedicated Andreas Shoredits Company Name Tubing Type LDPE Wood Plant Arkwright AP3 CCR **Tubing Diameter Proiect Name** 0.17 in Tubing Length Site Name ARGWC-17 31 ft

00 0' 0" Latitude 00 0' 0" Longitude Sonde SN 369323

Turbidity Make/Model Pump placement from TOC **HACH 2100Q** 29.50 ft

Pumping Information: Well Information:

Final Pumping Rate Well ID ARGWC-17 210 mL/min Total System Volume 0.6183661 L Well diameter 2.00 in Well Total Depth Calculated Sample Rate 34.50 ft 300 sec Screen Length Stabilization Drawdown 2.6 in 10 ft Depth to Water 21.66 ft **Total Volume Pumped** 9.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	/cmTurb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 20
Last 5	14:20:41	1200.22	20.65	5.12	221.49	9.50	22.39	0.60	224.97
Last 5	14:25:41	1500.21	20.59	5.10	223.51	4.84	22.26	0.46	220.51
Last 5	14:30:41	1800.21	20.90	5.09	223.95	3.80	22.25	0.39	219.04
Last 5	14:35:41	2100.22	20.59	5.07	224.11	2.46	22.25	0.34	218.68
Last 5	14:40:41	2400.22	21.02	5.08	224.39	2.24	22.24	0.32	215.52
Variance 0			0.31	-0.00	0.44			-0.07	-1.47
Variance 1			-0.32	-0.03	0.15			-0.05	-0.36
Variance 2			0.43	0.01	0.28			-0.02	-3.17

Notes

Start purging well @ 14:00, stop @ 14;40; Purge rate lowered from initial rate of 325 ml/min to 210 ml/min @ 14:20; Collect sample @ 14:45, pH is 5.07; Weather is sunny 33 degrees C

Grab Samples ARGWC-17

Date: 2020-08-20 17:05:38

Project Information: Pump Information:

Operator NameEver GuillenPump Model/TypeQED dedicatedCompany NameWOODTubing TypeHDPEProject NamePlant Arkwright AP3 CCRTubing Diameter0.17 inSite NameARGWC-18Tubing Length50.65 ft

Site Name ARGWC-1
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407447

Turbidity Make/Model HACH 2100Q Pump placement from TOC 45.65 ft

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWC-18 Well diameter Total System Volume 0.7060724 L 2 in 50.65 ft Calculated Sample Rate Well Total Depth 300 sec Stabilization Drawdown Screen Length 10 ft 0 in Depth to Water 28.28 ft **Total Volume Pumped** 28 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	/cmTurb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	16:41:01	19208.09	23.98	6.44	592.62	26.00	28.62	0.39	268.24
Last 5	16:46:01	19508.09	23.83	6.44	592.08	26.70	28.62	0.38	256.28
Last 5	16:51:01	19808.09	23.70	6.44	593.07	26.10	28.62	0.38	242.51
Last 5	16:56:01	20108.09	23.76	6.44	592.47	27.10	28.62	0.38	228.05
Last 5	17:01:01	20408.09	23.79	6.43	591.96	26.30	2862.00	0.38	214.76
Variance 0			-0.13	-0.00	0.98			-0.00	-13.76
Variance 1			0.06	-0.00	-0.60			0.00	-14.46
Variance 2			0.03	-0.00	-0.51			-0.00	-13.29

Notes

Sample time =1705.

Date: 2020-08-20 15:25:52

Project Information:

Operator Name Andreas Shoredits

Company Name Wood

Project Name Plant Arkwright AP3 CCR

Site Name ARAMW-3

32° 55' 31.01" Latitude -830 -42' -30.63" Longitude

Sonde SN 369323

Turbidity Make/Model **HACH 2100Q** **Tubing Type**

Pump Information:

Pump Model/Type QED Sample Pro

LDPE **Tubing Diameter** 0.17 in Tubing Length 66 ft

Pump placement from TOC 62 ft

Well Information:

Well ID ARAMW-3 Well diameter 2.00 in Well Total Depth 67.90 ft Screen Length 10 ft Depth to Water 25.57 ft

Pumping Information:

Final Pumping Rate 190 mL/min Total System Volume 0.6845859 L Calculated Sample Rate 300 sec Stabilization Drawdown 2.4 in **Total Volume Pumped** 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	pH SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 20
Last 5	14:22:02	1500.02	22.20	6.24	333.82	5.66	26.21	0.25	-22.47
Last 5	14:27:02	1800.02	22.33	6.23	334.76	5.49	26.20	0.20	-24.05
Last 5	14:32:02	2100.02	21.55	6.24	336.69	4.39	26.20	0.18	-24.30
Last 5	14:37:02	2400.02	21.39	6.24	338.16	3.97	26.19	0.15	-24.73
Last 5	14:42:02	2699.99	21.26	6.24	340.38	3.37	26.18	0.15	-26.22
Variance 0			-0.78	0.01	1.94			-0.02	-0.25
Variance 1			-0.16	-0.00	1.46			-0.02	-0.43
Variance 2			-0.13	0.00	2.22			-0.01	-1.49

Notes

Start purging well @ 13:59, stop @ 14:42; Initial purge rate of 160 ml/min increased to 190-195 ml/min @ 14:03; Water has strong sulfurous odor; Sample collected @ 14:45; pH during collection is 6.24; Weather is cloudy with thunderstorms 27 degrees C

Grab Samples ARAMW-3

Date: 2020-08-20 12:02:04

Project Information:

Operator Name Andreas Shoredits

Company Name Wood
Project Name Plant Arkwright AP3 CCR

Site Name ARAMW-4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369323

Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED Sample Pro

52 ft

Tubing TypeLDPETubing Diameter0.17 inTubing Length56 ft

Pump placement from TOC

Well Information:

Well IDARAMW-4Well diameter2.00 inWell Total Depth57.72 ftScreen Length10 ftDepth to Water21.44 ft

Pumping Information:

Final Pumping Rate 195 mL/min
Total System Volume 0.6399516 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.7 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS/	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 20
Last 5	11:21:52	1500.02	20.51	5.92	1712.92	1.01	21.53	0.22	6.09
Last 5	11:26:52	1800.02	20.58	5.85	1718.18	0.87	21.54	0.19	8.72
Last 5	11:31:52	2100.02	20.68	5.81	1711.91	0.80	21.54	0.17	11.08
Last 5	11:36:52	2400.02	20.64	5.79	1707.67	0.70	21.54	0.15	13.17
Last 5	11:41:52	2700.02	20.55	5.77	1687.25	0.60	21.54	0.13	17.76
Variance 0			0.11	-0.04	-6.26			-0.02	2.35
Variance 1			-0.05	-0.02	-4.25			-0.02	2.09
Variance 2			-0.09	-0.01	-20.42			-0.02	4.60

Notes

Start purging well @ 10:59, stop @ 11:41; Initial purge rate of 100 ml/min increased to 190-200 ml/min @ 11:07; Water has stong sulfurous odor; Collect sample @ 11:45; pH @ collection is 5.77; Weather is clear 28 degrees C

Grab Samples ARAMW-4

Date: 2020-08-21 10:35:09

Project Information:

Operator Name Andreas Shoredits

Company Name Project Name Site Name Wood Plant Arkwright AP3 CCR

369323

 Site Name
 ARAMW-6

 Latitude
 32° 54' 8.83"

 Longitude
 -83° -40' -57.39"

Sonde SN

Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Barnant Co Portable Sampler

Tubing TypeHDPETubing Diameter0.17 inTubing Length32.0 ft

Pump placement from TOC 27.0 ft

Well Information:

Well IDARAMW-6Well diameter2.00 inWell Total Depth32.34 ftScreen Length10 ftDepth to Water13.45 ft

Pumping Information:

Final Pumping Rate 215 mL/min
Total System Volume 0.3528295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.2 in
Total Volume Pumped 7.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 20
Last 5	09:19:25	900.02	20.98	6.36	387.85	4.20	14.33	0.74	-34.19
Last 5	09:24:25	1200.03	21.04	6.34	378.79	2.91	14.34	0.23	-20.73
Last 5	09:29:25	1500.02	21.04	6.34	372.42	0.99	14.34	0.19	-9.15
Last 5	09:34:25	1800.02	21.08	6.33	367.65	0.46	14.35	0.17	-2.37
Last 5	09:39:25	2100.02	21.08	6.32	364.09	0.15	14.34	0.15	1.91
Variance 0			-0.00	-0.01	-6.37			-0.04	11.58
Variance 1			0.04	-0.01	-4.76			-0.02	6.79
Variance 2			-0.00	-0.01	-3.56			-0.02	4.27

Notes

Start purging well @ 09:05, stop @ 09:39; Initial purge rate of 200 ml/min increased to 215 ml/min @ 09:15; Water has strong sulfurous odor; Collect sample @ 09:45; pH during collection is 6.32; Weather is cloudy with light rain 23 degrees C

Grab Samples ARAMW-6 Groundwater sample

And A Community of the		G	eorgia Po	and the second of the second o	44.7	Data (GW)]
Site Name: Plant	Arkw					Date: 8/18-21/2020	-
	Sample	Sample		Equipment			1
Well ID	Date	Time	Field Blank	Blank	Field Dup.	Additional Comments	
ARGWA-5	8/18/20						
ARGWA-3	8/18/20	1320					1
ARGWC-7	8/18/20	1525					
FB#/	8/18/20	1100	FB#1			FieldBlank For 8/18/20 beginning of	4 - oli
ARGWC-17	8/18/20						100mpring
ARGWA-12	8/18/20						- -
ARGWA-13	8/18/20						1
ARGWA-14	8/19/20						1
ARGWC-15	8/19/20						1
ARGWC-16	8/19/20		-				
ARGWC-9	8/19/20	1425					entral de la constante de la c
ARGWC-10	8/19/20	1/25					
Dup-1	8/19/20				A RGWC-I	a Duplicate of ARGWC-10/DUP-1	
A AGWC-8	8/20/20				717000	1 DEMINESTE VI LIVONG-101DWI-1	4
ARGWC-18	8/20/20					Collected Tot+Diss App IV metals	Turb=26.3 after 5hrs,45min
ARAMW-4	8/20/20					Cone clea to 1 F13:33 Hante make	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
ARAMW-3	8/20/20			<u> </u>			
ARAMW-6	8/2//20						1
EB#1	8/20/20			EB#I	 	Equip Black of blalde pump	1
	- Cynus - Sur	10,00				Land Mork AL Glasse - bamb	4
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Additional comments :	= IJRi	LF	D+1 121	+ + 4 + 4 + 4	+ 4.1	Pend 3 using ASTM Type I/II	1
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EB# I was co	11-4-11	I wrac	IENY.	Ja Pan P	337, E Y	Pump ID# 20153 wing	1
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1011111998-1-		A NGI E	i nance	11 DEAD A	ho! To	OBARSS, EXPUSIZUAL,	4
							

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-111645-1

Client Project/Site: CCR - Plant Arkwright AP-3

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by: 10/29/2020 7:27:42 AM

Shali Brown, Project Manager II (615)301-5031

Shali.Brown@Eurofinset.com

LINKS

Review your project results through

Have a Question?



Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

Client: Southern Company Project/Site: CCR - Plant Arkwright AP-3 Laboratory Job ID: 180-111645-1

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Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Job ID: 180-111645-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-111645-1

Comments

No additional comments.

Receipt

The samples were received on 9/30/2020 9:00 AM, 10/1/2020 9:00 AM and 10/2/2020 9:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 2.1° C, 2.7° C, 3.4° C, 3.8° C and 3.8° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Methods 6020A, 6020B: The following samples were diluted due to the nature of the sample matrix: (180-111758-E-1-A ^5), (180-111758-E-1-B MS ^5), (180-111758-E-1-C MSD ^5), (180-111758-E-1-A PDS ^5) and (180-111758-E-1-A SD ^25). Elevated reporting limits (RLs) are provided.

Methods 245.1, 7470A: The laboratory control sample (LCS) for preparation batch 180-332971 and analytical batch 180-333510 recovered outside control limits for the following analytes: Mercury These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 180-111645-1

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Definitions/Glossary

Client: Southern Company Job ID: 180-111645-1

Project/Site: CCR - Plant Arkwright AP-3

Qualifiers

			$\overline{}$	"	$\overline{}$
_	_			"	•
	_	_	•	•	u

Qualifier **Qualifier Description**

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier **Qualifier Description**

В Compound was found in the blank and sample.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly use	ed abbreviations ma	y or may not be presei	nt in this report.
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¤ Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery **CFL** Contains Free Liquid CFU Colony Forming Unit Contains No Free Liquid CNF

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

 $\mathsf{DL},\,\mathsf{RA},\,\mathsf{RE},\,\mathsf{IN}$ Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" Minimum Detectable Activity (Radiochemistry) MDA MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit ML Minimum Level (Dioxin) MPN Most Probable Number MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive QC **Quality Control**

Relative Error Ratio (Radiochemistry) **RER**

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) **TEQ**

TNTC Too Numerous To Count

Accreditation/Certification Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Job ID: 180-111645-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20 *
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-21
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-21
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-14-21
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-21

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 $^{^{\}star} \ \text{Accreditation/Certification renewal pending - accreditation/certification considered valid}.$

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company

180-111743-4

Project/Site: CCR - Plant Arkwright AP-3

ARGWC-8

Lab Sample ID Matrix Collected Received Client Sample ID Asset ID 180-111645-1 ARGWA-5 Water 09/29/20 10:50 09/30/20 09:00 180-111645-2 ARGWA-3 09/29/20 12:25 09/30/20 09:00 Water ARGWC-7 180-111645-3 Water 09/29/20 14:15 09/30/20 09:00 180-111645-4 ARGWC-16 Water 09/29/20 15:40 09/30/20 09:00 180-111646-1 ARGWA-14 Water 09/29/20 10:35 09/30/20 09:00 ARGWC-15 Water 09/29/20 13:05 09/30/20 09:00 180-111646-2 180-111646-3 ARGWC-17 Water 09/29/20 14:55 09/30/20 09:00 DUP-01 Water 180-111646-4 09/29/20 00:00 09/30/20 09:00 180-111647-1 FB-01 Water 09/29/20 09:45 09/30/20 09:00 ARGWA-12 180-111647-2 **Ground Water** 09/29/20 11:27 09/30/20 09:00 180-111647-3 ARGWA-13 Water 09/29/20 13:30 09/30/20 09:00 180-111689-1 EB-01 Water 09/30/20 09:05 10/01/20 09:00 180-111689-2 ARAMW-4 Water 09/30/20 12:40 10/01/20 09:00 180-111689-3 ARAMW-3 Water 09/30/20 16:45 10/01/20 09:00 ARGWC-18 09/30/20 16:15 10/01/20 09:00 180-111689-4 Water ARGWC-10 Water 10/01/20 11:00 10/02/20 09:00 180-111743-1 180-111743-2 ARGWC-9 Water 10/01/20 14:50 10/02/20 09:00 180-111743-3 ARAMW-6 Water 10/01/20 14:55 10/02/20 09:00

Water

10/01/20 11:00 10/02/20 09:00

Job ID: 180-111645-1

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Method Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
Filtration	Sample Filtration	None	TAI PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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Lab Chronicle

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Lab Sample ID: 180-111645-1

Matrix: Water

Job ID: 180-111645-1

Date Collected: 09/29/20 10:50 Date Received: 09/30/20 09:00

Client Sample ID: ARGWA-5

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: INTEGRION		1			332371	10/06/20 09:27	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: NEMO		1			334462	10/22/20 14:15	RSK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	331934	10/01/20 06:37	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling		1			333129	09/29/20 10:50	AGJ	TAL PIT

Client Sample ID: ARGWA-3

Date Collected: 09/29/20 12:25 Date Received: 09/30/20 09:00 Lab Sample ID: 180-111645-2

Lab Sample ID: 180-111645-3

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: INTEGRION		1			332371	10/06/20 09:48	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: NEMO		1			334462	10/22/20 14:18	RSK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	331934	10/01/20 06:37	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			333129	09/29/20 12:25	AGJ	TAL PIT

Client Sample ID: ARGWC-7

Date Collected: 09/29/20 14:15

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			332371	10/06/20 10:08	MJH	TAL PIT
	Instrumen	t ID: INTEGRION								
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			334462	10/22/20 14:21	RSK	TAL PIT
	Instrumen	t ID: NEMO								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	331934	10/01/20 06:37	AVS	TAL PIT
	Instrumen	t ID: NOEQUIP								
Total/NA	Analysis	Field Sampling		1			333129	09/29/20 14:15	AGJ	TAL PIT
	Instrumen	t ID: NOEQUIP								

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Lab Chronicle

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-16

Lab Sample ID: 180-111645-4

Matrix: Water

Job ID: 180-111645-1

Date Collected: 09/29/20 15:40 Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: INTEGRION		1			332371	10/06/20 10:29	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: NEMO		1			334462	10/22/20 14:38	RSK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	331934	10/01/20 06:37	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling at ID: NOEQUIP		1			333129	09/29/20 15:40	AGJ	TAL PIT

Client Sample ID: ARGWA-14

Date Collected: 09/29/20 10:35

Lab Sample ID: 180-111646-1

Matrix: Water

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 300.0 R2.1 ID: INTEGRION		1			332371	10/06/20 10:50	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020B t ID: NEMO		1			334462	10/22/20 14:41	RSK	TAL PIT
Total/NA	Analysis Instrument	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	331934	10/01/20 06:37	AVS	TAL PIT
Total/NA	Analysis Instrument	Field Sampling		1			333129	09/29/20 10:35	AGJ	TAL PIT

Client Sample ID: ARGWC-15

Date Collected: 09/29/20 13:05

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			332371	10/06/20 11:53	MJH	TAL PIT
	Instrumen	t ID: INTEGRION								
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			334462	10/22/20 14:44	RSK	TAL PIT
	Instrumen	t ID: NEMO								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	331934	10/01/20 06:37	AVS	TAL PIT
	Instrumen	t ID: NOEQUIP								
Total/NA	Analysis	Field Sampling		1			333129	09/29/20 13:05	AGJ	TAL PIT
	Instrumen	t ID: NOEQUIP								

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Lab Sample ID: 180-111646-2 Matrix: Water

Job ID: 180-111645-1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-17

Lab Sample ID: 180-111646-3

Matrix: Water

Date Collected: 09/29/20 14:55 Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: INTEGRION		1			332371	10/06/20 14:40	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: NEMO		1			334462	10/22/20 14:46	RSK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	331934	10/01/20 06:37	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling		1			333129	09/29/20 14:55	AGJ	TAL PIT

Client Sample ID: DUP-01

Date Collected: 09/29/20 00:00

Lab Sample ID: 180-111646-4

Matrix: Water

Date Collected: 09/29/20 00:00
Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: INTEGRION		1			332371	10/06/20 15:01	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: NEMO		1			334462	10/22/20 14:49	RSK	TAL PI
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	331934	10/01/20 06:37	AVS	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			333129	09/29/20 00:00	AGJ	TAL PIT

Client Sample ID: FB-01

Date Collected: 09/29/20 09:45

Lab Sample ID: 180-111647-1

Matrix: Water

Date Collected: 09/29/20 09:45 Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			332371	10/06/20 08:24	MJH	TAL PIT
	Instrumer	t ID: INTEGRION								
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			334462	10/22/20 14:52	RSK	TAL PIT
	Instrumer	t ID: NEMO								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	331996	10/01/20 12:36	GRB	TAL PIT
	Instrumer	t ID: NOEQUIP								

Client Sample ID: ARGWA-12

Date Collected: 09/29/20 11:27

Lab Sample ID: 180-111647-2

Matrix: Ground Water

Date Received: 09/30/20 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			332371	10/06/20 16:03	MJH	TAL PIT
	Instrument	ID: INTEGRION								

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Job ID: 180-111645-1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Lab Sample ID: 180-111647-2

Matrix: Ground Water

Client Sample ID: ARGWA-12 Date Collected: 09/29/20 11:27

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B at ID: NEMO		1			334462	10/22/20 14:54	RSK	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	331996	10/01/20 12:36	GRB	TAL PIT
Total/NA	Analysis Instrumer	Field Sampling at ID: NOEQUIP		1			333130	09/29/20 11:27	AGJ	TAL PIT

Client Sample ID: ARGWA-13 Lab Sample ID: 180-111647-3

Date Collected: 09/29/20 13:30

. Matrix: Water

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			332371	10/06/20 17:06	MJH	TAL PIT
	Instrumen	t ID: INTEGRION								
Total/NA	Analysis	EPA 300.0 R2.1		5			332371	10/06/20 17:27	MJH	TAL PIT
	Instrumen	t ID: INTEGRION								
Total Recoverable	Prep	3005A			50 mL	50 mL	333113	10/12/20 15:58	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			334462	10/22/20 14:57	RSK	TAL PIT
	Instrumen	t ID: NEMO								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	331996	10/01/20 12:36	GRB	TAL PIT
	Instrumen	t ID: NOEQUIP								
Total/NA	Analysis	Field Sampling		1			333130	09/29/20 13:30	AGJ	TAL PIT
	Instrumen	t ID: NOEQUIP								

Client Sample ID: EB-01 Lab Sample ID: 180-111689-1

Date Collected: 09/30/20 09:05 Date Received: 10/01/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 300.0 R2.1 at ID: INTEGRION		1			332371	10/06/20 09:06	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			334271	10/21/20 20:28	RSK	TAL PIT
	Instrumer	it ID: A								
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	332159	10/02/20 14:35	GRB	TAL PIT

Client Sample ID: ARAMW-4 Lab Sample ID: 180-111689-2

Date Collected: 09/30/20 12:40 Date Received: 10/01/20 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 at ID: INTEGRION		1			332371	10/06/20 21:58	MJH	TAL PIT

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Matrix: Water

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Matrix: Water

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARAMW-4

Date Collected: 09/30/20 12:40 Date Received: 10/01/20 09:00

Lab Sample ID: 180-111689-2

Matrix: Water

Job ID: 180-111645-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		10			332371	10/06/20 22:19	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			334271	10/21/20 20:31	RSK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	332159	10/02/20 14:35	GRB	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			333128	09/30/20 12:40	AGJ	TAL PIT

Client Sample ID: ARAMW-3

Date Collected: 09/30/20 16:45

Lab Sample ID: 180-111689-3

Lab Sample ID: 180-111689-4

Matrix: Water

Matrix: Water

Date Received: 10/01/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: INTEGRION		1			332371	10/06/20 23:21	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: A		1			334271	10/21/20 20:42	RSK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	332159	10/02/20 14:35	GRB	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling at ID: NOEQUIP		1			333128	09/30/20 16:45	AGJ	TAL PIT

Client Sample ID: ARGWC-18

Date Collected: 09/30/20 16:15

Date Received: 10/01/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: INTEGRION		1			332371	10/07/20 00:24	MJH	TAL PIT
Dissolved	Filtration	Filtration			250 mL	1.0 mL	332490	10/06/20 14:43	KHM	TAL PIT
Dissolved	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Dissolved	Analysis Instrumen	EPA 6020B at ID: A		1			334271	10/21/20 20:49	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: A		1			334271	10/21/20 20:45	RSK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	332159	10/02/20 14:35	GRB	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling		1			333128	09/30/20 16:15	AGJ	TAL PIT

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Job ID: 180-111645-1

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-10 Lab Sample ID: 180-111743-1 Date Collected: 10/01/20 11:00

Matrix: Water

Date Received: 10/02/20 09:00

Client: Southern Company

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 t ID: INTEGRION		1			332937	10/10/20 21:23	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			334271	10/21/20 21:10	RSK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	332329	10/05/20 15:06	GRB	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			333127	10/01/20 11:00	AGJ	TAL PIT

Client Sample ID: ARGWC-9

Lab Sample ID: 180-111743-2 Date Collected: 10/01/20 14:50 **Matrix: Water**

Date Received: 10/02/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 300.0 R2.1 at ID: INTEGRION		1			332816	10/09/20 12:27	EPS	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B at ID: A		1			334271	10/21/20 21:14	RSK	TAL PI
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	332329	10/05/20 15:06	GRB	TAL PI
Total/NA	Analysis Instrumen	Field Sampling		1			333127	10/01/20 14:50	AGJ	TAL PIT

Client Sample ID: ARAMW-6

Lab Sample ID: 180-111743-3 Date Collected: 10/01/20 14:55 **Matrix: Water**

Date Received: 10/02/20 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			334271	10/21/20 21:25	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020B t ID: A		1			334457	10/22/20 13:11	RSK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	332329	10/05/20 15:06	GRB	TAL PIT
Total/NA	Analysis Instrumen	Field Sampling t ID: NOEQUIP		1			333127	10/01/20 14:55	AGJ	TAL PIT

Lab Chronicle

Client: Southern Company Job ID: 180-111645-1

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-8

Lab Sample ID: 180-111743-4

Date Collected: 10/01/20 11:00 Matrix: Water Date Received: 10/02/20 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B nt ID: A		1			334271	10/21/20 21:28	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	333214	10/13/20 09:41	KHM	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020B nt ID: A		1			334457	10/22/20 13:15	RSK	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	332329	10/05/20 15:06	GRB	TAL PIT
Total/NA	Analysis Instrumer	Field Sampling		1			333127	10/01/20 11:00	AGJ	TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Filtration

KHM = Kyle Mucroski

Batch Type: Prep

KHM = Kyle Mucroski

TJO = Tyler Oliver

Batch Type: Analysis

AGJ = Andy Johnson

AVS = Abbey Smith

EPS = Evan Scheuer

GRB = Gabriel Berghe

MJH = Matthew Hartman

RSK = Robert Kurtz

3

4

5

8

9

11

12

Client Sample Results

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWA-5 Lab Sample ID: 180-111645-1

Date Collected: 09/29/20 10:50 Date Received: 09/30/20 09:00

Matrix: Water

Job ID: 180-111645-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.6		1.0	0.32	mg/L			10/06/20 09:27	1
Fluoride	0.051	J	0.10	0.026	mg/L			10/06/20 09:27	1
Sulfate	<0.38		1.0	0.38	mg/L			10/06/20 09:27	1
Method: EPA 6020B - Meta	als (ICP/MS) - To	otal Recove	rable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:15	1
Barium	0.030		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:15	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:15	1
Boron	<0.039		0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:15	1
Calcium	6.6		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:15	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:15	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:15	1
Lead	< 0.00013		0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:15	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:15	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:15	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:15	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:15	1
Thallium	0.00019	JB	0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:15	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	61		10	10	mg/L			10/01/20 06:37	1
Method: Field Sampling -	Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.00				SU			09/29/20 10:50	1

Client: Southern Company

рН

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWA-3 Lab Sample ID: 180-111645-2

Date Collected: 09/29/20 12:25 Date Received: 09/30/20 09:00

Matrix: Water

Job ID: 180-111645-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.7		1.0	0.32	mg/L			10/06/20 09:48	1
Fluoride	0.065	J	0.10	0.026	mg/L			10/06/20 09:48	1
Sulfate	<0.38		1.0	0.38	mg/L			10/06/20 09:48	1
Method: EPA 6020B - Me	etals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:18	1
Barium	0.019		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:18	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:18	1
Boron	<0.039		0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:18	1
Calcium	5.9		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:18	1
Chromium	0.0030		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:18	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:18	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:18	1
Lithium	<0.0034		0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:18	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:18	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:18	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:18	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:18	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	62		10	10	mg/L			10/01/20 06:37	1

6.02

SU

09/29/20 12:25

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Lab Sample ID: 180-111645-3 **Client Sample ID: ARGWC-7**

Date Collected: 09/29/20 14:15 Date Received: 09/30/20 09:00

рН

Matrix: Water

Job ID: 180-111645-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.1		1.0	0.32	mg/L			10/06/20 10:08	1
Fluoride	0.027	J	0.10	0.026	mg/L			10/06/20 10:08	1
Sulfate	38		1.0	0.38	mg/L			10/06/20 10:08	1
Method: EPA 6020B - Meta	als (ICP/MS) - To	otal Recove	rable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:21	1
Barium	0.042		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:21	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:21	1
Boron	0.078	J	0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:21	1
Calcium	11		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:21	1
Chromium	0.0031		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:21	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:21	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:21	1
Lithium	<0.0034		0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:21	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:21	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:21	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:21	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:21	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		10	10	mg/L			10/01/20 06:37	1
Method: Field Sampling -	Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

5.92

SU

09/29/20 14:15

Client: Southern Company Job ID: 180-111645-1

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-16

Date Collected: 09/29/20 15:40 Date Received: 09/30/20 09:00

pН

Lab Sample ID: 180-111645-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.2		1.0	0.32	mg/L			10/06/20 10:29	1
Fluoride	0.026	J	0.10	0.026	mg/L			10/06/20 10:29	1
Sulfate	200		1.0	0.38	mg/L			10/06/20 10:29	1
Method: EPA 6020B - Me	tals (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:38	1
Barium	0.042		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:38	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:38	1
Boron	0.081		0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:38	1
Calcium	39		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:38	1
Chromium	0.0020		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:38	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:38	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:38	1
Lithium	<0.0034		0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:38	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:38	1
Selenium	0.0025	J	0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:38	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:38	1
Thallium	0.00025	J	0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:38	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	340		10	10	mg/L			10/01/20 06:37	1
Method: Field Sampling Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

5.50

SU

10/29/2020

09/29/20 15:40

Client: Southern Company Job ID: 180-111645-1

Project/Site: CCR - Plant Arkwright AP-3

Method: Field Sampling - Field Sampling

Result Qualifier

6.80

Analyte

pН

Client Sample ID: ARGWA-14

Date Collected: 09/29/20 10:35 Date Received: 09/30/20 09:00

Lab Sample ID: 180-111646-1

Matrix: Water

Analyte	•	r <mark>omatogra</mark> p Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.1		1.0		mg/L	— <u>-</u>		10/06/20 10:50	1
Fluoride	0.13		0.10	0.026	-			10/06/20 10:50	1
Sulfate	4.1		1.0		mg/L			10/06/20 10:50	1
Method: EPA 6020B - Meta	uls (ICP/MS) - To	otal Recove	rable						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00038	J	0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:41	1
Barium	0.062		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:41	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:41	1
Boron	0.039	J	0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:41	1
Calcium	29		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:41	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:41	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:41	1
Lead	< 0.00013		0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:41	1
Lithium	0.0044	J	0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:41	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:41	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:41	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:41	1
Thallium	0.00019	J	0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:41	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	210		10	10	mg/L			10/01/20 06:37	1

RL

MDL Unit

SU

Prepared

D

Analyzed

09/29/20 10:35

Dil Fac

Client: Southern Company

Result Qualifier

7.11

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-15

Date Collected: 09/29/20 13:05 Date Received: 09/30/20 09:00

Analyte

pН

Lab Sample ID: 180-111646-2

Matrix: Water

Job ID: 180-111645-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5		1.0	0.32	mg/L			10/06/20 11:53	1
Fluoride	0.089	J	0.10	0.026	mg/L			10/06/20 11:53	1
Sulfate	7.7		1.0	0.38	mg/L			10/06/20 11:53	1
Method: EPA 6020B - Meta	als (ICP/MS) - To	otal Recove	rable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:44	1
Barium	0.030		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:44	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:44	1
Boron	<0.039		0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:44	1
Calcium	25		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:44	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:44	1
Cobalt	0.00030	J	0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:44	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:44	1
Lithium	<0.0034		0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:44	1
Molybdenum	0.0019	J	0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:44	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:44	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:44	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:44	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		10	10	mg/L			10/01/20 06:37	1

RL

MDL Unit

SU

Prepared

D

Analyzed

09/29/20 13:05

Dil Fac

Client: Southern Company

Calcium

Chromium

Cobalt

Lead

Lithium

Molybdenum

Selenium

Silver

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-17 Lab Sample ID: 180-111646-3

Date Collected: 09/29/20 14:55
Date Received: 09/30/20 09:00

12

<0.0015

<0.00013

< 0.0034

<0.00061

< 0.0015

<0.00018

0.027

Matrix: Water

10/12/20 15:58 10/22/20 14:46

Job ID: 180-111645-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.4		1.0	0.32	mg/L			10/06/20 14:40	1
Fluoride	0.029	J	0.10	0.026	mg/L			10/06/20 14:40	1
Sulfate	66		1.0	0.38	mg/L			10/06/20 14:40	1
Method: EPA 6020B	- Metals (ICP/MS) - To	otal Recove	rable						
	•			MDI	Unit	D	Prenared	Analyzed	Dil Fac
Analyte	Result	Qualifier	RL	MDL 0.00031		<u>D</u>	Prepared 10/12/20 15:58	Analyzed 10/22/20 14:46	Dil Fac
Method: EPA 6020B Analyte Arsenic Barium	•			MDL 0.00031 0.0016	mg/L	<u>D</u>	Prepared 10/12/20 15:58 10/12/20 15:58	10/22/20 14:46	Dil Fac
Analyte Arsenic	Result <0.00031	Qualifier	0.0010	0.00031	mg/L mg/L	<u>D</u>	10/12/20 15:58 10/12/20 15:58	10/22/20 14:46	Dil Fac 1 1 1

0.50

0.0020

0.0025

0.0010

0.0050

0.015

0.0050

0.0010

0.13 mg/L

0.0015 mg/L

0.00013 mg/L

0.00013 mg/L

0.0034 mg/L

0.00061 mg/L

0.0015 mg/L

0.00018 mg/L

Dil Fac	Analyzed	Prepared
1	10/22/20 14:46	10/12/20 15:58
1	10/22/20 14:46	10/12/20 15:58
1	10/22/20 14:46	10/12/20 15:58
1	10/22/20 14:46	10/12/20 15:58
1	10/22/20 14:46	10/12/20 15:58
1	10/22/20 14:46	10/12/20 15:58
1	10/22/20 14:46	10/12/20 15:58
1	10/22/20 14:46	10/12/20 15:58
1	10/22/20 14:46	10/12/20 15:58
1	10/22/20 14:46	10/12/20 15:58
1	10/22/20 14:46	10/12/20 15:58

Thallium	<0.00015		0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:46	1
General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analvzed	Dil Fac
Total Dissolved Solids	140		10	10	mg/L			10/01/20 06:37	1

wethou: Field Sampling - Field	a Samping								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
рН	5.75				SU			09/29/20 14:55	1

Client: Southern Company Job ID: 180-111645-1

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: DUP-01 Lab Sample ID: 180-111646-4 Date Collected: 09/29/20 00:00

Matrix: Water

Date Received: 09/30/20 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.5		1.0	0.32	mg/L			10/06/20 15:01	1
Fluoride	0.029	J	0.10	0.026	mg/L			10/06/20 15:01	1
Sulfate	69		1.0	0.38	mg/L			10/06/20 15:01	1
Method: EPA 6020B - Met	als (ICP/MS) - To	otal Recove	rable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:49	1
Barium	0.058		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:49	1
Beryllium	0.00040	J	0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:49	1
Boron	0.045	J	0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:49	1
Calcium	13		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:49	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:49	1
Cobalt	0.027		0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:49	1
Lead	0.00015	J	0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:49	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:49	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:49	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:49	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:49	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:49	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		10	10	mg/L			10/01/20 06:37	1
Method: Field Sampling -	Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.75				SU			09/29/20 00:00	1

Client: Southern Company Job ID: 180-111645-1

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: FB-01 Lab Sample ID: 180-111647-1

Date Collected: 09/29/20 09:45 **Matrix: Water** Date Received: 09/30/20 09:00

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32	1.0	0.32	mg/L			10/06/20 08:24	1
Fluoride	<0.026	0.10	0.026	mg/L			10/06/20 08:24	1
Sulfate	<0.38	1.0	0.38	mg/L			10/06/20 08:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:52	1
Barium	<0.0016		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:52	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:52	1
Boron	<0.039		0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:52	1
Calcium	<0.13		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:52	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:52	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:52	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:52	1
Lithium	<0.0034		0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:52	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:52	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:52	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:52	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:52	1

General Chemistry							
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<u> </u>	10	10 mg/L			10/01/20 12:36	

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWA-12 Lab Sample ID: 180-111647-2

Date Collected: 09/29/20 11:27 Date Received: 09/30/20 09:00

Matrix: Ground Water

Job ID: 180-111645-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.32	mg/L			10/06/20 16:03	1
Fluoride	0.060	J	0.10	0.026	mg/L			10/06/20 16:03	1
Sulfate	8.3		1.0	0.38	mg/L			10/06/20 16:03	1
Method: EPA 6020B - Meta	als (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:54	1
Barium	0.079		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:54	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:54	1
Boron	<0.039		0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:54	1
Calcium	14		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:54	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:54	1
Cobalt	0.00016	J	0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:54	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:54	1
Lithium	0.0048	J	0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:54	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:54	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:54	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:54	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:54	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		10	10	mg/L			10/01/20 12:36	1
Method: Field Sampling -	Field Sampling								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.88				SU			09/29/20 11:27	

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Lab Sample ID: 180-111647-3 **Client Sample ID: ARGWA-13**

Date Collected: 09/29/20 13:30 Date Received: 09/30/20 09:00

Matrix: Water

Job ID: 180-111645-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.7		1.0	0.32	mg/L			10/06/20 17:06	1
Fluoride	0.032	J	0.10	0.026	mg/L			10/06/20 17:06	1
Sulfate	540		5.0	1.9	mg/L			10/06/20 17:27	5
Method: EPA 6020B - Meta	als (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:57	1
Barium	0.024		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:57	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:57	1
Boron	0.35		0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:57	1
Calcium	120		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:57	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:57	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:57	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:57	1
Lithium	0.0052		0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:57	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:57	1
Selenium	0.021		0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:57	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:57	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:57	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	880		10	10	mg/L			10/01/20 12:36	1
Method: Field Sampling -	Field Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.75				SU			09/29/20 13:30	1

Client: Southern Company Job ID: 180-111645-1

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: EB-01 Lab Sample ID: 180-111689-1

Date Collected: 09/30/20 09:05 Matrix: Water Date Received: 10/01/20 09:00

Method: EPA 300.0 R2.	.1 - Anions, Ion Chr	omatograp	hy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.32		1.0	0.32	mg/L			10/06/20 09:06	1
Fluoride	<0.026		0.10	0.026	mg/L			10/06/20 09:06	1
Sulfate	<0.38		1.0	0.38	mg/L			10/06/20 09:06	1
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/13/20 09:41	10/21/20 20:28	1
Barium	<0.0016		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 20:28	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 20:28	1
Boron	0.048	J	0.080	0.039	mg/L		10/13/20 09:41	10/21/20 20:28	1
Calcium	<0.13		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 20:28	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 20:28	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 20:28	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 20:28	1
Lithium	<0.0034		0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 20:28	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 20:28	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 20:28	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/13/20 09:41	10/21/20 20:28	1
Thallium	<0.00015		0.0010	0.00015	ma/l		10/13/20 09:41	10/21/20 20:28	

General Chemistry								
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10	10	10	ma/l			10/02/20 14:35	1

10/29/2020

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Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARAMW-4

Date Collected: 09/30/20 12:40

Date Received: 10/01/20 09:00

Lab Sample ID: 180-111689-2

Matrix: Water

Job ID: 180-111645-1

Method: EPA 300.0 R2.1 - Ar	nions, Ion Chrom	atography						
Analyte	Result Qua	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.0	1.0	0.32	mg/L			10/06/20 21:58	1
Fluoride	0.028 J	0.10	0.026	mg/L			10/06/20 21:58	1
Sulfate	790	10	3.8	mg/L			10/06/20 22:19	10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00039	J	0.0010	0.00031	mg/L		10/13/20 09:41	10/21/20 20:31	1
Barium	0.053		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 20:31	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 20:31	1
Boron	0.36		0.080	0.039	mg/L		10/13/20 09:41	10/21/20 20:31	1
Calcium	210		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 20:31	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 20:31	1
Cobalt	0.0046		0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 20:31	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 20:31	1
Lithium	0.012		0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 20:31	1
Molybdenum	0.00073	J	0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 20:31	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 20:31	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/13/20 09:41	10/21/20 20:31	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/13/20 09:41	10/21/20 20:31	1

General Chemistry									
Analyte	Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1300		10	10	mg/L			10/02/20 14:35	1

Method: Field Sampling - Field	l Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
рН	5.94				SU			09/30/20 12:40	1

Client: Southern Company

Result Qualifier

6.41

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARAMW-3

Date Collected: 09/30/20 16:45

Date Received: 10/01/20 09:00

Analyte

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Lab Sample	:טו	180-111689-3
		Matrix: Water

100 111000 0

Job ID: 180-111645-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.5		1.0	0.32	mg/L			10/06/20 23:21	
Fluoride	0.064	J	0.10	0.026	mg/L			10/06/20 23:21	•
Sulfate	49		1.0	0.38	mg/L			10/06/20 23:21	,
Method: EPA 6020B - Meta	als (ICP/MS) - To	otal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/13/20 09:41	10/21/20 20:42	
Barium	0.094		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 20:42	•
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 20:42	•
Boron	1.1		0.080	0.039	mg/L		10/13/20 09:41	10/21/20 20:42	
Calcium	37		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 20:42	•
Chromium	<0.0015		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 20:42	•
Cobalt	0.0011	J	0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 20:42	
Lead	<0.00013		0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 20:42	•
Lithium	0.0055		0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 20:42	•
Molybdenum	0.0061	J	0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 20:42	
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 20:42	•
Silver	<0.00018		0.0010	0.00018	mg/L		10/13/20 09:41	10/21/20 20:42	
Thallium	<0.00015		0.0010	0.00015	mg/L		10/13/20 09:41	10/21/20 20:42	
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	240		10	10	mg/L			10/02/20 14:35	

RL

MDL Unit

SU

Prepared

Analyzed

09/30/20 16:45

Dil Fac

Thallium

Analyte

Analyte

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General Chemistry

Total Dissolved Solids

Method: Field Sampling - Field Sampling

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-18 Lab Sample ID: 180-111689-4

Date Collected: 09/30/20 16:15 Date Received: 10/01/20 09:00

Matrix: Water

Job ID: 180-111645-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.9		1.0	0.32	mg/L			10/07/20 00:24	1
Fluoride	0.082	J	0.10	0.026	mg/L			10/07/20 00:24	1
Sulfate	170		1.0	0.38	mg/L			10/07/20 00:24	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recove	rable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/13/20 09:41	10/21/20 20:45	1
Barium	0.041		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 20:45	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 20:45	1
Boron	2.6		0.080	0.039	mg/L		10/13/20 09:41	10/21/20 20:45	1
Calcium	52		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 20:45	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 20:45	1
Cobalt	0.0013	J	0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 20:45	1
Lead	0.00020	J	0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 20:45	1
Lithium	0.0048	J	0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 20:45	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 20:45	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 20:45	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/13/20 09:41	10/21/20 20:45	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/13/20 09:41	10/21/20 20:45	1
Method: EPA 6020B -	Metals (ICP/MS) - D	issolved							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/13/20 09:41	10/21/20 20:49	1
Barium	0.037		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 20:49	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 20:49	1
Boron	2.7		0.080	0.039	mg/L		10/13/20 09:41	10/21/20 20:49	1
Calcium	53		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 20:49	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 20:49	1
Cobalt	0.0012	J	0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 20:49	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 20:49	1
Lithium	0.0046	J	0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 20:49	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 20:49	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 20:49	1
Silver	<0.00018		0.0010	0.00018	ma/l		10/12/20 00:41	10/21/20 20:49	1

0.0010

RL

10

RL

0.00015 mg/L

MDL Unit

MDL Unit

SU

10 mg/L

D

D

Prepared

Prepared

< 0.00015

Result Qualifier

Result Qualifier

390

5.98

Eurofins TestAmerica, Pittsburgh

10/13/20 09:41 10/21/20 20:49

Analyzed

10/02/20 14:35

Analyzed

09/30/20 16:15

Dil Fac

Dil Fac

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-10

Date Collected: 10/01/20 11:00 Date Received: 10/02/20 09:00 Lab Sample ID: 180-111743-1

Matrix: Water

Job ID: 180-111645-1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.9	1.0	0.32	mg/L			10/10/20 21:23	1
Fluoride	0.048 J	0.10	0.026	mg/L			10/10/20 21:23	1
Sulfate	<0.38	1.0	0.38	mg/L			10/10/20 21:23	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/13/20 09:41	10/21/20 21:10	
Barium	0.032		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 21:10	•
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 21:10	•
Boron	0.082		0.080	0.039	mg/L		10/13/20 09:41	10/21/20 21:10	
Calcium	8.1		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 21:10	
Chromium	0.0047		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 21:10	•
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 21:10	
Lead	<0.00013		0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 21:10	•
Lithium	<0.0034		0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 21:10	•
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 21:10	
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 21:10	•
Silver	<0.00018		0.0010	0.00018	mg/L		10/13/20 09:41	10/21/20 21:10	•
Thallium	<0.00015		0.0010	0.00015	mg/L		10/13/20 09:41	10/21/20 21:10	

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	93		10	10	mg/L			10/05/20 15:06	1

Method: Fleid Sampling - Fleid									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
рН	5.83				SU			10/01/20 11:00	1

Client: Southern Company

Result Qualifier

55

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-9

Date Collected: 10/01/20 14:50 Date Received: 10/02/20 09:00

General Chemistry

Total Dissolved Solids

Analyte

Lab Sample ID: 180-111743-2

Matrix: Water

Job ID: 180-111645-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.5		1.0	0.32	mg/L			10/09/20 12:27	1
Fluoride	0.041	J	0.10	0.026	mg/L			10/09/20 12:27	1
Sulfate	0.82	J	1.0	0.38	mg/L			10/09/20 12:27	1
Method: EPA 6020B -	Metals (ICP/MS) - To	otal Recove	rable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/13/20 09:41	10/21/20 21:14	1
Barium	0.045		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 21:14	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 21:14	1
Boron	0.041	J	0.080	0.039	mg/L		10/13/20 09:41	10/21/20 21:14	1
Calcium	5.7		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 21:14	1
Chromium	0.0075		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 21:14	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 21:14	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 21:14	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 21:14	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 21:14	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 21:14	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/13/20 09:41	10/21/20 21:14	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/13/20 09:41	10/21/20 21:14	1

Analyzed Dil Fac 10/05/20 15:06

Method: Field Sampling - Field	Sampling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.78				SU			10/01/20 14:50	1

RL

10

MDL Unit

10 mg/L

Prepared

Client: Southern Company Job ID: 180-111645-1

Result Qualifier

6.37

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARAMW-6

Lab Sample ID: 180-111743-3

Date Collected: 10/01/20 14:55 **Matrix: Water**

Date Received: 10/02/20 09:00

Analyte

pН

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.0		1.0	0.32	mg/L			10/11/20 01:54	1
Fluoride	0.071	J	0.10	0.026	mg/L			10/11/20 01:54	1
Sulfate	58		1.0	0.38	mg/L			10/11/20 01:54	1
Method: EPA 6020B - Meta	als (ICP/MS) - To	otal Recove	rable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/13/20 09:41	10/21/20 21:25	1
Barium	0.044		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 21:25	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 21:25	1
Boron	1.1		0.080	0.039	mg/L		10/13/20 09:41	10/22/20 13:11	1
Calcium	38		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 21:25	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 21:25	1
Cobalt	0.0018	J	0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 21:25	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 21:25	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 21:25	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 21:25	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 21:25	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/13/20 09:41	10/21/20 21:25	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/13/20 09:41	10/21/20 21:25	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	220		10	10	mg/L			10/05/20 15:06	1

RL

MDL Unit

SU

Prepared

Dil Fac

Analyzed

10/01/20 14:55

Client: Southern Company

Result Qualifier

6.44

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-8

Lab Sample ID: 180-111743-4 Date Collected: 10/01/20 11:00

Matrix: Water

Job ID: 180-111645-1

Date Received: 10/02/20 09:00

Analyte

pН

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.0		1.0	0.32	mg/L			10/11/20 02:15	1
Fluoride	0.14		0.10	0.026	mg/L			10/11/20 02:15	1
Sulfate	57		1.0	0.38	mg/L			10/11/20 02:15	1
Method: EPA 6020B - Meta	als (ICP/MS) - To	otal Recove	rable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/13/20 09:41	10/21/20 21:28	1
Barium	0.052		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 21:28	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 21:28	1
Boron	1.2		0.080	0.039	mg/L		10/13/20 09:41	10/22/20 13:15	1
Calcium	52		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 21:28	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 21:28	1
Cobalt	0.00021	J	0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 21:28	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 21:28	1
Lithium	0.0035	J	0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 21:28	1
Molybdenum	0.043		0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 21:28	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 21:28	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/13/20 09:41	10/21/20 21:28	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/13/20 09:41	10/21/20 21:28	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	270		10	10	mg/L			10/05/20 15:06	1

RL

MDL Unit

SU

Prepared

10/29/2020

Dil Fac

Analyzed

10/01/20 11:00

Job ID: 180-111645-1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-332371/38

Matrix: Water

Analyte

Chloride

Fluoride

Sulfate

Analysis Batch: 332371

Client Sample ID: Method Blank Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Type: Total/NA

MB MB Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac D 0.32 mg/L < 0.32 1.0 10/06/20 19:11 0.026 mg/L <0.026 0.10 10/06/20 19:11 < 0.38 1.0 0.38 mg/L 10/06/20 19:11

Lab Sample ID: MB 180-332371/6

Matrix: Water

Analysis Batch: 332371

Client Sample ID: Method Blank Prep Type: Total/NA

MB MB Analyte Result Qualifier RL **MDL** Unit D **Prepared** Analyzed Dil Fac Chloride 1.0 0.32 mg/L < 0.32 10/06/20 05:29 Fluoride 0.10 < 0.026 0.026 mg/L 10/06/20 05:29 Sulfate 0.38 mg/L 10/06/20 05:29 < 0.38 1.0

Lab Sample ID: LCS 180-332371/37

Matrix: Water

Analysis Batch: 332371

Spike LCS LCS %Rec. Added Result Qualifier Unit Limits Analyte D %Rec Chloride 50.0 48.4 mg/L 97 90 - 110 Fluoride 2.50 2.38 mg/L 95 90 - 110 50.0 47.0 mg/L 90 - 110 Sulfate 94

Lab Sample ID: LCS 180-332371/5

Matrix: Water

Analysis Batch: 332371

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	49.6		mg/L		99	90 - 110	
Fluoride	2.50	2.40		mg/L		96	90 - 110	
Sulfate	50.0	48.2		mg/L		96	90 - 110	

Lab Sample ID: 180-111646-2 MS

Client Sample ID: ARGWC-15 Matrix: Water Prep Type: Total/NA **Analysis Batch: 332371**

	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	2.5		50.0	51.9		mg/L		99	90 - 110		_
Fluoride	0.089	J	2.50	2.55		mg/L		98	90 - 110		
Sulfate	7.7		50.0	56.4		mg/L		97	90 - 110		

Lab Sample ID: 180-111646-2 MSD

Matrix: Water

Analysis Batch: 332371

inaly old Datolli CCLC:											
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	2.5		50.0	52.3		mg/L		100	90 - 110	1	20
Fluoride	0.089	J	2.50	2.58		mg/L		100	90 - 110	1	20
Sulfate	7.7		50.0	56.8		mg/L		98	90 - 110	1	20

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Client Sample ID: ARGWC-15

Prep Type: Total/NA

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Project/Site: CCR - Plant Arkwright AP-3

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 180-111647-2 MS

Matrix: Ground Water Analysis Batch: 332371 Client Sample ID: ARGWA-12 **Prep Type: Total/NA**

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 12 50.0 58.5 mg/L 94 90 - 110 Fluoride 0.060 J 2.50 2.43 mg/L 95 90 - 110 Sulfate 8.3 50.0 90 - 110 55.2 mg/L 94

Lab Sample ID: 180-111647-2 MSD Client Sample ID: ARGWA-12 Prep Type: Total/NA

Matrix: Ground Water Analysis Batch: 332371

Sample Sample Spike MSD MSD %Rec. **RPD** Limit Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits **RPD** Chloride 50.0 12 60.8 mg/L 98 90 - 110 4 20 Fluoride 0.060 2.50 2.55 mg/L 99 90 - 110 5 20 Sulfate 50.0 90 - 110 8.3 57.4 mg/L 98 4 20

Lab Sample ID: MB 180-332816/6 Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 332816

MB MB Dil Fac Result Qualifier Analyte RL **MDL** Unit D Prepared Analyzed Chloride < 0.32 1.0 0.32 mg/L 10/09/20 10:01 Fluoride <0.026 0.10 0.026 mg/L 10/09/20 10:01 10/09/20 10:01 Sulfate < 0.38 1.0 0.38 mg/L

Lab Sample ID: LCS 180-332816/5 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 332816

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	49.0		mg/L	_	98	90 - 110	
Fluoride	2.50	2.42		mg/L		97	90 - 110	
Sulfate	50.0	47.4		mg/L		95	90 - 110	

Lab Sample ID: MB 180-332937/43 Client Sample ID: Method Blank

Matrix: Water

Analysis Batch: 332937

MB MB Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Chloride <0.32 1.0 0.32 mg/L 10/10/20 21:02 Fluoride < 0.026 0.10 0.026 mg/L 10/10/20 21:02 Sulfate < 0.38 0.38 mg/L 10/10/20 21:02 1.0

Lab Sample ID: LCS 180-332937/42 Client Sample ID: Lab Control Sample Prep Type: Total/NA

Matrix: Water

Analysis Batch: 332937

-	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	49.2		mg/L		98	90 - 110	
Fluoride	2.50	2.39		mg/L		95	90 - 110	
Sulfate	50.0	47.7		mg/L		95	90 - 110	

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Prep Type: Total/NA

Project/Site: CCR - Plant Arkwright AP-3

Job ID: 180-111645-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Sample Sample

3.9

0.048

<0.38

Result Qualifier

Lab Sample ID: 180-111743-1 MS

Matrix: Water

Analysis Batch: 332937

Client Sample ID: ARGWC-10

Prep Type: Total/NA

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 3.9 50.0 51.5 mg/L 95 90 - 110 Fluoride 0.048 J 2.50 2.46 mg/L 97 90 - 110 Sulfate < 0.38 50.0 47.6 90 - 110 mg/L 95

MSD MSD

51.4

2.46

47.7

Result Qualifier

Unit

mg/L

mg/L

mg/L

Spike

Added

50.0

2.50

50.0

Lab Sample ID: 180-111743-1 MSD

Matrix: Water

Analyte

Chloride

Fluoride

Sulfate

Analysis Batch: 332937

Client Sample ID: ARGWC-10 **Prep Type: Total/NA**

%Rec. **RPD** %Rec Limits RPD Limit D 95 90 - 110 0 20 96 90 - 110 0 20

90 - 110

95

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-333113/1-A

Matrix: Water

Analysis Batch: 334462

Client Sample ID: Method Blank **Prep Type: Total Recoverable**

Prep Batch: 333113

0

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/12/20 15:58	10/22/20 14:08	1
Barium	<0.0016		0.010	0.0016	mg/L		10/12/20 15:58	10/22/20 14:08	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/12/20 15:58	10/22/20 14:08	1
Boron	<0.039		0.080	0.039	mg/L		10/12/20 15:58	10/22/20 14:08	1
Calcium	<0.13		0.50	0.13	mg/L		10/12/20 15:58	10/22/20 14:08	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/12/20 15:58	10/22/20 14:08	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/12/20 15:58	10/22/20 14:08	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/12/20 15:58	10/22/20 14:08	1
Lithium	< 0.0034		0.0050	0.0034	mg/L		10/12/20 15:58	10/22/20 14:08	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/12/20 15:58	10/22/20 14:08	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/12/20 15:58	10/22/20 14:08	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/12/20 15:58	10/22/20 14:08	1
Thallium	0.000208	J	0.0010	0.00015	mg/L		10/12/20 15:58	10/22/20 14:08	1

Lab Sample ID: LCS 180-333113/2-A

Matrix: Water

Analysis Batch: 334462

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits 1.00 1.02 80 - 120 Arsenic mg/L 102 Barium 1.00 0.998 mg/L 100 80 - 120 Beryllium 0.500 0.516 mg/L 103 80 - 120 Boron 1.25 1.11 mg/L 89 80 - 120 Calcium 25.0 27.6 mg/L 110 80 - 120 Chromium 0.500 0.502 mg/L 100 80 - 120Cobalt 0.500 0.502 mg/L 100 80 - 120Lead 0.500 0.505 mg/L 101 80 - 120 Lithium 0.500 0.489 mg/L 98 80 - 120 Molybdenum 0.500 0.525 105 80 - 120 mg/L

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20

Prep Batch: 333113

Project/Site: CCR - Plant Arkwright AP-3

Job ID: 180-111645-1

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-333113/2-A

Matrix: Water

Analysis Batch: 334462

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Prep Batch: 333113

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Selenium	1.00	1.05		mg/L		105	80 - 120	
Silver	0.250	0.251		mg/L		101	80 - 120	
Thallium	1.00	1.01		mg/L		101	80 - 120	

Lab Sample ID: 180-111645-3 MS

Matrix: Water

Analysis Batch: 334462

Client Sample ID: ARGWC-7 **Prep Type: Total Recoverable Prep Batch: 333113**

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	<0.00031		1.00	1.01		mg/L		101	75 - 125	
Barium	0.042		1.00	1.05		mg/L		101	75 - 125	
Beryllium	<0.00018		0.500	0.507		mg/L		101	75 - 125	
Boron	0.078	J	1.25	1.18		mg/L		88	75 - 125	
Calcium	11		25.0	37.3		mg/L		106	75 - 125	
Chromium	0.0031		0.500	0.499		mg/L		99	75 - 125	
Cobalt	<0.00013		0.500	0.499		mg/L		100	75 - 125	
Lead	<0.00013		0.500	0.484		mg/L		97	75 - 125	
Lithium	< 0.0034		0.500	0.484		mg/L		97	75 - 125	
Molybdenum	<0.00061		0.500	0.527		mg/L		105	75 - 125	
Selenium	<0.0015		1.00	1.02		mg/L		102	75 - 125	
Silver	<0.00018		0.250	0.252		mg/L		101	75 - 125	
Thallium	<0.00015		1.00	0.994		mg/L		99	75 - 125	

Lab Sample ID: 180-111645-3 MSD

Matrix: Water

Analysis Ratch: 334462

Client Sample ID: ARGWC-7 Prep Type: Total Recoverable

Drop Potoby 222442

Analysis Batch: 334462	/sis Batch: 334462								Prep Batch: 3		
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	<0.00031		1.00	1.03		mg/L		103	75 - 125	1	20
Barium	0.042		1.00	1.07		mg/L		103	75 - 125	2	20
Beryllium	<0.00018		0.500	0.511		mg/L		102	75 - 125	1	20
Boron	0.078	J	1.25	1.20		mg/L		90	75 - 125	1	20
Calcium	11		25.0	37.5		mg/L		107	75 - 125	1	20
Chromium	0.0031		0.500	0.505		mg/L		100	75 - 125	1	20
Cobalt	<0.00013		0.500	0.506		mg/L		101	75 - 125	1	20
Lead	< 0.00013		0.500	0.498		mg/L		100	75 - 125	3	20
Lithium	< 0.0034		0.500	0.489		mg/L		98	75 - 125	1	20
Molybdenum	<0.00061		0.500	0.530		mg/L		106	75 - 125	1	20
Selenium	<0.0015		1.00	1.04		mg/L		104	75 - 125	2	20
Silver	<0.00018		0.250	0.254		mg/L		102	75 - 125	1	20
Thallium	< 0.00015		1.00	1.02		ma/L		102	75 - 125	3	20

Lab Sample ID: MB 180-333214/1-A

Matrix: Water

Analysis Batch: 334271

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 333214

	IVID	IAID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00031		0.0010	0.00031	mg/L		10/13/20 09:41	10/21/20 19:59	1
Barium	<0.0016		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 19:59	1

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Project/Site: CCR - Plant Arkwright AP-3

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 180-333214/1-A

Matrix: Water

Analysis Batch: 334271

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 333214

Job ID: 180-111645-1

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 19:59	1
Boron	<0.039		0.080	0.039	mg/L		10/13/20 09:41	10/21/20 19:59	1
Calcium	<0.13		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 19:59	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 19:59	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 19:59	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 19:59	1
Lithium	<0.0034		0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 19:59	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 19:59	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 19:59	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/13/20 09:41	10/21/20 19:59	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/13/20 09:41	10/21/20 19:59	1

Lab Sample ID: MB 180-333214/1-A

Matrix: Water

Analysis Batch: 334457

MB MB

MR ME

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 0.080 0.039 mg/L 10/13/20 09:41 10/22/20 13:04 Boron < 0.039

Lab Sample ID: LCS 180-333214/2-A

Matrix: Water

Analysis Batch: 334271

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 333214

Prep Batch: 333214

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	1.00	1.06		mg/L		106	80 - 120	
Barium	1.00	1.06		mg/L		106	80 - 120	
Beryllium	0.500	0.531		mg/L		106	80 - 120	
Boron	1.25	1.34		mg/L		107	80 - 120	
Chromium	0.500	0.524		mg/L		105	80 - 120	
Cobalt	0.500	0.524		mg/L		105	80 - 120	
Lead	0.500	0.526		mg/L		105	80 - 120	
Lithium	0.500	0.509		mg/L		102	80 - 120	
Molybdenum	0.500	0.530		mg/L		106	80 - 120	
Selenium	1.00	1.04		mg/L		104	80 - 120	
Silver	0.250	0.257		mg/L		103	80 - 120	
Thallium	1.00	1.13		mg/L		113	80 - 120	

Lab Sample ID: LCS 180-333214/2-A

Matrix: Water

Analyte

Calcium

Analysis Batch: 334457

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 333214

%Rec. Limits D %Rec 111 80 - 120

Lab Sample ID: PB 180-332490/1-G

Matrix: Water

Analysis Batch: 334271

Client Sample ID: Method Blank Prep Type: Dissolved

Prep Batch: 333214

PB PB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac <u>10/13/20 09:41</u> <u>10/21/20 20:03</u> Arsenic < 0.00031 0.0010 0.00031 mg/L

LCS LCS

27.7

Result Qualifier

Unit

mg/L

Spike

Added

25.0

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Project/Site: CCR - Plant Arkwright AP-3

Job ID: 180-111645-1

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: PB 180-332490/1-G

Matrix: Water

Analysis Batch: 334271

Client Sample ID: Method Blank Prep Type: Dissolved

Prep Batch: 333214

	PB	PB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.0016		0.010	0.0016	mg/L		10/13/20 09:41	10/21/20 20:03	1
Beryllium	<0.00018		0.0025	0.00018	mg/L		10/13/20 09:41	10/21/20 20:03	1
Boron	<0.039		0.080	0.039	mg/L		10/13/20 09:41	10/21/20 20:03	1
Calcium	<0.13		0.50	0.13	mg/L		10/13/20 09:41	10/21/20 20:03	1
Chromium	<0.0015		0.0020	0.0015	mg/L		10/13/20 09:41	10/21/20 20:03	1
Cobalt	<0.00013		0.0025	0.00013	mg/L		10/13/20 09:41	10/21/20 20:03	1
Lead	<0.00013		0.0010	0.00013	mg/L		10/13/20 09:41	10/21/20 20:03	1
Lithium	<0.0034		0.0050	0.0034	mg/L		10/13/20 09:41	10/21/20 20:03	1
Molybdenum	<0.00061		0.015	0.00061	mg/L		10/13/20 09:41	10/21/20 20:03	1
Selenium	<0.0015		0.0050	0.0015	mg/L		10/13/20 09:41	10/21/20 20:03	1
Silver	<0.00018		0.0010	0.00018	mg/L		10/13/20 09:41	10/21/20 20:03	1
Thallium	<0.00015		0.0010	0.00015	mg/L		10/13/20 09:41	10/21/20 20:03	1

Lab Sample ID: LCS 180-332490/2-G

Matrix: Water

Analysis Batch: 334271

Client Sample ID: Lab Control Sample

Prep Type: Dissolved Prep Batch: 333214

Analysis batch: 334271							Prep Batch: 333214
	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Arsenic	1.00	1.01		mg/L		101	80 - 120
Barium	1.00	1.02		mg/L		102	80 - 120
Beryllium	0.500	0.500		mg/L		100	80 - 120
Boron	1.25	1.25		mg/L		100	80 - 120
Calcium	25.0	28.8		mg/L		115	80 - 120
Chromium	0.500	0.497		mg/L		99	80 - 120
Cobalt	0.500	0.499		mg/L		100	80 - 120
Lead	0.500	0.505		mg/L		101	80 - 120
Lithium	0.500	0.483		mg/L		97	80 - 120
Molybdenum	0.500	0.509		mg/L		102	80 - 120
Selenium	1.00	0.985		mg/L		98	80 - 120
Silver	0.250	0.248		mg/L		99	80 - 120
Thallium	1.00	1.09		mg/L		109	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-331934/2

Matrix: Water

Analysis Batch: 331934

мв мв

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Total Dissolved Solids <10 10 10 mg/L 10/01/20 06:37

Lab Sample ID: LCS 180-331934/1

Matrix: Water

Analysis Batch: 331934

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Client Sample ID: Method Blank

Prep Type: Total/NA

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits Total Dissolved Solids 632 626 99 80 - 120 mg/L

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Project/Site: CCR - Plant Arkwright AP-3

Job ID: 180-111645-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 180-111645-4 DU Client Sample ID: ARGWC-16 **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 331934

DU DU Sample Sample **RPD** Result Qualifier Result Qualifier Unit RPD Limit Analyte D Total Dissolved Solids 340 344 mg/L

Lab Sample ID: MB 180-331996/2 Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Water

Analysis Batch: 331996

MB MB

MDL Unit Result Qualifier RL Prepared Analyzed Dil Fac 10 10 mg/L 10/01/20 12:36 **Total Dissolved Solids** <10

Lab Sample ID: LCS 180-331996/1 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 331996

Spike LCS LCS %Rec. Added Result Qualifier Limits Analyte Unit %Rec Total Dissolved Solids 714 606 85 80 - 120 mg/L

Lab Sample ID: MB 180-332159/2 Client Sample ID: Method Blank **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 332159

MB MB

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Total Dissolved Solids 10 10 ma/L 10/02/20 14:35 <10

Lab Sample ID: LCS 180-332159/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 332159

LCS LCS Spike %Rec. Added Result Qualifier Limits Analyte Unit %Rec Total Dissolved Solids 714 742 104 80 - 120 mg/L

Lab Sample ID: 180-111689-2 DU Client Sample ID: ARAMW-4

Matrix: Water

Analysis Batch: 332159

DU DU Sample Sample **RPD** Result Qualifier Result Qualifier **RPD** Analyte Unit Limit 1330 Total Dissolved Solids 1300 mg/L 0.6

Lab Sample ID: MB 180-332329/2 Client Sample ID: Method Blank

Matrix: Water

Analysis Batch: 332329

MB MB Result Qualifier RL

MDL Unit Prepared Dil Fac Analyzed Total Dissolved Solids 10 10/05/20 15:06 <10 10 mg/L

Lab Sample ID: LCS 180-332329/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 332329

Spike LCS LCS %Rec. Added Result Qualifier Limits Analyte Unit %Rec **Total Dissolved Solids** 357 80 - 120 336 mg/L 94

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Prep Type: Total/NA

Client: Southern Company

Job ID: 180-111645-1

Project/Site: CCR - Plant Arkwright AP-3

HPLC/IC

Analysis Batch: 332371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111645-1	ARGWA-5	Total/NA	Water	EPA 300.0 R2.1	
180-111645-2	ARGWA-3	Total/NA	Water	EPA 300.0 R2.1	
180-111645-3	ARGWC-7	Total/NA	Water	EPA 300.0 R2.1	
180-111645-4	ARGWC-16	Total/NA	Water	EPA 300.0 R2.1	
180-111646-1	ARGWA-14	Total/NA	Water	EPA 300.0 R2.1	
180-111646-2	ARGWC-15	Total/NA	Water	EPA 300.0 R2.1	
180-111646-3	ARGWC-17	Total/NA	Water	EPA 300.0 R2.1	
180-111646-4	DUP-01	Total/NA	Water	EPA 300.0 R2.1	
180-111647-1	FB-01	Total/NA	Water	EPA 300.0 R2.1	
180-111647-2	ARGWA-12	Total/NA	Ground Water	EPA 300.0 R2.1	
180-111647-3	ARGWA-13	Total/NA	Water	EPA 300.0 R2.1	
180-111647-3	ARGWA-13	Total/NA	Water	EPA 300.0 R2.1	
180-111689-1	EB-01	Total/NA	Water	EPA 300.0 R2.1	
180-111689-2	ARAMW-4	Total/NA	Water	EPA 300.0 R2.1	
180-111689-2	ARAMW-4	Total/NA	Water	EPA 300.0 R2.1	
180-111689-3	ARAMW-3	Total/NA	Water	EPA 300.0 R2.1	
180-111689-4	ARGWC-18	Total/NA	Water	EPA 300.0 R2.1	
MB 180-332371/38	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
MB 180-332371/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-332371/37	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-332371/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-111646-2 MS	ARGWC-15	Total/NA	Water	EPA 300.0 R2.1	
180-111646-2 MSD	ARGWC-15	Total/NA	Water	EPA 300.0 R2.1	
180-111647-2 MS	ARGWA-12	Total/NA	Ground Water	EPA 300.0 R2.1	
180-111647-2 MSD	ARGWA-12	Total/NA	Ground Water	EPA 300.0 R2.1	

Analysis Batch: 332816

Lab Sample ID 180-111743-2	Client Sample ID ARGWC-9	Prep Type Total/NA	Matrix Water	Method EPA 300.0 R2.1	Prep Batch
MB 180-332816/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-332816/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 332937

Lab Sample ID 180-111743-1	Client Sample ID ARGWC-10	Prep Type Total/NA	Matrix Water	Method EPA 300.0 R2.1	Prep Batch
180-111743-3	ARAMW-6	Total/NA	Water	EPA 300.0 R2.1	
180-111743-4	ARGWC-8	Total/NA	Water	EPA 300.0 R2.1	
MB 180-332937/43	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-332937/42	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-111743-1 MS	ARGWC-10	Total/NA	Water	EPA 300.0 R2.1	
180-111743-1 MSD	ARGWC-10	Total/NA	Water	EPA 300.0 R2.1	

Metals

Filtration Batch: 332490

Lab Sample ID 180-111689-4	Client Sample ID ARGWC-18	Prep Type Dissolved	Matrix Water	Method Filtration	Prep Batch
PB 180-332490/1-G	Method Blank	Dissolved	Water	Filtration	
LCS 180-332490/2-G	Lab Control Sample	Dissolved	Water	Filtration	

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1.

QC Association Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright AP-3

Metals

Prep Batch: 333113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
180-111645-1	ARGWA-5	Total Recoverable	Water	3005A	
180-111645-2	ARGWA-3	Total Recoverable	Water	3005A	
180-111645-3	ARGWC-7	Total Recoverable	Water	3005A	
180-111645-4	ARGWC-16	Total Recoverable	Water	3005A	
180-111646-1	ARGWA-14	Total Recoverable	Water	3005A	
180-111646-2	ARGWC-15	Total Recoverable	Water	3005A	
180-111646-3	ARGWC-17	Total Recoverable	Water	3005A	
180-111646-4	DUP-01	Total Recoverable	Water	3005A	
180-111647-1	FB-01	Total Recoverable	Water	3005A	
180-111647-2	ARGWA-12	Total Recoverable	Ground Water	3005A	
180-111647-3	ARGWA-13	Total Recoverable	Water	3005A	
MB 180-333113/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-333113/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-111645-3 MS	ARGWC-7	Total Recoverable	Water	3005A	
180-111645-3 MSD	ARGWC-7	Total Recoverable	Water	3005A	

Prep Batch: 333214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111689-1	EB-01	Total Recoverable	Water	3005A	
180-111689-2	ARAMW-4	Total Recoverable	Water	3005A	
180-111689-3	ARAMW-3	Total Recoverable	Water	3005A	
180-111689-4	ARGWC-18	Dissolved	Water	3005A	332490
180-111689-4	ARGWC-18	Total Recoverable	Water	3005A	
180-111743-1	ARGWC-10	Total Recoverable	Water	3005A	
180-111743-2	ARGWC-9	Total Recoverable	Water	3005A	
180-111743-3	ARAMW-6	Total Recoverable	Water	3005A	
180-111743-4	ARGWC-8	Total Recoverable	Water	3005A	
MB 180-333214/1-A	Method Blank	Total Recoverable	Water	3005A	
PB 180-332490/1-G	Method Blank	Dissolved	Water	3005A	332490
LCS 180-332490/2-G	Lab Control Sample	Dissolved	Water	3005A	332490
LCS 180-333214/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 334271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111689-1	EB-01	Total Recoverable	Water	EPA 6020B	333214
180-111689-2	ARAMW-4	Total Recoverable	Water	EPA 6020B	333214
180-111689-3	ARAMW-3	Total Recoverable	Water	EPA 6020B	333214
180-111689-4	ARGWC-18	Dissolved	Water	EPA 6020B	333214
180-111689-4	ARGWC-18	Total Recoverable	Water	EPA 6020B	333214
180-111743-1	ARGWC-10	Total Recoverable	Water	EPA 6020B	333214
180-111743-2	ARGWC-9	Total Recoverable	Water	EPA 6020B	333214
180-111743-3	ARAMW-6	Total Recoverable	Water	EPA 6020B	333214
180-111743-4	ARGWC-8	Total Recoverable	Water	EPA 6020B	333214
MB 180-333214/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	333214
PB 180-332490/1-G	Method Blank	Dissolved	Water	EPA 6020B	333214
LCS 180-332490/2-G	Lab Control Sample	Dissolved	Water	EPA 6020B	333214
LCS 180-333214/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	333214

Analysis Batch: 334457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111743-3	ARAMW-6	Total Recoverable	Water	EPA 6020B	333214

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10/29/2020

Job ID: 180-111645-1

QC Association Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Metals (Continued)

Analysis Batch: 334457 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111743-4	ARGWC-8	Total Recoverable	Water	EPA 6020B	333214
MB 180-333214/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	333214
LCS 180-333214/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	333214

Analysis Batch: 334462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111645-1	ARGWA-5	Total Recoverable	Water	EPA 6020B	333113
180-111645-2	ARGWA-3	Total Recoverable	Water	EPA 6020B	333113
180-111645-3	ARGWC-7	Total Recoverable	Water	EPA 6020B	333113
180-111645-4	ARGWC-16	Total Recoverable	Water	EPA 6020B	333113
180-111646-1	ARGWA-14	Total Recoverable	Water	EPA 6020B	333113
180-111646-2	ARGWC-15	Total Recoverable	Water	EPA 6020B	333113
180-111646-3	ARGWC-17	Total Recoverable	Water	EPA 6020B	333113
180-111646-4	DUP-01	Total Recoverable	Water	EPA 6020B	333113
180-111647-1	FB-01	Total Recoverable	Water	EPA 6020B	333113
180-111647-2	ARGWA-12	Total Recoverable	Ground Water	EPA 6020B	333113
180-111647-3	ARGWA-13	Total Recoverable	Water	EPA 6020B	333113
MB 180-333113/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	333113
LCS 180-333113/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	333113
180-111645-3 MS	ARGWC-7	Total Recoverable	Water	EPA 6020B	333113
180-111645-3 MSD	ARGWC-7	Total Recoverable	Water	EPA 6020B	333113

General Chemistry

Analysis Batch: 331934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111645-1	ARGWA-5	Total/NA	Water	SM 2540C	
180-111645-2	ARGWA-3	Total/NA	Water	SM 2540C	
180-111645-3	ARGWC-7	Total/NA	Water	SM 2540C	
180-111645-4	ARGWC-16	Total/NA	Water	SM 2540C	
180-111646-1	ARGWA-14	Total/NA	Water	SM 2540C	
180-111646-2	ARGWC-15	Total/NA	Water	SM 2540C	
180-111646-3	ARGWC-17	Total/NA	Water	SM 2540C	
180-111646-4	DUP-01	Total/NA	Water	SM 2540C	
MB 180-331934/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-331934/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-111645-4 DU	ARGWC-16	Total/NA	Water	SM 2540C	

Analysis Batch: 331996

Lab Sample ID 180-111647-1	Client Sample ID FB-01	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
180-111647-2	ARGWA-12	Total/NA	Ground Water	SM 2540C	
180-111647-3	ARGWA-13	Total/NA	Water	SM 2540C	
MB 180-331996/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-331996/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 332159

Lab Sample ID 180-111689-1	Client Sample ID EB-01	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
180-111689-2	ARAMW-4	Total/NA	Water	SM 2540C	
180-111689-3	ARAMW-3	Total/NA	Water	SM 2540C	

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Job ID: 180-111645-1

QC Association Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Job ID: 180-111645-1

General Chemistry (Continued)

Analysis Batch: 332159 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111689-4	ARGWC-18	Total/NA	Water	SM 2540C	
MB 180-332159/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-332159/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-111689-2 DU	ARAMW-4	Total/NA	Water	SM 2540C	

Analysis Batch: 332329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111743-1	ARGWC-10	Total/NA	Water	SM 2540C	
180-111743-2	ARGWC-9	Total/NA	Water	SM 2540C	
180-111743-3	ARAMW-6	Total/NA	Water	SM 2540C	
180-111743-4	ARGWC-8	Total/NA	Water	SM 2540C	
MB 180-332329/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-332329/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 333127

Lab Sample ID 180-111743-1	Client Sample ID ARGWC-10	Prep Type Total/NA	Matrix Water	Method Prep Batch Field Sampling
180-111743-2	ARGWC-9	Total/NA	Water	Field Sampling
180-111743-3	ARAMW-6	Total/NA	Water	Field Sampling
180-111743-4	ARGWC-8	Total/NA	Water	Field Sampling

Analysis Batch: 333128

Lab Sample ID		Client Sample ID	Prep Type	Matrix	Method	Prep Batch
	180-111689-2	ARAMW-4	Total/NA	Water	Field Sampling	
	180-111689-3	ARAMW-3	Total/NA	Water	Field Sampling	
	180-111689-4	ARGWC-18	Total/NA	Water	Field Sampling	

Analysis Batch: 333129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111645-1	ARGWA-5	Total/NA	Water	Field Sampling	
180-111645-2	ARGWA-3	Total/NA	Water	Field Sampling	
180-111645-3	ARGWC-7	Total/NA	Water	Field Sampling	
180-111645-4	ARGWC-16	Total/NA	Water	Field Sampling	
180-111646-1	ARGWA-14	Total/NA	Water	Field Sampling	
180-111646-2	ARGWC-15	Total/NA	Water	Field Sampling	
180-111646-3	ARGWC-17	Total/NA	Water	Field Sampling	
180-111646-4	DUP-01	Total/NA	Water	Field Sampling	

Analysis Batch: 333130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111647-2	ARGWA-12	Total/NA	Ground Water	Field Sampling	
180-111647-3	ARGWA-13	Total/NA	Water	Field Sampling	

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301 Alpha Drive RIDC Park Pittsburgh PA 15238

Chain of Custody Record 244- ATLANTA eurofins Environment Testing

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Phone: 412-963-7058 Fax: 412-963-2468				
Client Information	BHOWARD, EGuillen, Ashared & Bro	PM: wn, Shali	Carrier Tracking No(s):	CDC No: 180-64149-11995.1
Client Contact Joju Albraham		alt ali Brown@Eurofinset.com		Page Page 1 of 3
Company: Southern Company		Analysis Re	quested	Job#.
Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State, Zip: GA, 30308	TAT Requested (days):	2		Preservation Codes: A - HCL
Phone Email:	P0 # GPC11064570 W0 #	MSD (Yes or No) Radium 226 om 16 (App III/ApplV + Silver) 28D - Chloride Fluoride Sulfate - Yotal Dissolved Solids - Radium 228 ury		F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate
JAbraham@southernco.com		or Ne) or Ne) fill/AppiV ide Fluo		I - loe U - Acetone J - Dt Water V - MCAA K - EDTA W - pH 4-5
Project Name: CCR - Plant Arkweight	Project #: 18020201	Sample (Yes or No) ISD (Yes or No) adium 226 116 (App III/AppIV + § 119 - Chloride Fluoride Total Dissolved Solid adium 228		K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:
Sne: Georgia	SSOW#.	ored Sample (MS/MSD (Yes 26 - Radium 221 20 - Radium 221 FM_28D - Chlor lied - Total Diss 28 - Radium 221 ercury		Other:
Sample Identification	Sample Type (C=comp, G=grab) ST-Tissue. A-Vs Sample Date Time Preservation Code:	Field Filtere Parform MS 9316_Ra226 6020B - Cust 300_ORGFM 2640C_Galed 9320_Ra228 7470A - Merc		
ARGWA-5	9/29/201050 G W	X X X X X X X		
ADGWA-3	1/21/201030 C W	XXXXX		pH=6.00
ARGWC-7	1415 G W	XXXXXX		pH=5.92
ARGWA-3 ARGWC-7 ARGWC-16	V 1540 G W	XXXXXX		pH=5.50
			180-111645 Chain of 0	Dustody
	Poison B Unknown Radiological	Sample Disposal (A fee may be Return To Client	assessed if samples are retal Disposal By Lab - Arc	ined longer than 1 month) thive For Months
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirem		
Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:	
Beingushed by Relingushed by	9/29/20/1745 Company Date/Time: Company Company	Received by Juliu 1	Date/Time: 9	2-30-20 Company TAPE
Relinquished by:	Date/Time: Company	Received by:	Date/Time:	Company
Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) ⁶ C and Other	Remarks	Ver. 01/16/2019

Phone: 412-963-7058 Fax: 412-963-2468

301 Alpha Drive RIDC Park Pittsburgh, PA 15238

Client Information

Client Contact

Chain of Custody Record

DHoward, EGuillen, Ashardt Brown, Shall

244- ATLANTA Offins

Carrier Tracking No(s):

180-64149-11995.1

Joju Abraham Shali.Brown@Eurofinset.com Page 1 of 3 Company Job # Southern Company Analysis Requested Preservation Codes: 241 Ralph McGill Blvd SE B10185 standar A - HCL M - Hexane B - NaOH N - None Atlanta C - Zn Acetate O - AsNaO2 State, Zip: D - Nitric Acid P - Na204S E - NaHSO4 Q - Na2SO3 GA 30308 300_ORGFM_28D - Chloride Fluoride Sulfate F - MeOH R - Na2S203 Phone: G - Amchior S-H2S04 GPC11064570 Calcd - Total Dissolved Solids H - Ascorbic Acid T - TSP Dodecahydrate Email I-los U - Acetone J - Di Water V-MCAA JAbraham@southernco.com Total Number of containers K - EDTA W-pH 4-5 Project Name: raject#: MS/MSD (Yes or L-EDA Z - other (specify) CCR - Plant Arkwright 18020201 SSOW# Other: Georgia Matrix Sample Type Sample (C=comp, Time Sample Identification Sample Date G=grab) ST=Rissoe, A=Air) Special Instructions/Note: Preservation Code: D D W nH=6.80 G W PHAS ARGWC-G W 0H=5,75 W pH=5:75 Possible Hazard Identification Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Non-Hazard Flammable Skin Imitant Poison B Unknown Radiological Disposal By Lab Return To Client Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements Empty Kit Relinquished by: Method of Shipment Woo Dany Nowa Relinquished by: Сотрапу Relinquished by: Сотралу Received by

Custody Seals Intact:

A Yes A No

Custody Seal No.

Page 46 of 59



Cooler Temperature(s) ⁶C and Other Remarks.

N











Ver. 01/16/2019

301 Alpha Drive RIDC Park

10/29/2020

Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

244- ATLANTAGEN

eurofins Environment Testing

Client Information	D Howard	Lab PM: Brown, Shali	" Rai	MAIN	OC No: 60-64149-11995.1
Client Contact. Joju Abraham	Phone:	E-Mail: Shali.Brown@	©Eurofinset.com		Page Page 1 of 3
Company:			Analysis Reque	ated.	Job #
Southern Company Address: 241 Raiph McGill Blvd SE B10185	Due Bate Requested:		Analysis Reque	sted	Preservation Codes:
Oty Affanta	TAT Requested (days):				A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2
State, Zlp. GA, 30308			rate c		D - Ninc Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3
Phone:	PO#: GPC11064570	(or	Hds Sul		G - Amohlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate
Email: JAbraham@southemco.com	WO#:	No or N	Applv ved So	2	I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5
JAbraham@southemco.com Project Name: CCR - Plant Arkwright	Project #: 18020201	Yes or	App III/ hieridd Dissolv	ortaino	L - EDA Z - other (specify)
Ste: Georgia	SSOW#.	Samp ASD (Radium 226 m 16 (App II 28D - Chloric - Total Disso Radium 228 Iry	00.00	Other:
	Sample (C=comp, o	Matrix (All Silbored Sample (Yes or No)	9316_Ra226 - Radium 226 6020B - Custom 16 (App III/AppIV + Silver) 300_ORGFM_28D - Chloride Fluoride Sulfate 2840C_Calcd - Total Dissolved Solids 932G_Ra228 - Radium 228 7470A - Mersury	Total Number of containers	
Sample Identification	Sample Date Time G=grab) sr-n Preservation		ONN N N D NO	The state of the s	Special Instructions/Note:
FR-01			XXXXXX		
ARGWA-12			XXXXXX		oH=5.88
FB-01 ARGWA-12 ARGWA-13	√ 1330 G V	N	XXXXXX		pH=5.75
		-+++	+++++		
		-+++	+		
		-H	+++++	180-111	647 Chain of Custody
					I
Possible Hazard Identification	Poison B Unknown Radiological	Sam	ple Disposal (A fee may be asse	ssed if samples are retain sal By Lab — Arch	ive For Months
Deliverable Requested: I, II, III, IV, Other (specify)		Spec	cial Instructions/QC Requirements:	, , , , , , , , , , , , , , , , , , , ,	and the same of th
Empty Kit Relinquished by:	. Date:	Time:	0	Method of Shipment	- A
Reinquished by Howard Reinquished by	19/29/20 / 1745 N	Veod	Received by MMWW independent of the control of the	Ostertime	-20 company
Relinquished by			Received by	Date/Time:	9:00 Company
Custody Seals Intact: Custody Seal No.:		c	Cooler Temperature(s) °C and Other Remar	ks:	



4 L

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record 244- ATLANTA General Testing

Client Information	EGuillen, Asharedit	Lab PM: Brown, Shali		Carrier Tracking No(s):	CDC Na: 180-64149-11995.2
Client Contact: Joju Abraham	Phone:	E-Mail: Shali.Brown@E	Eurofinset.com		Page 1 of 6 1
Joju Abraham Company Southern Company			Analysis Reg	uested	Job#:
Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State, Zipi GA, 3030B	Due Date Requested: 5tandard				Preservation Codes:
City. Atlanta	TAT Requested (days):		1 7	34	A - HCL M - Hexane B - NaOH N - None
State Zip	1				C - Zn Apetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 O - Na2SO3
Phone:	PO#:		+ Silver)		F - MeOH R - Na2S203 G - Amchlor S - H2S04
Email:	GPC11064570 W0#:		Solids Solids	.चु	H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acatone
JAbraham@southernco.com		ON L	Appl Appl	ė sau	J - DI Water V - MCAA K - EDTA W - pH 4-5
Email: JAbraham@southernoo.com Project Name: CCR - Plant Arkwright	Project #: 18020201	88 O 226	pp IIII	6 6 Containers	L - EDA Z - other (specify)
Site Georgia	SSOW#:	Sample (Yes or No) ISD (Yes or No) radium 226	otal C	#	Other:
	Sample Type Sample (C=comp,	Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix Matrix	5020B - Custom 16 (App III/AppIV + Silver) 500_ORGFM_28D - Chloride Fluoride Sulfate 2640C_Calcd - Total Dissolved Solids 9320_Ra228 - Radium 228 7470A - Mercury 602_08 - Custs - 15(App III/T+silver)	7H-70 A-H2	
Sample Identification	Sample Date Time G=grab) s		CONCON N N O		Special Instructions/Note:
EB-01	9/30/200905 G	WX		3	
A R D MW- H	1240 G	wx			pH=5.94
2 2 2 42 42 - 3	1645 G	WX		3	pH=6,41
A RAMW-4 A RAMW-3 A RGWC-18	V 1615 G	WXX		2 41	11-6.4)
14 KG W C - 18	1000	V 1/1 X	XXXXXX	X	pH=5.98
		-	 		
		——————————————————————————————————————	III III III III III III III III III II		w
		-++	MEGAD GIDIADA DA DA	Unnouna -	* Lab will Filter
			MANAHARANI	999090 <u>+</u>	dissolved metals
		180	0-1116pg ex	100401010	sample
			0-111689 Chain of Custody	orn mat Wil Mi	'
Possible Hazard Identification Skin Irritant	ison B Unknown Radiological	Sample	e Disposal (A fee may be a: Return To Client	ssessed if samples are retain	
Deliverable Requested: I, II, III, IV, Other (specify)	Sort B Unknown Hadiological		Instructions/QC Requiremen	isposal By Lab Arch	ive For Months
Empty Kit Relinquished by:	Date:	Time:		Method of Shipment:	
Remarked by: () 11			seived by		I an Compagn III
Reinquisted by	9/30/20/ 1815 C	Company Reco	served by Millie U	Date/Time	1-30 Compagnitud
					9:00 Company
Relinquished by:	Date/Time: C	Company Rec	served by:	Date/Time:	Company
Custody Seals Intact: Custody Seal No.: A Yes & No.		Cod	oler Temperature(s) ⁶ C and Other Re	emarks:	
a les a Nu					















301 Alpha Drive RIDC Park Pittsburgh, PA 15238

10/29/2020

Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record 244- ATLANTA

America

	Sampler	11 0	r 1.	Lab	PM:							Carrier Tra	cking No(s):	-		DOC No:		_
Client Information	I Già	llen, As	hored	T-S Bro	wn, Sha	ali							180-64149-1199 Page:	5.2				
Iniu Ahraham	Priorie.			C-180	aii. Brow	n@Eu	rofin	set or	om .							Page. 2 of 3		
Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185					Т				_		_				_	iob#:		_
Southern Company					-		_	_	Ana	alysi	s Rec	quested			4			
241 Ralph McGill Rlvd SF R10185	Due Date Rec	tandara			1 10										981	Preservation Cod	les:	
City.	TAT Request				1 10	1				- 1				1 8		A - HCL B - NaOH	M - Hexane	
City. Atlanta State, Zip.					1 10	ш				- 1				1 16		C - Zn Apetate	N - None O - AsNaO2	
State, Zip:						ш		.		- 1						D - Nitric Acid E - NaHSO4	P - Na204S	
GA, 3030B Phone:	PO#				136	1	5	ig		- 1	1			1 8		F - MeOH	Q - Na2SO3 R - Na2S2O3	
Priorie.	GPC11064	570			2		<u>≟</u>	8 9	8	- 1			111	9		G - Amohlor	S - H2SO4	
Email:	WO#:				or No)		≥	P P	i s	- 1			111			I - Ibe	T - TSP Dodecahydrat U - Acetone	
JAbraham@southernco.com Project Name:					0 8 N	1	App	1	Ved	- 1						J - DI Water K - EDTA	V - MCAA W - pH 4-5	
Project Name: CCR - Plant Arkwright	Project #. 18020201				20 0	98	1	ş.	toss e	28					511	L-EDA	Z - other (specify)	
CCR - Plant Arkwright Sne:	SSOW#:				Sample (Yes	E	₹)	8	9 ,	Ē					conta	Other:		
Georgia					Sar	g g	5	8	Total	ξ,			111	1 3	5			
			Sample	Matrix	Field Filtered Sample (Yes or Perform MS/MSD (Yes or No)	9315_Ra226 - Radium 226	6020B - Custom 15 (App III/ApplV + Silver)	300_ORGFM_28D - Chloride Fluoride Sulfate	2540C_Caled - Total Dissolved Solids	9320 Ra228 - Radium 228					Number			_
		1	Type	(w-water,	E E	1422	5	36	G. S	No.			111		51			
		Sample	(C=comp,	Sreolid, Orwastololi,	Ple	2	80	0	0, 3	0 5		1.1			=			
Sample Identification	Sample D	ate Time		BT=Tissue, A=4ir	1 8	_	-	_							Total	Special In	structions/Note:	
		<><	Preserva	ation Code:	XX	0	D	N I	N	OX	D			D	X			
ARGWC-10	10/1/2	0 1100	G	W		X	X	X	X :	X	<			1.00	3	pH=5.8	33	
ARGWC-10 ARGWC-9 ARAMW-6 ARGWC-8		1450	G	W		X	X	X	X	X)	5			1	3	oH=5.7	18	
ARAMW-6		1455	G	W	Ш	X	X	X	X	X)	_				3	pH=6	37	
ARGWC-8	1	1100	6	W	Ш	X	×	X	X	X)				710	3	pH=6.	44	
					Ш											'		
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2					Ц.	1.	Ш	_			\perp			1 1	2			
Possible Hazard Identification					Sa						y be a	assessed	if samples			d longer than 1	month)	
	Paison B U	inknown i	Radiological		-				lient			Disposal B	y Lab	Arc	chiv	e For	Months	
Deliverable Requested: I, II, III, IV, Other (specify)					Sp	ecial	Instru	iction	s/QC	Requ	uireme	ints:						
Empty Kit Relinquished by:		Date:			Time				_	_	/	Meth	od of Shipme	nt:				
Relinquished by () H	1071	120/18	320	Woa	9	Rece	ived b	y.					Date/T	1 1 .		0.	Company	
Reinquished by: And Marraul	Date/Time:	120/12	120	Company	a	Rece	ived b	<u>~</u>	V				Date/T) 2 2 v		900	Company Company	_
Relinquished by	Date/Time:			Company		Race	ived b	v-					Date/T	imo				_
				7.0				-					Daleri				Company	
Custody Seals Intact: Custody Seal No.:						Cook	er Tem	peratu	ure(s) °	C and	Other R	emarks:						













ANTY RD NW STE 100

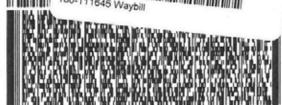
BILL THIRD PARTY

SAMPLE RECEIVING **EUROFINS TEST AMERICA**

RIDC



Do Not Lift Using This Tag



TRK# 8121 9394 4889

WED - 30 SEP 10:30A PRIORITY OVERNIGHT 15238

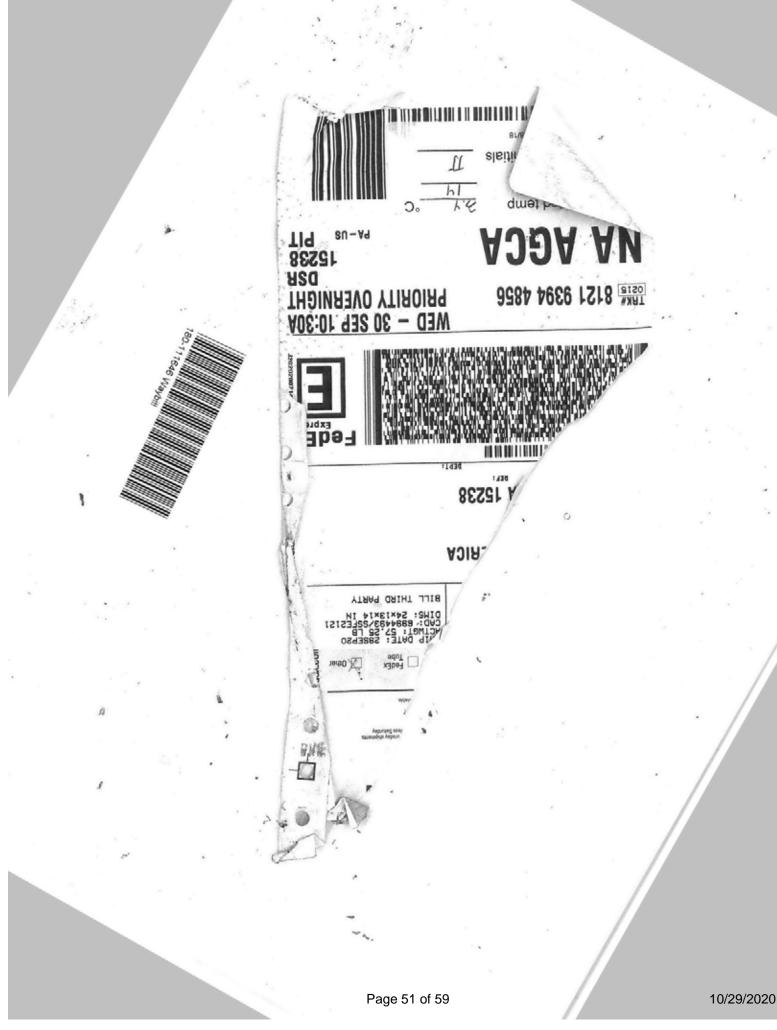
PA-US

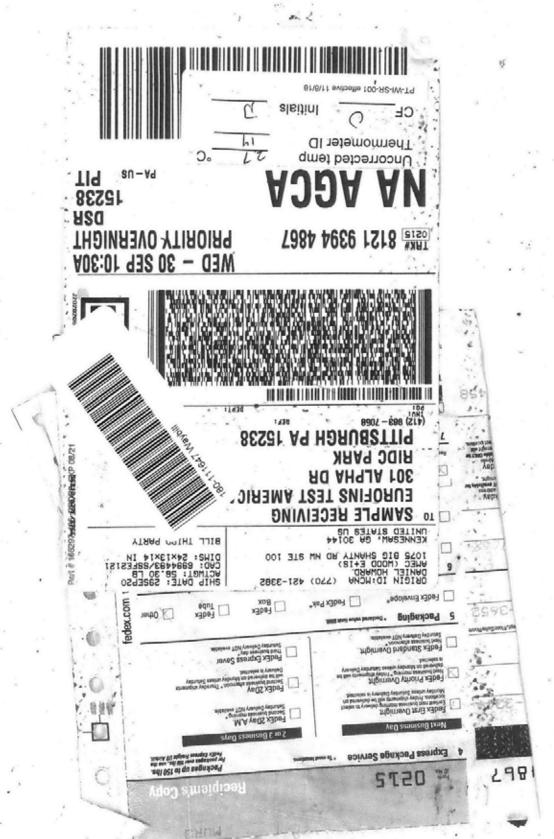
Uncorrected temp Thermometer ID



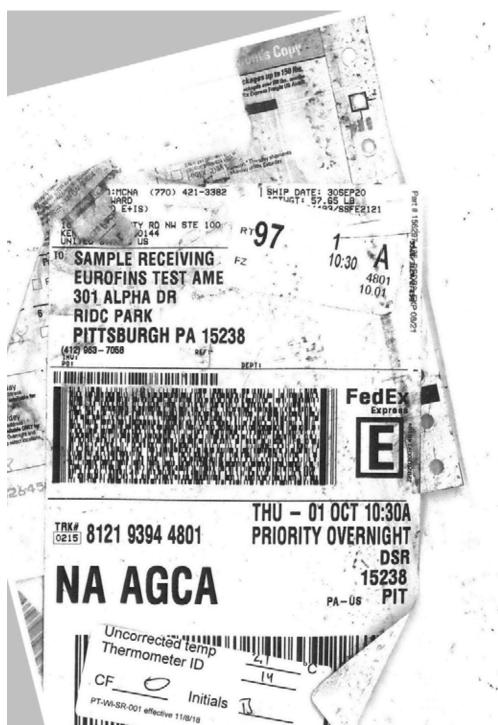
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Page 50 of 59





Page 52 of 59







0215

Express Package Service Mext Bus

perity Overnight

GRIGIN ID:HCNA (770) 421-3382 DANIEC HOWARD AMEC (MOOD E+IS) 1075 BIG SHANTY RD NW STE 100 KENNESAM, GA 30144 UNITED STATES US

SHIP DATE: 010CT20 ACTMGT: 57.30 LB CAD: 6984493/SSFE2121 DIMS: 24x13x14 IN

FedEx Express Saver

FedEx 20 av

FedEx ZDay A.M.

BILL THIRD PARTY ...

EUROFINS TEST AMERICA SAMPLE RECEIVING 301 ALPHA DR

PITTSBURGH PA 15238

RIDC PARK

11630

PRIORITY OVERNIGHT FRI - 02.0CT 10:30A

Uncorrected temp NA AGCA Thermometer ID

200

PK-US . PI

Initials pT-WI-SR-001 effective 11/8/18 CF

180-111743 Waybill

Client: Southern Company

Job Number: 180-111645-1

Login Number: 111645 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Creator. Watson, Debbie		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Eurofins TestAmerica, Pittsburgh

Job Number: 180-111645-1

Login Number: 111646 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-111645-1

Login Number: 111647

List Number: 1 Creator: Watson, Debbie List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
Γhe cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or ampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is 6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-111645-1

Login Number: 111689

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

orcator. Watson, Debbic		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 180-111645-1

Login Number: 111743

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Creator: Say, Thomas C		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-111645-2

Client Project/Site: CCR - Plant Arkwright AP-3

For:

Southern Company 241 Ralph McGill Blvd SE B10185 Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by: 11/23/2020 6:44:07 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

Client: Southern Company
Project/Site: CCR - Plant Arkwright AP-3

Laboratory Job ID: 180-111645-2

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Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

,

Job ID: 180-111645-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-111645-2

Comments

No additional comments.

Receipt

The samples were received on 9/30/2020 9:00 AM, 10/1/2020 9:00 AM and 10/2/2020 9:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 2.1° C, 2.7° C, 3.4° C, 3.8° C and 3.8° C.

RAD

Methods 903.0, 9315: Ra-226 prep batch 160-484743:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EB-01 (180-111689-1), ARAMW-4 (180-111689-2), ARAMW-3 (180-111689-3), ARGWC-18 (180-111689-4), (LCS 160-484743/1-A) and (MB 160-484743/24-A)

Methods 903.0, 9315: Radium-226 prep batch 160-485335:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

ARGWC-10 (180-111743-1), ARGWC-9 (180-111743-2), ARAMW-6 (180-111743-3), ARGWC-8 (180-111743-4), (LCS 160-485335/1-A) and (MB 160-485335/22-A)

Method 9315: Radium-226 Prep Batch 160-485173:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. ARGWA-5 (180-111645-1), ARGWA-3 (180-111645-2), ARGWC-7 (180-111645-3), ARGWC-16 (180-111645-4), ARGWA-14 (180-111646-1), ARGWC-15 (180-111646-2), ARGWC-17 (180-111646-3), DUP-01 (180-111646-4), FB-01 (180-111647-1), ARGWA-12 (180-111647-2) and ARGWA-13 (180-111647-3)

Methods 904.0, 9320: Radium-228 prep batch 160-484744:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EB-01 (180-111689-1), ARAMW-4 (180-111689-2), ARAMW-3 (180-111689-3), ARGWC-18 (180-111689-4), (LCS 160-484744/1-A) and (MB 160-484744/24-A)

Methods 904.0, 9320: Radium-228 prep batch 160-485338:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

ARGWC-10 (180-111743-1), ARGWC-9 (180-111743-2), ARAMW-6 (180-111743-3), ARGWC-8 (180-111743-4), (LCS 160-485338/1-A) and (MB 160-485338/22-A)

Method 9320: 9320 prep batch 160-485176

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

ARGWA-5 (180-111645-1), ARGWA-3 (180-111645-2), ARGWC-7 (180-111645-3), ARGWC-16 (180-111645-4), ARGWA-14 (180-111646-1), ARGWC-15 (180-111646-2), ARGWC-17 (180-111646-3), DUP-01 (180-111646-4), FB-01 (180-111647-1), ARGWA-12 (180-111647-2) and ARGWA-13 (180-111647-3)

Job ID: 180-111645-2

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Case Narrative

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Job ID: 180-111645-2

Job ID: 180-111645-2 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

Method PrecSep_0: Radium 228 Prep Batch 160-485176:

Insufficient sample volume was available to perform a sample duplicate for the following samples: ARGWA-5 (180-111645-1), ARGWA-3 (180-111645-2), ARGWC-7 (180-111645-3), ARGWC-16 (180-111645-4), ARGWA-14 (180-111646-1), ARGWC-15 (180-111646-2), ARGWC-17 (180-111646-3), DUP-01 (180-111646-4), FB-01 (180-111647-1), ARGWA-12 (180-111647-2) and ARGWA-13 (180-111647-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium 226 Prep Batch 160-485173:

Insufficient sample volume was available to perform a sample duplicate for the following samples: ARGWA-5 (180-111645-1), ARGWA-3 (180-111645-2), ARGWC-7 (180-111645-3), ARGWC-16 (180-111645-4), ARGWA-14 (180-111646-1), ARGWC-15 (180-111646-2), ARGWC-17 (180-111646-3), DUP-01 (180-111646-4), FB-01 (180-111647-1), ARGWA-12 (180-111647-2) and ARGWA-13 (180-111647-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Definitions/Glossary

Client: Southern Company Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Qualifiers

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Qualifier Qualifier Description

U Result is less than the sample detection limit.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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Accreditation/Certification Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
lowa	State	373	12-01-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

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Sample Summary

Client: Southern Company

180-111743-4

Project/Site: CCR - Plant Arkwright AP-3

ARGWC-8

Lab Sample ID Matrix Collected Received Client Sample ID Asset ID 180-111645-1 ARGWA-5 Water 09/29/20 10:50 09/30/20 09:00 180-111645-2 ARGWA-3 09/29/20 12:25 09/30/20 09:00 Water ARGWC-7 180-111645-3 Water 09/29/20 14:15 09/30/20 09:00 180-111645-4 ARGWC-16 Water 09/29/20 15:40 09/30/20 09:00 180-111646-1 ARGWA-14 Water 09/29/20 10:35 09/30/20 09:00 ARGWC-15 Water 09/29/20 13:05 09/30/20 09:00 180-111646-2 180-111646-3 ARGWC-17 Water 09/29/20 14:55 09/30/20 09:00 DUP-01 Water 180-111646-4 09/29/20 00:00 09/30/20 09:00 180-111647-1 FB-01 Water 09/29/20 09:45 09/30/20 09:00 ARGWA-12 180-111647-2 **Ground Water** 09/29/20 11:27 09/30/20 09:00 180-111647-3 ARGWA-13 Water 09/29/20 13:30 09/30/20 09:00 180-111689-1 EB-01 Water 09/30/20 09:05 10/01/20 09:00 180-111689-2 ARAMW-4 Water 09/30/20 12:40 10/01/20 09:00 180-111689-3 ARAMW-3 Water 09/30/20 16:45 10/01/20 09:00 ARGWC-18 09/30/20 16:15 10/01/20 09:00 180-111689-4 Water ARGWC-10 Water 10/01/20 11:00 10/02/20 09:00 180-111743-1 180-111743-2 ARGWC-9 Water 10/01/20 14:50 10/02/20 09:00 180-111743-3 ARAMW-6 Water 10/01/20 14:55 10/02/20 09:00

Water

10/01/20 11:00 10/02/20 09:00

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Method Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Method **Method Description** Protocol Laboratory 9315 Radium-226 (GFPC) SW846 TAL SL 9320 Radium-228 (GFPC) SW846 TAL SL Ra226_Ra228 Combined Radium-226 and Radium-228 TAL-STL TAL SL PrecSep_0 Preparation, Precipitate Separation None TAL SL PrecSep-21 Preparation, Precipitate Separation (21-Day In-Growth) None TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

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Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWA-5

Date Collected: 09/29/20 10:50 Date Received: 09/30/20 09:00

Client: Southern Company

Lab Sample ID: 180-111645-1

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.87 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 at ID: GFPCBLUE		1			489823	11/20/20 17:01	СММ	TAL SL
Total/NA	Prep	PrecSep_0			1000.87 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			489473	11/17/20 12:46	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			489999	11/23/20 15:36	SCB	TAL SL

Client Sample ID: ARGWA-3 Lab Sample ID: 180-111645-2

Date Collected: 09/29/20 12:25 **Matrix: Water**

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.98 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			489823	11/20/20 17:01	СММ	TAL SL
Total/NA	Prep	PrecSep_0			999.98 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			489473	11/17/20 12:46	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			489999	11/23/20 15:36	SCB	TAL SL

Client Sample ID: ARGWC-7 Lab Sample ID: 180-111645-3 **Matrix: Water**

Date Collected: 09/29/20 14:15

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.81 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			489920	11/21/20 15:49	CMM	TAL SL
Total/NA	Prep	PrecSep_0			999.81 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			489473	11/17/20 12:46	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			489999	11/23/20 15:36	SCB	TAL SL

Client Sample ID: ARGWC-16 Lab Sample ID: 180-111645-4

Date Collected: 09/29/20 15:40

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.74 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis	9315		1			489920	11/21/20 15:49	CMM	TAL SL
	Instrumen	t ID: GFPCRED								

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Matrix: Water

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-16 Lab Sample ID: 180-111645-4

Date Collected: 09/29/20 15:40 **Matrix: Water** Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			999.74 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCPURPLE	Ī	1			489473	11/17/20 12:46	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			489999	11/23/20 15:36	SCB	TAL SL

Client Sample ID: ARGWA-14 Lab Sample ID: 180-111646-1

Date Collected: 09/29/20 10:35 **Matrix: Water**

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.80 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			489920	11/21/20 15:49	CMM	TAL SL
Total/NA	Prep	PrecSep_0			999.80 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			489473	11/17/20 12:47	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			489999	11/23/20 15:36	SCB	TAL SL

Lab Sample ID: 180-111646-2 **Client Sample ID: ARGWC-15**

Date Collected: 09/29/20 13:05 Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.80 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			489922	11/21/20 15:53	CMM	TAL SL
Total/NA	Prep	PrecSep_0			1000.80 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1		-	489473	11/17/20 12:47	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			489999	11/23/20 15:36	SCB	TAL SL

Client Sample ID: ARGWC-17 Lab Sample ID: 180-111646-3

Date Collected: 09/29/20 14:55 Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.12 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis	9315		1			489922	11/21/20 15:53	CMM	TAL SL
	Instrumer	t ID: GFPCBLUE								
Total/NA	Prep	PrecSep_0			1000.12 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis	9320		1			489416	11/17/20 12:49	CMM	TAL SL
	Instrumer	t ID: GFPCBLUE								

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Matrix: Water

Matrix: Water

11/23/2020

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-17 Lab Sample ID: 180-111646-3

Date Collected: 09/29/20 14:55

. Matrix: Water

Job ID: 180-111645-2

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1			489999	11/23/20 15:36	SCB	TAL SL

Client Sample ID: DUP-01

Date Collected: 09/29/20 00:00

Lab Sample ID: 180-111646-4

Matrix: Water

Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.85 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			489922	11/21/20 15:54	CMM	TAL SL
Total/NA	Prep	PrecSep_0			1000.85 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			489416	11/17/20 12:49	СММ	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			489999	11/23/20 15:36	SCB	TAL SL

Client Sample ID: FB-01 Lab Sample ID: 180-111647-1

Date Collected: 09/29/20 09:45 Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.32 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCBLUE		1			489922	11/21/20 15:54	CMM	TAL SL
Total/NA	Prep	PrecSep_0			1000.32 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCBLUE		1			489416	11/17/20 12:49	CMM	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			489999	11/23/20 15:36	SCB	TAL SL

Client Sample ID: ARGWA-12 Lab Sample ID: 180-111647-2

Date Collected: 09/29/20 11:27 Date Received: 09/30/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.10 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			489922	11/21/20 15:54	CMM	TAL SL
Total/NA	Prep	PrecSep_0			999.10 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			489416	11/17/20 12:49	CMM	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			489999	11/23/20 15:36	SCB	TAL SL

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Matrix: Water

Matrix: Ground Water

noa, i ittobargii

Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWA-13

Date Collected: 09/29/20 13:30 Date Received: 09/30/20 09:00

Client: Southern Company

Lab Sample ID: 180-111647-3

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.24 mL	1.0 g	485173	10/09/20 07:26	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 at ID: GFPCBLUE		1			489922	11/21/20 15:54	CMM	TAL SL
Total/NA	Prep	PrecSep_0			999.24 mL	1.0 g	485176	10/09/20 08:02	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCBLUE		1			489416	11/17/20 12:49	СММ	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			489999	11/23/20 15:36	SCB	TAL SL

Client Sample ID: EB-01 Lab Sample ID: 180-111689-1

Date Collected: 09/30/20 09:05 **Matrix: Water**

Date Received: 10/01/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.39 mL	1.0 g	484743	10/06/20 11:14	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			487030	10/28/20 12:53	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.39 mL	1.0 g	484744	10/06/20 11:57	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			485907	10/15/20 12:56	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			487752	11/02/20 19:09	SCB	TAL SL

Lab Sample ID: 180-111689-2 **Client Sample ID: ARAMW-4** Date Collected: 09/30/20 12:40 **Matrix: Water**

Date Received: 10/01/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.95 mL	1.0 g	484743	10/06/20 11:14	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			487030	10/28/20 12:53	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.95 mL	1.0 g	484744	10/06/20 11:57	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			485907	10/15/20 12:57	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			487752	11/02/20 19:09	SCB	TAL SL

Client Sample ID: ARAMW-3 Lab Sample ID: 180-111689-3

Date Collected: 09/30/20 16:45 Date Received: 10/01/20 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.88 mL	1.0 g	484743	10/06/20 11:14	AVB	TAL SL
Total/NA	Analysis	9315		1			487030	10/28/20 12:53	SCB	TAL SL
	Instrumer	nt ID: GFPCRED								

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Matrix: Water

Job ID: 180-111645-2

Client: Southern Company Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARAMW-3

Date Collected: 09/30/20 16:45 Date Received: 10/01/20 09:00

Lab Sample ID: 180-111689-3

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

11/23/2020

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			999.88 mL	1.0 g	484744	10/06/20 11:57	AVB	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCBLUE		1			485907	10/15/20 12:57	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			487752	11/02/20 19:09	SCB	TAL SL

Client Sample ID: ARGWC-18 Lab Sample ID: 180-111689-4

Date Collected: 09/30/20 16:15

Date Received: 10/01/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.81 mL	1.0 g	484743	10/06/20 11:14	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			487030	10/28/20 12:54	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.81 mL	1.0 g	484744	10/06/20 11:57	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			485907	10/15/20 12:57	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			487752	11/02/20 19:09	SCB	TAL SL

Lab Sample ID: 180-111743-1 **Client Sample ID: ARGWC-10**

Date Collected: 10/01/20 11:00 Date Received: 10/02/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.03 mL	1.0 g	485335	10/13/20 08:06	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			488215	11/04/20 10:20	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.03 mL	1.0 g	485338	10/13/20 08:31	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			487365	10/30/20 11:48	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			490000	11/23/20 15:38	SCB	TAL SL

Client Sample ID: ARGWC-9 Lab Sample ID: 180-111743-2

Date Collected: 10/01/20 14:50 Date Received: 10/02/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.83 mL	1.0 g	485335	10/13/20 08:06	AVB	TAL SL
Total/NA	Analysis	9315		1			488215	11/04/20 10:20	SCB	TAL SL
	Instrumen	t ID: GFPCRED								
Total/NA	Prep	PrecSep_0			999.83 mL	1.0 g	485338	10/13/20 08:31	AVB	TAL SL
Total/NA	Analysis	9320		1			487365	10/30/20 11:48	FLC	TAL SL
	Instrumen	t ID: GFPCBLUE								

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Lab Chronicle

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-9 Lab Sample ID: 180-111743-2

Date Collected: 10/01/20 14:50 Date Received: 10/02/20 09:00

Matrix: Water

Job ID: 180-111645-2

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1			490000	11/23/20 15:38	SCB	TAL SL

Client Sample ID: ARAMW-6

Lab Sample ID: 180-111743-3 Date Collected: 10/01/20 14:55 **Matrix: Water**

Date Received: 10/02/20 09:00

D T	Batch	Batch	D	Dil	Initial	Final	Batch	Prepared	A I 4	1 -1-
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.26 mL	1.0 g	485335	10/13/20 08:06	AVB	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			488215	11/04/20 10:23	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.26 mL	1.0 g	485338	10/13/20 08:31	AVB	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCBLUE		1			487365	10/30/20 11:48	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			490000	11/23/20 15:38	SCB	TAL SL

Client Sample ID: ARGWC-8

Lab Sample ID: 180-111743-4 Date Collected: 10/01/20 11:00 **Matrix: Water**

Date Received: 10/02/20 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.18 mL	1.0 g	485335	10/13/20 08:06	AVB	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			488215	11/04/20 10:23	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.18 mL	1.0 g	485338	10/13/20 08:31	AVB	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			487365	10/30/20 11:48	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			490000	11/23/20 15:38	SCB	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Prep

AVB = Amber Bleem

Batch Type: Analysis

CMM = Chelsea Mazariegos

FLC = Fernando Cruz

SCB = Sarah Bernsen

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Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWA-5

Date Collected: 09/29/20 10:50
Date Received: 09/30/20 09:00

Lab Sample ID: 180-111645-1

Matrix: Water

Job ID: 180-111645-2

Method: 9315 -	Radium-226 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0786	U	0.0999	0.100	1.00	0.239	pCi/L	10/09/20 07:26	11/20/20 17:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	67.5		40 - 110					10/09/20 07:26	11/20/20 17:01	1

Method: 9320 -	Radium-228 (GFPC)								
	·	•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0678	U	0.291	0.291	1.00	0.539	pCi/L	10/09/20 08:02	11/17/20 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	67.5		40 - 110					10/09/20 08:02	11/17/20 12:46	1
Y Carrier	80.0		40 - 110					10/09/20 08:02	11/17/20 12:46	1

Method: Ra226_Ra2	228 - Con	bined Ra	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.146	U	0.308	0.308	5.00	0.539	pCi/L		11/23/20 15:36	1

Client: Southern Company Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWA-3

Date Collected: 09/29/20 12:25
Date Received: 09/30/20 09:00

Lab Sample ID: 180-111645-2

Matrix: Water

Radium-226 (GFPC)								
·	,	Count Uncert.	Total Uncert.						
Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
-0.0686	U	0.0753	0.0756	1.00	0.184	pCi/L	10/09/20 07:26	11/20/20 17:01	1
%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
89.9		40 - 110					10/09/20 07:26	11/20/20 17:01	1
	Result -0.0686 %Yield	Result Qualifier -0.0686 U %Yield Qualifier 89.9	Count Uncert.	Count Uncert. Uncert.	Count Total Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Uncer	Count Total Uncert. Uncert. Uncert. Count Uncert.	Count Total Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Unc	Count Total Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Count Uncert. Count Uncert. Count Uncert. Count Uncert. Count Uncert. Count Uncert. Count Uncert. Count C	Count Uncert. Uncert. Uncert. Uncert. Uncert. Uncert. Count Uncert. U

Method: 9320 -	Radium-228 (GFPC)								
	·	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0207	U	0.268	0.268	1.00	0.477	pCi/L	10/09/20 08:02	11/17/20 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.9		40 - 110					10/09/20 08:02	11/17/20 12:46	1
Y Carrier	76.3		40 - 110					10/09/20 08:02	11/17/20 12:46	1

Method: Ra226_Ra2	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0479	U	0.278	0.278	5.00	0.477	pCi/L		11/23/20 15:36	1

Client: Southern Company Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-7 Lab Sample ID: 180-111645-3 Date Collected: 09/29/20 14:15

Matrix: Water

Date Received: 09/30/20 09:00

Method: 9315 - R	adium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0786	U	0.0859	0.0862	1.00	0.137	pCi/L	10/09/20 07:26	11/21/20 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					10/09/20 07:26	11/21/20 15:49	1

Method: 9320 - I	Radium-228 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.256	U	0.276	0.277	1.00	0.451	pCi/L	10/09/20 08:02	11/17/20 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					10/09/20 08:02	11/17/20 12:46	1
Y Carrier	76.6		40 - 110					10/09/20 08:02	11/17/20 12:46	1

_ Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.334	U	0.289	0.290	5.00	0.451	pCi/L		11/23/20 15:36	1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-16

Date Collected: 09/29/20 15:40 Date Received: 09/30/20 09:00 Lab Sample ID: 180-111645-4

Matrix: Water

Job ID: 180-111645-2

Method:	9315 -	Radium-226	(GFPC)

			Uncert.	lotai Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.129	U	0.130	0.130	1.00	0.207	pCi/L	10/09/20 07:26	11/21/20 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.7		40 - 110					10/09/20 07:26	11/21/20 15:49	1

Method: 9320 - 1	· ·	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.153	U	0.236	0.237	1.00	0.460	pCi/L	10/09/20 08:02	11/17/20 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.7		40 - 110					10/09/20 08:02	11/17/20 12:46	1
Y Carrier	75.1		40 - 110					10/09/20 08:02	11/17/20 12:46	1

Methou. Nazzo_Naz	220 - 6011	ibilieu ita	ululli-220 a	ilu Kaululi	1-220					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	-0.0246	U	0.269	0.270	5.00	0.460	pCi/L		11/23/20 15:36	1

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11/23/2020

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWA-14

Date Collected: 09/29/20 10:35 Date Received: 09/30/20 09:00

Lab Sample ID: 180-111646-1

Matrix: Water

Job ID: 180-111645-2

Method: 9315 - F	Radium-226 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.109	U	0.0989	0.0993	1.00	0.149	pCi/L	10/09/20 07:26	11/21/20 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.4		40 - 110					10/09/20 07:26	11/21/20 15:49	1

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0259	U	0.287	0.287	1.00	0.511	pCi/L	10/09/20 08:02	11/17/20 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.4		40 - 110					10/09/20 08:02	11/17/20 12:47	1
Y Carrier	78.5		40 - 110					10/09/20 08:02	11/17/20 12:47	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.134	U	0.304	0.304	5.00	0.511	pCi/L		11/23/20 15:36	1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-15

Date Collected: 09/29/20 13:05 Date Received: 09/30/20 09:00 Lab Sample ID: 180-111646-2

Matrix: Water

Job ID: 180-111645-2

Method: 9315 - Ra	adium-226 (GFPC)								
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0832	U	0.115	0.115	1.00	0.194	pCi/L	10/09/20 07:26	11/21/20 15:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					10/09/20 07:26	11/21/20 15:53	1

Analyte	Popult	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	l Init	Prepared	Analvzed	Dil Fac
Analyte	Result	Qualifier	(20+/-)	(20+/-)	KL _	MIDC	Unit	Prepared	Analyzeu	DII Fac
Radium-228	0.311	U	0.290	0.292	1.00	0.469	pCi/L	10/09/20 08:02	11/17/20 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					10/09/20 08:02	11/17/20 12:47	1
Y Carrier	84.1		40 - 110					10/09/20 08:02	11/17/20 12:47	1

Method: Ra226_Ra2	28 - Con	bined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.394	U	0.312	0.314	5.00	0.469	pCi/L		11/23/20 15:36	1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-17

Date Collected: 09/29/20 14:55 Date Received: 09/30/20 09:00

Lab Sample ID: 180-111646-3

Matrix: Water

Job ID: 180-111645-2

Method: 9315 - Radium-226 (G	FPC)
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Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.138	U	0.116	0.117	1.00	0.176	pCi/L	10/09/20 07:26	11/21/20 15:53	1
Carrier Ba Carrier	% Yield 85.5	Qualifier	Limits 40 - 110					Prepared 10/09/20 07:26	Analyzed 11/21/20 15:53	Dil Fac

Method: 9320 - F	Radium-228 (GFPC)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0374	U	0.259	0.259	1.00	0.457	pCi/L	10/09/20 08:02	11/17/20 12:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					10/09/20 08:02	11/17/20 12:49	1
Y Carrier	82.6		40 - 110					10/09/20 08:02	11/17/20 12:49	1

Welliou. Nazzo_Naz	.20 - 6011	ibilieu ita	ululli-220 a	ilu Kaululi	1-220					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.175	U	0.284	0.284	5.00	0.457	pCi/L		11/23/20 15:36	1

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Client: Southern Company Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: DUP-01 Lab Sample ID: 180-111646-4

Date Collected: 09/29/20 00:00 Matrix: Water Date Received: 09/30/20 09:00

Method: 9315 - R	Radium-226 (GFPC)								
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.205		0.133	0.134	1.00	0.186	pCi/L	10/09/20 07:26	11/21/20 15:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					10/09/20 07:26	11/21/20 15:54	1

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0195	U	0.234	0.234	1.00	0.418	pCi/L	10/09/20 08:02	11/17/20 12:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					10/09/20 08:02	11/17/20 12:49	1
Y Carrier	84.5		40 - 110					10/09/20 08:02	11/17/20 12:49	1

Method: Ra226_Ra2	28 - Con	bined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.225	U	0.269	0.270	5.00	0.418	pCi/L		11/23/20 15:36	1

4.0

11

Client: Southern Company Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: FB-01 Lab Sample ID: 180-111647-1

. Matrix: Water

Date Collected: 09/29/20 09:45 Date Received: 09/30/20 09:00

adium-226 ((GFPC)								
		Count Uncert.	Total Uncert.						
Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
-0.0230	U	0.0753	0.0754	1.00	0.160	pCi/L	10/09/20 07:26	11/21/20 15:54	1
%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
92.9		40 - 110					10/09/20 07:26	11/21/20 15:54	1
	Result -0.0230 %Yield	Result Qualifier -0.0230 U WYield Qualifier 92.9	Count Uncert.	Count Uncert. Uncert.	Count Total Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. Unc	Count Total Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Count Uncert. U	Count Total Uncert. Uncert. Uncert. Count Uncert. Uncert. Uncert. Uncert. Count Uncert. U	Count Uncert. Uncert. Uncert.	Count Uncert. Uncert. Uncert. Variety V

Method: 9320 - I	Radium-228 ((GFPC)								
Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.341	U	0.275	0.277	1.00	0.437	pCi/L	10/09/20 08:02	11/17/20 12:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/09/20 08:02	11/17/20 12:49	1
Y Carrier	82.2		40 - 110					10/09/20 08:02	11/17/20 12:49	1

Method: Ra226_Ra2	28 - Con	bined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.318	U	0.285	0.287	5.00	0.437	pCi/L	_	11/23/20 15:36	1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWA-12 Lab Sample ID: 180-111647-2

Date Collected: 09/29/20 11:27 Date Received: 09/30/20 09:00

Matrix: Ground Water

Job ID: 180-111645-2

Method: 9315 - Ra	adium-226 (GFPC)								
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.205		0.121	0.122	1.00	0.156	pCi/L	10/09/20 07:26	11/21/20 15:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					10/09/20 07:26	11/21/20 15:54	1

Method: 9320 - F	Radium-228 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.559		0.294	0.298	1.00	0.436	pCi/L	10/09/20 08:02	11/17/20 12:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					10/09/20 08:02	11/17/20 12:49	1
Y Carrier	81.5		40 - 110					10/09/20 08:02	11/17/20 12:49	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.765		0.318	0.322	5.00	0.436	pCi/L		11/23/20 15:36	1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWA-13

Date Collected: 09/29/20 13:30 Date Received: 09/30/20 09:00 Lab Sample ID: 180-111647-3

Matrix: Water

Job ID: 180-111645-2

Method: 9315 - Rad	ium-226 (GFPC)					
		Count	Total			
		Uncert.	Uncert.			
Analyte	Result Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	ı

 Analyte
 Result
 Qualifier
 (2σ+/-)
 (2σ+/-)
 RL
 MDC
 Unit
 Prepared
 Analyzed
 Dil Fac

 Radium-226
 0.0914
 U
 0.122
 0.122
 1.00
 0.204
 pCi/L
 10/09/20 07:26
 11/21/20 15:54
 1

 Carrier
 %Yield Ba Carrier
 Qualifier 40 - 110
 Limits 40 - 110
 Prepared 10/09/20 07:26
 Analyzed 11/21/20 15:54
 Dil Fac 11/21/20 15:54
 1

Method: 9320 - Radium-228 (GFPC)

Count Total
Uncert. Uncert.

Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL**MDC** Unit **Prepared** Analyzed Dil Fac 0.312 U 0.269 0.425 pCi/L 10/09/20 08:02 11/17/20 12:49 Radium-228 0.267 1.00

 Carrier
 %Yield Ba Carrier
 Qualifier 40 - 110
 Limits 10/09/20 08:02
 Prepared 10/09/20 08:02
 Analyzed 11/17/20 12:49
 Dil Fac 11/17/20 12:49
 1

 Y Carrier
 82.2
 40 - 110
 10/09/20 08:02
 11/17/20 12:49
 1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Count Total Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL MDC Unit Prepared Analyzed Dil Fac 0.403 U 0.294 0.295 5.00 0.425 pCi/L 11/23/20 15:36 Combined Radium 226

+ 228

11/23/2020

Client: Southern Company Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: EB-01 Lab Sample ID: 180-111689-1 Date Collected: 09/30/20 09:05

Matrix: Water

Date Received: 10/01/20 09:00

N	lethod: 9315 - Rad	lium-226 ((GFPC)								
				Count Uncert.	Total Uncert.						
Α	nalyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
R	adium-226	0.0216	U	0.0469	0.0470	1.00	0.0862	pCi/L	10/06/20 11:14	10/28/20 12:53	1
С	arrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
В	a Carrier	92.0		40 - 110					10/06/20 11:14	10/28/20 12:53	1

Method: 9320 -	Kaululli-220 (GFPC)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.210	U	0.254	0.255	1.00	0.420	pCi/L	10/06/20 11:57	10/15/20 12:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					10/06/20 11:57	10/15/20 12:56	1
Y Carrier	73.6		40 - 110					10/06/20 11:57	10/15/20 12:56	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.231	U	0.258	0.259	5.00	0.420	pCi/L		11/02/20 19:09	1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARAMW-4

Date Collected: 09/30/20 12:40 Date Received: 10/01/20 09:00 Lab Sample ID: 180-111689-2

Matrix: Water

Job ID: 180-111645-2

Method: 9315 - F	Radium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.146		0.0763	0.0775	1.00	0.0924	pCi/L	10/06/20 11:14	10/28/20 12:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		40 - 110					10/06/20 11:14	10/28/20 12:53	1

Method: 9320 -	·	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.386	U	0.313	0.315	1.00	0.497	pCi/L	10/06/20 11:57	10/15/20 12:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		40 - 110					10/06/20 11:57	10/15/20 12:57	1
Y Carrier	73.3		40 - 110					10/06/20 11:57	10/15/20 12:57	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.532		0.322	0.324	5.00	0.497	pCi/L		11/02/20 19:09	1

12

Client: Southern Company Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARAMW-3

Date Collected: 09/30/20 16:45 Date Received: 10/01/20 09:00 Lab Sample ID: 180-111689-3

Matrix: Water

Method: 9315 - R	Radium-226 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0603	U	0.0669	0.0672	1.00	0.107	pCi/L	10/06/20 11:14	10/28/20 12:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.6		40 - 110					10/06/20 11:14	10/28/20 12:53	1

Method: 9320 -	Kaululli-220 (GFPC)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.479	U	0.394	0.397	1.00	0.628	pCi/L	10/06/20 11:57	10/15/20 12:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.6		40 - 110					10/06/20 11:57	10/15/20 12:57	1
Y Carrier	75.1		40 - 110					10/06/20 11:57	10/15/20 12:57	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.539	U	0.400	0.403	5.00	0.628	pCi/L		11/02/20 19:09	1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-18

Date Collected: 09/30/20 16:15 Date Received: 10/01/20 09:00 Lab Sample ID: 180-111689-4

Matrix: Water

Job ID: 180-111645-2

adium-226 (GFPC)								
	•	Count Uncert.	Total Uncert.						
Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
0.0870	U	0.0661	0.0666	1.00	0.0925	pCi/L	10/06/20 11:14	10/28/20 12:54	1
%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
81.7		40 - 110					10/06/20 11:14	10/28/20 12:54	1
	Result	Result Qualifier 0.0870 U WYield Qualifier 81.7	Count Uncert.	Count Uncert. Uncert.	Count Uncert. Uncert. Uncert. Count Uncert. Uncert. Count Uncert. Cou	Count Total Uncert.	Count Total Uncert. Uncert. Uncert. Uncert. Uncert. O.0870 U O.0661 O.0666 O.0666 O.0925 PCi/L	Count Uncert. Uncert. Uncert. Count Uncer	Count Uncert. Uncert. Uncert. Variety V

Method: 9320 -		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00594	U	0.287	0.287	1.00	0.518	pCi/L	10/06/20 11:57	10/15/20 12:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.7		40 - 110					10/06/20 11:57	10/15/20 12:57	1
Y Carrier	74.8		40 - 110					10/06/20 11:57	10/15/20 12:57	1

Method: Ra226_Ra2	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0811	U	0.295	0.295	5.00	0.518	pCi/L		11/02/20 19:09	1

Client: Southern Company Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-10

Date Collected: 10/01/20 11:00 Date Received: 10/02/20 09:00 Lab Sample ID: 180-111743-1

Matrix: Water

Method: 9315 - F	Radium-226 ((GFPC)								
	·	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.114	U	0.119	0.120	1.00	0.191	pCi/L	10/13/20 08:06	11/04/20 10:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.5		40 - 110					10/13/20 08:06	11/04/20 10:20	1

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0586	U	0.341	0.342	1.00	0.606	pCi/L	10/13/20 08:31	10/30/20 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.5		40 - 110					10/13/20 08:31	10/30/20 11:48	1
Y Carrier	71.8		40 - 110					10/13/20 08:31	10/30/20 11:48	1

Method: Ra226_Ra2	228 - Con	bined Ra	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.172	U	0.361	0.362	5.00	0.606	pCi/L		11/23/20 15:38	1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-9

Date Collected: 10/01/20 14:50 Date Received: 10/02/20 09:00 Lab Sample ID: 180-111743-2

Matrix: Water

Job ID: 180-111645-2

Method: 9315 - F	Radium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0570	U	0.0732	0.0734	1.00	0.122	pCi/L	10/13/20 08:06	11/04/20 10:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					10/13/20 08:06	11/04/20 10:20	1

Method: 9320 - I	Radium-228 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.444	U	0.298	0.301	1.00	0.456	pCi/L	10/13/20 08:31	10/30/20 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					10/13/20 08:31	10/30/20 11:48	1
Y Carrier	72.9		40 - 110					10/13/20 08:31	10/30/20 11:48	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.501		0.307	0.310	5.00	0.456	pCi/L		11/23/20 15:38	1

1

1

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARAMW-6

Date Collected: 10/01/20 14:55 Date Received: 10/02/20 09:00 Lab Sample ID: 180-111743-3

Matrix: Water

Job ID: 180-111645-2

Method: 9315 - Ra	adium-226 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0541	U	0.0684	0.0686	1.00	0.113	pCi/L	10/13/20 08:06	11/04/20 10:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/13/20 08:06	11/04/20 10:23	1

Method: 9320 - F	Radium-228 (GFPC)								
	·	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0427	U	0.255	0.255	1.00	0.464	pCi/L	10/13/20 08:31	10/30/20 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/13/20 08:31	10/30/20 11:48	1
Y Carrier	77.0		40 - 110					10/13/20 08:31	10/30/20 11:48	1

Method: Ra226_Ra2	228 - Con	bined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0114	U	0.264	0.264	5.00	0.464	pCi/L		11/23/20 15:38	1

Client: Southern Company Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Client Sample ID: ARGWC-8 Lab Sample ID: 180-111743-4 Date Collected: 10/01/20 11:00

Matrix: Water

Date Received: 10/02/20 09:00

Method: 9315 - Ra	dium-226 (GFPC)								
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.229		0.107	0.109	1.00	0.114	pCi/L	10/13/20 08:06	11/04/20 10:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.4		40 - 110					10/13/20 08:06	11/04/20 10:23	1

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.283	U	0.333	0.334	1.00	0.549	pCi/L	10/13/20 08:31	10/30/20 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.4		40 - 110					10/13/20 08:31	10/30/20 11:48	1
Y Carrier	75.9		40 - 110					10/13/20 08:31	10/30/20 11:48	1

Method: Ra226_Ra2	28 - Con	bined Ra	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.512	U	0.350	0.351	5.00	0.549	pCi/L		11/23/20 15:38	1

RL

1.00

Total

Uncert.

 $(2\sigma + / -)$

1.49

RL

1.00

Total

Uncert.

 $(2\sigma + / -)$

1.10

MDC Unit

0.112 pCi/L

RL

1.00

MDC Unit

0.158 pCi/L

RL

1.00

MDC Unit

0.118 pCi/L

Job ID: 180-111645-2

Prep Type: Total/NA

Prep Batch: 484743

Prep Type: Total/NA

Prep Batch: 484743

Analyzed

Analyzed

Client Sample ID: Method Blank

10/06/20 11:14 10/28/20 14:42

10/06/20 11:14 10/28/20 14:42

Client Sample ID: Lab Control Sample

%Rec.

Limits

75 - 125

Prepared

Prepared

%Rec

Prepared

Prepared

%Rec

92

96

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-484743/24-A

Analysis Batch: 487030

Analyte

Ba Carrier

Analyte

Matrix: Water

Count Total Uncert. Uncert. $(2\sigma + / -)$ $(2\sigma + / -)$

LCS LCS

Result Qual

14.45

Count

Uncert.

 $(2\sigma + / -)$

0.0848

Limits

Spike

11.3

40 - 110

LCS LCS

Result Qual

10.43

Total

Uncert.

 $(2\sigma + / -)$

0.0849

0.0981

Radium-226 0.1797 0.0967 MB Carrier %Yield

Qualifier Limits 82.2 40 - 110

Spike

Added

15.1

Lab Sample ID: LCS 160-484743/1-A

MB MB

Result Qualifier

Matrix: Water Analysis Batch: 487030

Radium-226 LCS LCS

Carrier %Yield Qualifier Limits Ba Carrier 85.2 40 - 110

Lab Sample ID: MB 160-485173/22-A

Matrix: Water

Analysis Batch: 489921

MB MB Analyte Result Qualifier Radium-226 Ū 0.03423

MR MR Carrier %Yield Qualifier Ba Carrier 94.7

Lab Sample ID: LCS 160-485173/1-A

Matrix: Water

Analysis Batch: 489824

Analyte Added Radium-226

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 74.0 40 - 110

Lab Sample ID: LCSD 160-485173/2-A

Matrix: Water

Analysis Batch: 489824

Spike LCSD LCSD Analyte Added Result Qual Radium-226

 $(2\sigma + / -)$ 11.3 10.04 1.05

Uncert. RL 1.00

Total

MDC Unit 0.182 pCi/L

MDC Unit

0.182 pCi/L

%Rec

%Rec. Limits RER

Limit 75 - 125 0.18

Page 34 of 60

Dil Fac

Dil Fac

10

Client Sample ID: Method Blank Prep Type: Total/NA

Analyzed

Prep Batch: 485173

Dil Fac

10/09/20 07:27 11/21/20 15:55

Dil Fac Analyzed 10/09/20 07:27 11/21/20 15:55

Client Sample ID: Lab Control Sample

Prep Batch: 485173

Prep Type: Total/NA

RER

Count

Uncert.

 $(2\sigma + / -)$

0.0606

LCS LCS

Result Qual

9.598

Count

Uncert.

Spike

Added

11.3

Total

Uncert.

 $(2\sigma + / -)$

0.0606

RL

1.00

Total

Uncert.

 $(2\sigma + / -)$

1.05

MDC Unit

0.116 pCi/L

RL

MDC Unit

0.624 pCi/L

1.00

MDC Unit

0.120 pCi/L

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCSD 160-485173/2-A

Matrix: Water

Analysis Batch: 489824

LCSD LCSD

Carrier **%Yield Qualifier** Limits Ba Carrier 83 1 40 - 110

Lab Sample ID: MB 160-485335/22-A

Analysis Batch: 488215

Matrix: Water

MB MB Result Qualifier

Analyte Radium-226 0.01934 MB MB

Carrier %Yield Qualifier Limits Ba Carrier 89.6 40 - 110

Lab Sample ID: LCS 160-485335/1-A

Matrix: Water

Analyte

Radium-226

Analysis Batch: 488215

LCS LCS Carrier %Yield Qualifier Limits

Ba Carrier 40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-484744/24-A

Matrix: Water

Analysis Batch: 485729

Analyte Result Qualifier $(2\sigma + / -)$ Radium-228 0.1025 U 0.357 MB MB

MB MB

Carrier %Yield Qualifier Limits Ba Carrier 82.2 40 - 110 Y Carrier 79.3 40 - 110

Lab Sample ID: LCS 160-484744/1-A

Matrix: Water

Analysis Batch: 485907

LCS LCS **Spike** Analyte Added Result Qual

Radium-228 10.3 10.33

Uncert. $(2\sigma + / -)$ 1.33

Total

Uncert.

 $(2\sigma + / -)$

0.357

Total

RL

1.00

RL 1.00

MDC Unit 0.594 pCi/L

Prepared

%Rec Limits 100 75 - 125

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Job ID: 180-111645-2

Prep Batch: 485173

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 485335

Prepared Analyzed Dil Fac 10/13/20 08:06 11/04/20 12:24

Prepared Analyzed Dil Fac 10/13/20 08:06 11/04/20 12:24

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 485335

%Rec. %Rec

Limits 85

75 - 125

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 484744

Prepared Analyzed Dil Fac 10/06/20 11:57 10/15/20 12:51

Analyzed Dil Fac 10/06/20 11:57 10/15/20 12:51 10/06/20 11:57 10/15/20 12:51

Client Sample ID: Lab Control Sample

Prep Type: Total/NA **Prep Batch: 484744**

%Rec.

Eurofins TestAmerica, Pittsburgh

10

Job ID: 180-111645-2

Prep Type: Total/NA

Prep Batch: 484744

Prep Type: Total/NA

Prep Batch: 485176

Prep Type: Total/NA **Prep Batch: 485176**

Prep Type: Total/NA **Prep Batch: 485176**

Prep Type: Total/NA

Dil Fac

Dil Fac

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

Analyzed

Analyzed

Prepared

Prepared

Client Sample ID: Lab Control Sample Dup

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-484744/1-A

Matrix: Water

Analysis Batch: 485907

LCS LCS

Carrier	%Yield	Qualifier	Limits
Ba Carrier	85.2		40 - 110
Y Carrier	80.0		40 - 110

Lab Sample ID: MB 160-485176/22-A

Matrix: Water

Analysis Batch: 489416

Count Total MB MB Uncert. Uncert.

Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$

Radium-228 -0.2566 U 0.204 0.205 1.00 0.414 pCi/L 10/09/20 08:02 11/17/20 12:49 MB MB

RL

MDC Unit

Carrier %Yield Qualifier Limits Ba Carrier 94.7 40 - 110

10/09/20 08:02 11/17/20 12:49 10/09/20 08:02 11/17/20 12:49 Y Carrier 81.9 40 - 110 **Client Sample ID: Lab Control Sample**

Lab Sample ID: LCS 160-485176/1-A

Matrix: Water

Analysis Batch: 489473

Total LCS LCS %Rec. Spike Uncert. Analyte Added $(2\sigma + / -)$ RL %Rec Limits Result Qual MDC Unit Radium-228 7.65 7.199 0.976 1.00 75 - 125 0.568 pCi/L 94

LCS LCS

Carrier	%Yield	Qualifier	Limits
Ba Carrier	74.0		40 - 110
Y Carrier	81.9		40 - 110

Lab Sample ID: LCSD 160-485176/2-A

Matrix: Water

Analysis Batch: 489473 Total

Spike LCSD LCSD Uncert. %Rec. **RER** Analyte Added Result Qual $(2\sigma + / -)$ RL MDC Unit %Rec Limits RER Limit Radium-228 7.65 7.109 0.946 1.00 0.518 pCi/L 0.05

LCSD LCSD %Yield Qualifier Carrier Limits Ba Carrier 83.1 40 - 110 78.1 Y Carrier 40 - 110

Lab Sample ID: MB 160-485338/22-A

Matrix: Water

Analysis Batch: 487365

Prep Batch: 485338 Count Total мв мв Uncert. Uncert. Result Qualifier Analyte $(2\sigma + / -)$ $(2\sigma + / -)$ RI **MDC** Unit Prepared Analyzed Dil Fac 0.271 0.272 10/13/20 08:31 10/30/20 11:50 Radium-228 0.1071 U 1.00 0.469 pCi/L

Eurofins TestAmerica, Pittsburgh

Client Sample ID: Method Blank

QC Sample Results

Client: Southern Company Job ID: 180-111645-2

Project/Site: CCR - Plant Arkwright AP-3

Lab Sample ID: MB 160-485338/22-A

Method: 9320 - Radium-228 (GFPC) (Continued)

Matrix: Water

Analysis Batch: 487365

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 485338

MB MB **%Yield Qualifier** Dil Fac Carrier Limits Prepared Analyzed Ba Carrier 89.6 40 - 110 10/13/20 08:31 10/30/20 11:50 Y Carrier 78.5 40 - 110 10/13/20 08:31 10/30/20 11:50

Lab Sample ID: LCS 160-485338/1-A **Client Sample ID: Lab Control Sample**

Matrix: Water

Analysis Batch: 487365

Prep Type: Total/NA

Prep Batch: 485338

Total **Spike** LCS LCS Uncert. %Rec. **Analyte** Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits 75 - 125 Radium-228 8.484 1.07 1.00 0.497 pCi/L 7.69 110

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 84.6 40 - 110 40 - 110 Y Carrier 77.8

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10

QC Association Summary

Client: Southern Company

Project/Site: CCR - Plant Arkwright AP-3

Prep Batch: 484743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111689-1	EB-01	Total/NA	Water	PrecSep-21	
180-111689-2	ARAMW-4	Total/NA	Water	PrecSep-21	
180-111689-3	ARAMW-3	Total/NA	Water	PrecSep-21	
180-111689-4	ARGWC-18	Total/NA	Water	PrecSep-21	
MB 160-484743/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-484743/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 484744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111689-1	EB-01	Total/NA	Water	PrecSep_0	
180-111689-2	ARAMW-4	Total/NA	Water	PrecSep_0	
180-111689-3	ARAMW-3	Total/NA	Water	PrecSep_0	
180-111689-4	ARGWC-18	Total/NA	Water	PrecSep_0	
MB 160-484744/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-484744/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 485173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111645-1	ARGWA-5	Total/NA	Water	PrecSep-21	
180-111645-2	ARGWA-3	Total/NA	Water	PrecSep-21	
180-111645-3	ARGWC-7	Total/NA	Water	PrecSep-21	
180-111645-4	ARGWC-16	Total/NA	Water	PrecSep-21	
180-111646-1	ARGWA-14	Total/NA	Water	PrecSep-21	
180-111646-2	ARGWC-15	Total/NA	Water	PrecSep-21	
180-111646-3	ARGWC-17	Total/NA	Water	PrecSep-21	
180-111646-4	DUP-01	Total/NA	Water	PrecSep-21	
180-111647-1	FB-01	Total/NA	Water	PrecSep-21	
180-111647-2	ARGWA-12	Total/NA	Ground Water	PrecSep-21	
180-111647-3	ARGWA-13	Total/NA	Water	PrecSep-21	
MB 160-485173/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-485173/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-485173/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 485176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111645-1	ARGWA-5	Total/NA	Water	PrecSep_0	
180-111645-2	ARGWA-3	Total/NA	Water	PrecSep_0	
180-111645-3	ARGWC-7	Total/NA	Water	PrecSep_0	
180-111645-4	ARGWC-16	Total/NA	Water	PrecSep_0	
180-111646-1	ARGWA-14	Total/NA	Water	PrecSep_0	
180-111646-2	ARGWC-15	Total/NA	Water	PrecSep_0	
180-111646-3	ARGWC-17	Total/NA	Water	PrecSep_0	
180-111646-4	DUP-01	Total/NA	Water	PrecSep_0	
180-111647-1	FB-01	Total/NA	Water	PrecSep_0	
180-111647-2	ARGWA-12	Total/NA	Ground Water	PrecSep_0	
180-111647-3	ARGWA-13	Total/NA	Water	PrecSep_0	
MB 160-485176/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-485176/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-485176/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep 0	

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Page 38 of 60

Job ID: 180-111645-2

QC Association Summary

Client: Southern Company Project/Site: CCR - Plant Arkwright AP-3

Job ID: 180-111645-2

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Prep Batch: 485335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111743-1	ARGWC-10	Total/NA	Water	PrecSep-21	
180-111743-2	ARGWC-9	Total/NA	Water	PrecSep-21	
180-111743-3	ARAMW-6	Total/NA	Water	PrecSep-21	
180-111743-4	ARGWC-8	Total/NA	Water	PrecSep-21	
MB 160-485335/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-485335/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 485338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-111743-1	ARGWC-10	Total/NA	Water	PrecSep_0	-
180-111743-2	ARGWC-9	Total/NA	Water	PrecSep_0	
180-111743-3	ARAMW-6	Total/NA	Water	PrecSep_0	
180-111743-4	ARGWC-8	Total/NA	Water	PrecSep_0	
MB 160-485338/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-485338/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Chain of Custody Record 244- ATLANTA Curofins

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Phone: 412-963-7058 Fax: 412-963-2468

S - HZSO4
T - TSP Dodecatydrate
U - Acetone
V - MCAA
W - DH 4-45
Z - other (specify) Special Instructions/Note: N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 Months Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab . Archive For Month 0H=5.50 DH=6.00 DH=5.92 DH=6.03 180-64149-11995.1 G - Amchior H - Ascarbic Acid A - HCL B - NaOH C - Zn Acetake D - Nitric Acid E - NaHSO4 F - MeOH Page 1 of 3 I - Ice J - DI Water K-EDTA 180-111645 Chain of Custody Total Number of containers Method of Shipment Water Analysis Requested ooler Temperature(s) °C and Other Remarks Special Instructions/QC Requirements: my XXXXXX XXXXX XXXX 7470A - Mercury 9320_Ra228 - Radium 228 E-Mail Shali Brown@Eurofinset.com Received by: Ag perved DHoward, EGuillen, AShard Haronn, Shall me BT-Tissue, A-Air Company Company Preservation Code: Matrix 3 ≥ 3 3 Type (C=comp, G=grab) Radiological Sample 0 0 0 0 1745 Due Date Requested: | STG. A.C. O.C. of TAT Requested (days): 9/29/201050 1225 1540 Sample 14/5 Unknown 9/29/20/ PO#: GPC11064570 Sample Date Project #: 18020201 Poison B Skin Irritant Possible Hazard Identification

Non-Hazard — Flammable Skin Irrit
Deliverable Requested: I, III, IV, Other (specify) Custody Seal No. ARGWA-3 241 Ralph McGill Blvd SE B10185 ARGWC-16 ARGWC-7 ARGWA-S /Abraham@southernco.com Empty Kit Relinquished by: Custody Seals Intact: Client Information Sample Identification CCR - Plant Ankwright A Yes A No Southern Company Rehoquished by Joju Abraham inquished by: State, Zip: GA, 30308 Georgia Atlanta

Eurofins TestAmerica, Pittsburgn 301 Alpha Drive RIDC Park Pittsburgh, PA 15236 Phone: 412-963-7058 Fax: 412-963-2468	Chain of Custody Record	stody Reco		244- ATLANTA FREEZE	nent Testing
Client Information	D'Howard, EGwillen, Ashralita	Lab PM Brown, Shal	Lab PM. Garrier Tracking No(s)	g No(s): COC No: 180-64149-11995.1	
Client Contact. Joju Abraham	Phone:	E-Mail: Shali.Brown	@Eurofinset.com	Page: Page 1 of 3	
Company Southern Company			Analysis Requested	Job #:	
Address: 241 Ralph McGill Blvd SE B10185	Due Date Requested:			000	
Orly Atlanta	TAT Requested (days):				
State, Zp. GA, 303D8			_	00	s co
Prone.	PO#: GPC11054570	(0	yng əp	G - Amchler S - H2SO4 H - Ascorbic Acid T - TSP Dodes	03 decahydrate
Email: JAbraham@southernco.com	WO#:		Fluori	I - Ice J - Di Water	9
Project Name: CCR - Plant Arkwright	Project #. 18020201		Aviii qq abinoli vlossi	L-EDA	(Appedi)
Site Georgia	SSOWE		15 (A) 10 - Ch Total D	of cor	
	Sample		120P - Mercuri 120 Ra228 - R 120B - Custom 120B - Custom	19dmuM lesc	
Sample Identification	Sample Date Time G=grab)	ation Code:	2 30 2 30 2 30 2 90 2 90	Special Instructions/Note:	s/Note:
ARGWALIY	9/29/2 01035 G	3	×	08 9=H°	
ARGWOLIK	1305	3	X	-71	
PHACA RG WC-17	120	3	XXXXX	0H=5,75	
DUP-01	> 1	3	XXXXXX	PH=5,75	
				-	
				180-111646 Chain of Custody	1 1
Possible Hazard Identification		Sar	mole Disposal (A fee may be assessed if s	amples are retained longer than 1 month!	
Non-Hazard Flammable Skin Imitant	Poisan B Unknown Rediological		Return To Client Disposal By L	Return To Client Spisposal By Lab Archive For Months	
ssted: I, II, III, IV, Ot			Special Instructions/QC Requirements:		
Empty Kit Relinquished by:	Date:	Time:	Method o	Method of Shipment.	
Bellowing to Howard	9/29/20 /1745	Wood	Received of Mally with	Date-Time 502 O Company	TOP
	Date III.e.	Company	Received by	808	
	Date/Time:	Company	Received by:	Date/Time. / Company	
Custody Seals Intact: Custody Seal No.:			Cooler Temperature(s) ^o C and Other Remarks:		
				Ver. 01/16/2019	6/2019

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15236 Phone: 412-963-7058 Fax: 412-963-2468	Chai	n of Cus	Chain of Custody Record	cord	244-	4- ATI	FIAC	eurofins .	Environment Testing America
Client Information	DHOWARD		Lab PM: Brown, Shali	Shali		Earler lac	HINM	00C No: 80-64149-11995.1	1
Client Contact. Joju Abraham	Phone:		E-Mail. Shail.E	E-Mai: Shaii. Brown@Eurofinset.com	ofinset.com			Page 1 of 3	
Company. Southern Company					. An	Analysis Requested		Job #:	
Address: 241 Raioh McGill Blvd SE B10185								8	2
City Atlanta	TAT Requested (days):								A - Hexane
State Alpha (SA) 30308								D - Ntric Acid	P - Na204S Q - Na2503
Phone:	PO#: GPC11064570			727	de Sulf			70	7 - Na2S203 1 - H2SO4 - TSP Dodecahydrate
Email: JAbraham@southernco.com	WO#.			(on	Fluori				- Acetone - MCAA
Project Name: CCR - Plant Arkwright	Project #. 18020201		2/ 0	556 68 OL	ppioli	228			v - pH 4-5 other (specify)
Site: Georgia	SSGW#.		Junes	wnipe	40 - GE	_		Other:	
			Matrix (wwater, Swoold, Orwasteloll,	MiSM mohe 8 - 82589 - 816	MOCCENCE - CONSTRUCT	A - 855s.A_051	nal Number		
Sample Identification	Sample Date Time		ation Code:	76 C	DE Z	0	21	Special Inst	Special Instructions/Note:
FR-01	7/29/20 0945	J. C.	3	×	×				
ARG-12		_	3	1	×	1		OH= K. K.K	
ARGWA-13	V 133	0	3		X			25.7-HO	100
		+			+				
		+	I		+				
						-	180-111647	847 Chain of Custody	ody
ant	Poison B Unknown	Radiological	,,	Sample D	Neturn To Client	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client Disposal By Lab Archive For Mont	samples are retaine	etained longer than 1 n Archive For	Months
Other (specify)				Special In	structions/Q(Requirem			
Empty Kit Relinquished by:	. Date:		_	Time:		Method	Method of Shipment		1
Account towns of	9/29/20 / 1	745	Was d	Received by	Mr. M	MMWake		-20	COMPANY THE
Refinquished by:	DăterTimé		Company	Received by	ed by:		Data/fune:	9:00	Sombany 1
	Date/Time		Company	Received by	J/q pe		Date/Time:	7	Company
Custody Seals Infact: Custody Seal No.:				Cooler	Temperature(s)	Cooler Temperature(s) °C and Other Remarks:			
				1					Ver. 01/16/2019

Securofins Environment Testing America		Vage of	Codes	D · Mthre Acid P · Na2O45 E · NaHSO4 O · Na2SO3 F · MeOH R · Na2S2O3 G · Amethor S · H2SO4	H - Ascorbic Acid I - Ice J - DI Water	K-EDTA L-EDA	of col	PedmiN Mumber		2	30H=5,84	HO	1	* Lab will Filter	sample	amples are retained longer than 1 month) abArchive For Months	Aniconomy	Shipment: Date/Time: Jos.	_	Date/Time: 7 (/// Company	
Chain of Custody Record 244- ATLAN	Lab PM: Carrier Tracking No(s) Brown, Shali E-Mail CE-Mail	Analysis Requested		illver)	(oV) Pluoride Pluoride Pluoride Pluoride	ass or land and a second and a second a	total D total D total D total D total D	Field Filtered Perform MS/M 1020B - Custom 1020B -	ON N O OXX	XXXX	× × × × ×	××××××××××××××××××××××××××××××××××××××	× × × × × × × × × × × × × × × × × × ×		180-111689 Chain of Custoric	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client Disposal By Lab Archive For Month Special Identification C Beautingsons	does in souccours & C. Nedoling in S.	Received by 7.1.1.	Received by	Received by:	Cooler Temperature(s) ^a C and Other Remarks.
Chain of Custody	ESwillen, AShared, to Br	0	Due Date Requested: STandar of TAT Requested (days):	in Od	GFC 1064970	Project #: 18020201	SSOW#:	Sample (G=Comp.	X	9/30/20 0905 G W	0	9	V 1615 G W			Poison B Unknown Rediclogical	Date	Time: /	9/30/20/ 1815 Company	Date/Time	
Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468	Client Information Dient Contact Client Absoluted	Joju Autanami Southern Company	Address. 241 Raiph McGill Blvd SE B10185 Ciry. Atlanta	State, Zip. GA, 30208 Phone.	Email JAbraham@southernco.com	Project Name. CCR - Plant Arkwright	Site. Georgia	Sample Identification		E8-01	-	a	3			Possible Hazard Identification Non-Hazard Fiammable Skin Irritant Palmarable Remineded: II III N Other (specify)	Forest Kit Delinesished by	Employ vot veriniquismed by:	Reinquished by	Relinquished by:	Custody Seals Infact: Custody Seal No.:

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh PA 15238 Phone, 412-963-7058 Fax 412-963-2468	Chain of	Chain of Custody Record		244- ATLAN	ANTA	DS Environment Testing America
Client Information	EG: Non ASh.	A Share 1.+ S Brown, Shall		Carrier Trackir	-	11995.2
Clent Contact Joju Abraham			E-Mail: Shall:Brown@Eurofinset.com		Page:	
Company Southern Company			An	Analysis Requested	Job #:	
Address. 241 Raiph McGill Blvd SE B10185	Due Date Requested:				Preservation Codes	ő
City.	TAT Requested (days):				A - HCL B - NaOH	
State, Zip. GA, 30308					D - Nitric Acid E - NaHSO4	P - Na204S Q - Na2SO3
Phone:	PO #: GPC11064570		Silver		F - MeOH G - Amchlor H - According	5
Email JAbraham@southernco.com	WO#:	1	(oV) + Viqq		2000 754 40	3
Project Name: CCR - Plant Arkwright	Project #. 18020201	1	azz pp IIIVA	528	redTA L-EDA	W - pH 4-5 Z - other (specify)
She: Georgia	SSOW#:	dwes	SD (Y		of con	
	Sample	Sample Matrix Educater, Type Sevelet, CEcomp, Orwanelot, et al.	edorm MS/M 15_Razze - R 20B - Custom 15_Razze - R	Я - 855sЯ_05: pubneM - A07:	sedmuM lese	
Sample Identification	Sample Date Time G=	Gagrab) ST-Those A-42-) III Preservation Code:	x 50 x 30 c e0	16		Special Instructions/Note:
ARGWG-10	101.120 1100	3	×××		S.H.S	583
ARGING-9	1458		×	×	H.	1
ARAMW-6		2	× × ×	××	HO	1. 0
ARGWC-8	0011	S	×××	××	3 0 H=	6.44
					180-111743 Chain of Custody	φ
Doesikla Hanned Idaniffantion						
ant	Poison B Unknown Radiological	logica/	Return To Client	X Disposal By L	Sample Disposal (A fee may be assessed it samples are retained longer than 1 month) Return To Client .	an 1 month) Months
Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requirements	Requirements:		
Empty Kit Relinquished by:	Date:	T	ime:	Method	Method of Shipment:	×
Relinquished to the Comment	10)1/20/182	O Wood	Received by		Date/Time 12 Gas	Company Company
Syd Barragus Syd	Date/Time:	Company	Received by:		Date/Time:	Company
- 1	DateTime:	Сатралу	Received by:		Date/Time:	Company
Custody Seals Infact: Custody Seal No.:			Cooler Temperature(s)	Cooler Temperature(s) *C and Other Remarks:		
						Ver: 01/16/2019

Do Not Lift Using This Tag

ORIGIN ID:MCNA (770) 421-3382 DANIEL HOWARD AMEC (WOOD E+IS) 1075 BIG SHANTY RD NW STE 100

SHIP DATE: 29SEP20 ACTWGT: 59.45 LB CAD: 6994493/SSFE212 DIMS: 24x13x14 IN BILL THIRD PARTY

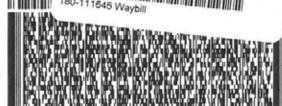
KENNESAW, GA 30144 UNITED STATES US

SAMPLE RECEIVING EUROFINS TEST AMERICA

301 ALPHA DR

RIDC PITT





FedEx

TRK# 8121 9394 4889

WED - 30 SEP 10:30A PRIORITY OVERNIGHT DSR 15238

NA AGCA

PA-US

Uncorrected temp Thermometer ID

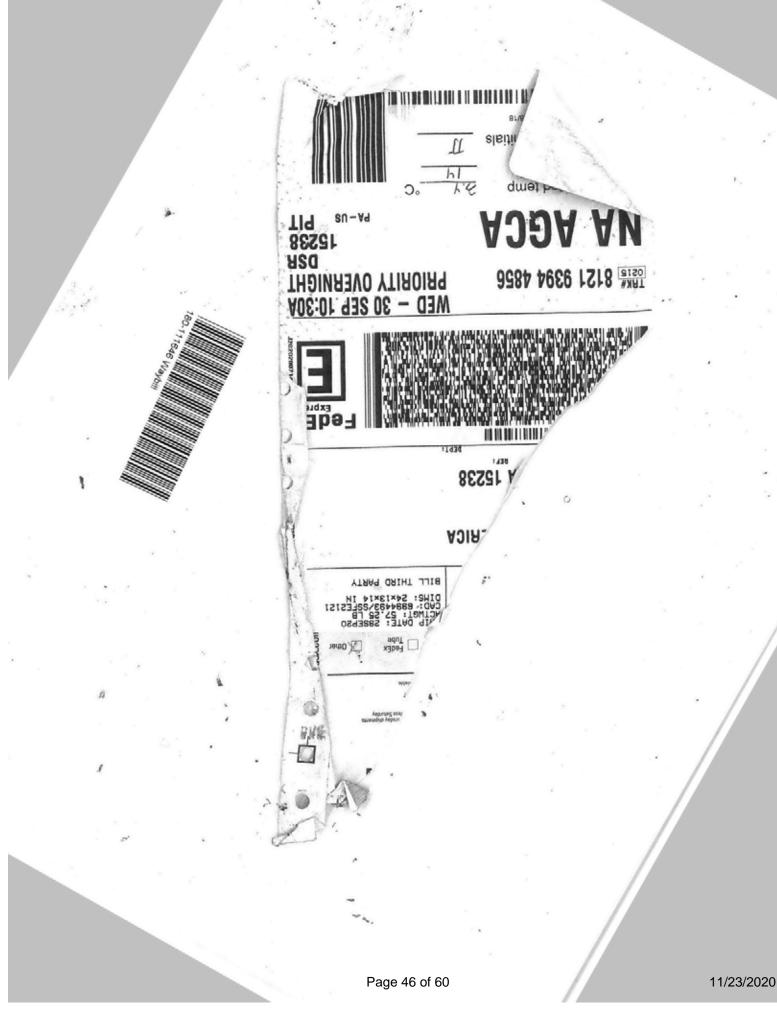
CF____O

als II



R197

1 10:30 A 4889 09:30



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Page 47 of 60









0215

Express Package Service

Mext Bus

DANIEC HOWARD ionity Overnight

AMEC (MOOD E+IS) 1075 BIG SHANTY RD NW STE 100 KENNESAM, GA 30144 UNITED STATES US

SHIP DATE: 010CT20 ACTMGT: 57.30 LB CAD: 6984493/SSFE2121 DIMS: 24x13x14 IN

FedEx Express Saver

FedEx 20 av

FedEx ZDay A.M.

BILL THIRD PARTY ...

EUROFINS TEST AMERICA SAMPLE RECEIVING 301 ALPHA DR

PITTSBURGH PA 15238

RIDC PARK

11630

PRIORITY OVERNIGHT FRI - 02.0CT 10:30A

200 Uncorrected temp NA AGCA Thermometer ID

PK-US . PI

Initials pT-WI-SR-001 effective 11/8/18 CF

180-111743 Waybill

Eurofins TestAmerica, Pittsburgh

Client Information (Sub Contract Lab)				Brown	Brown, Shali						180-413466.1	1.99	
Clent Contact Shipping/Receiving	Phone:			Shall	Brown@	Eurofin	E-Mail. Shall, Brown@Eurofinset.com		State of Origin. Georgia	in.	Page Page 1 of 1	4	
Company: TestAmerica Laboratories, Inc.					Accreditation	ons Regu	Accreditations Required (See note)	ote):			Job #	2 4	
Address: 13715 Rider Trail North,	Due Date Requested: 11/2/2020	:pa					Ā	Analysis Requested	quested		Preservation Codes:	Po	
Oty. Earth City	TAT Requested (days):	sys):			Yeb						A - HCL 8 - NaOH		M - Hexane N - None
State, Zp: MO, 63045					C) - S1	A0 30	pue 9				D - Nitric Acid E - NaHSO4		Na204S Na2503
Phone. 314-298-8566(Tel) 314-298-8757(Fax)	PO #:						zz-wn				G - America		R - Na25203 S - H2504
Email	WO#				(0)	822 m	ibesi b						Acetone MCAA
Project Name: CCR - Plant Arkwright	Project # 18020201				N NO SE	nibeA (eujqui				_		W - pH 4-5 Z - other (specify)
Site: Arkwright	SSOW#				A) as	c2eb (DO /Od:				oo too		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample	Sample Type (C=comp, G=grab)	Matrix (Wester, Screek, Ownstrink,	Field Filtered S MSM mobe9 en985548_2156	9350 ⁻ В#558/Бле деся λ	Ra22eRa228_GF Radium-228				Total Number	cial Instru	Special Instructions/Note:
	\ \	X		100	X								
ARGWA-5 (180-111645-1)	9/29/20	10:50 Factorn		Water		×	×				-		
ARGWA-3 (180-111645-2)	9/29/20	12:25 Eastern		Water		×	×				-		
ARGWC-7 (180-111645-3)	9/29/20	14:15 Eastern		Water	_	×	×				-		
ARGWC-16 (180-111645-4)	9/29/20	15:40 Eastern		Water	0	×	×				-		
Note: Since blocatory accreditations are subject to change, Eurofins TestAmerica places the beneathin of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain of custody, if the laboratory does not current. The standard accreditations will be provided, Any changes to accreditation status should be brought to Eurofins TestAmerica. TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.	erica places the ownershittix being analyzed, the sit to date, return the signer	p of method, a amples must be 3 Chain of Cust	tabyte & accredit shipped back to ody attesting to	ation compliand the Eurofins T said complicant	estAmeric estAmeric e to Eurof	t subcont a laborati ins TestA	pract laborations or other oth	ones. This sam instructions will	ple shipment is be provided. A	forwarded unde	hip of mathod, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not custose samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins ed Chain of Custody attesting to said complicance to Eurofins TestAmerica.	e laboratory o	does not currently to Eurofins
Possible Hazard Identification					Samp	le Disp	A) Jeson	fee may be	assessed if	samples an	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	han 1 mor	(qu
Unconfirmed Deliverable Reminested: 1 III IV Other (energie)	Driman Deliner	Phile Dank				Return	Return To Client		Disposal By Lab	Lab Lab	Archive For		Months
Deliveración Neguesteur II, III, IV. Onital (specify)	Filmary Deliverable Kank, 2	BOIL KARNK, A			Speck	al instru	chons/U	special instructions/QC Requirements	ints.				
Empty Kit Relinquished by:		Date:			Time:				Method	Method of Shipment.			
Reinquiring by: Matthe Lock	16/1/20	0021	54	ETH P.H		Received by		Fed 87		Date/Time:		00	Company
Reinsquistred by: () Fed Ex	Date/Time:		U	Company	Z.	Received by	44	BA	1	12/91	:60 02	5 22	Company STA STL
	Date/Time:		O	Company	R	Received by	6	0		Date/Time:		80	Kuedu
Custody Seals Intact: Custody Seal No.:					S	oler Tem	perature(s)	Cooler Temperature(s) "C and Other Remarks	emarks:				
					1	l						Var	0100001110

Client: Southern Company

Job Number: 180-111645-2

Login Number: 111645 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company

Job Number: 180-111645-2

Login Number: 111645

List Number: 2

Creator: Boyd, Jacob C

List Source: Eurofins TestAmerica, St. Louis

List Creation: 10/03/20 12:56 PM

Creator. Boya, Jacob C		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company Job Number: 180-111645-2

Login Number: 111646 List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Answer	Comment
N/A	
True	
True	
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	N/A True True True True True True True True

Client: Southern Company Job Number: 180-111645-2

Login Number: 111646

List Source: Eurofins TestAmerica, St. Louis List Number: 2

List Creation: 10/03/20 12:56 PM

Creator: Boyd, Jacob C

Creator. Boyu, Jacob C		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company

Job Number: 180-111645-2

Login Number: 111647

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company Job Number: 180-111645-2

Login Number: 111647

List Source: Eurofins TestAmerica, St. Louis List Number: 2

List Creation: 10/03/20 12:56 PM

Creator: Boyd, Jacob C

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company

Job Number: 180-111645-2

Login Number: 111689

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Answer	Comment
N/A	
True	
True	
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	N/A True True True True True True True Tru

Client: Southern Company Job Number: 180-111645-2

Login Number: 111689

List Source: Eurofins TestAmerica, St. Louis

List Number: 2

List Creation: 10/03/20 06:58 PM

Creator: Boyd, Jacob C

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company

Job Number: 180-111645-2

Login Number: 111743

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

oreator. Say, momas o		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Southern Company Job Number: 180-111645-2

Login Number: 111743

List Source: Eurofins TestAmerica, St. Louis

List Creation: 10/08/20 06:57 PM

List Number: 2 Creator: Korrinhizer, Micha L

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Date: 2020-09-29 12:24:12

Project Information: Pump Information:

Operator Name Ever Guillen Pump Model/Type QED dedicated Company Name WOOD **Tubing Type HDPE** Project Name Plant Arkwright CCR Tubing Diameter 0.17 in Tubing Length Site Name ARGWA-3 40.5

ft Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 613229

Turbidity Make/Model HACH 2100Q Pump placement from TOC 35.5 ft

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWA-3 Well diameter Total System Volume 0.6607687 L 2 in Calculated Sample Rate Well Total Depth 40.50 ft 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water 9 L 34.63 ft **Total Volume Pumped**

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cm Turb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization	1		+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:01:46	1500.03	19.16	6.04	88.19	12.20	34.92	6.57	72.65
Last 5	12:06:46	1800.02	19.22	6.03	88.00	9.02	34.92	6.59	73.00
Last 5	12:11:46	2100.02	19.15	6.04	87.72	7.64	34.92	6.59	73.63
Last 5	12:16:46	2400.02	19.18	6.01	87.53	5.47	34.92	6.57	74.26
Last 5	12:21:46	2700.02	19.24	6.02	87.41	3.91	34.92	6.57	74.02
Variance 0			-0.08	0.00	-0.27			-0.00	0.63
Variance 1			0.03	-0.03	-0.19			-0.02	0.63
Variance 2			0.06	0.01	-0.12			0.00	-0.24

Notes

Sampled at Sampled at 1225

Date: 2020-09-29 10:49:01

Project Information: Pump Information:

QED dedicated **Operator Name** Ever Guillen Pump Model/Type Company Name WOOD **Tubing Type** HDPE Project Name Plant Arkwright CCR Tubing Diameter 0.17 in Tubing Length Site Name ARGWA-5 30.0 ft

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 613229

Turbidity Make/Model HACH 2100Q Pump placement from TOC 25.0 ft

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWA-5 Well diameter Total System Volume 0.6139027 L 2 in Calculated Sample Rate Well Total Depth 30.0 ft 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water **Total Volume Pumped** 8 L 22.93 ft

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:25:53	1200.03	18.70	6.01	0.09	1.49	23.11	6.27	92.33
Last 5	10:30:53	1500.03	18.71	6.01	0.09	1.08	23.11	6.14	86.79
Last 5	10:35:53	1800.02	18.73	6.01	0.09	1.44	23.11	6.04	83.12
Last 5	10:40:53	2100.02	18.73	6.01	0.09	0.85	23.11	6.02	80.59
Last 5	10:45:53	2400.02	18.70	6.00	0.09	0.58	23.11	6.01	80.35
Variance 0			0.02	0.00	0.00			-0.09	-3.67
Variance 1			-0.00	-0.01	-0.00			-0.03	-2.53
Variance 2			-0.02	-0.01	-0.00			-0.00	-0.24

Notes

Sampled at 1050

Date: 2020-09-29 11:28:58

Project Information:

Operator Name

Company Name

Daniel Howard Wood E&IS

Project Name Plant Arkwright CCR AP3 ARGWA-12

Site Name 0° 0' 0" Latitude 0° 0' 0" Longitude Sonde SN 541714

Turbidity Make/Model Hach 2100Q Pump Information:

Pump Model/Type QED Micropurge dedicated **Tubing Type** HDPE

Tubing Diameter .25 in Tubing Length 35.2 ft

Pump placement from TOC

29.2 ft

Well Information:

Well ID ARGWA-12 Well diameter 2 in Well Total Depth 35.2 ft Screen Length 12 ft Depth to Water 15.11 ft

Pumping Information:

Final Pumping Rate 200 mL/min Total System Volume 0.8197761 L Calculated Sample Rate 300 sec Stabilization Drawdown 0.03 in **Total Volume Pumped** 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:05:39	600.02	19.65	5.89	194.55	7.59	15.62	3.41	83.79
Last 5	11:10:39	900.01	19.66	5.89	194.15	5.71	15.63	3.23	84.96
Last 5	11:15:39	1200.01	19.65	5.89	194.12	4.64	15.63	3.11	86.53
Last 5	11:20:39	1500.01	19.66	5.88	193.63	4.43	15.65	3.03	88.49
Last 5	11:25:39	1800.01	19.61	5.88	193.81	3.38	15.65	3.00	90.34
Variance 0			-0.00	0.00	-0.03			-0.11	1.57
Variance 1			0.01	-0.01	-0.49			-0.08	1.96
Variance 2			-0.05	-0.00	0.18			-0.04	1.85

Notes

ARGWA-12 sample time 1127

Date: 2020-09-29 13:33:43

Project Information:

Operator Name

Daniel Howard Wood E&IS

Pump Model/Type Tubing Type QED Micropurge dedicated

Company Name Project Name Site Name Latitude

Plant Arkwright CCR AP3 ARGWA-13 Tubing Type
Tubing Diameter
Tubing Length

Pump Information:

HDPE .25 in 43.3 ft

Langitude
Sonde SN

0° 0' 0" 0° 0' 0" 541714

541/14 Hach 2100Q

Pump placement from TOC

38.3 ft

Well Information:

Turbidity Make/Model

Well ID
Well diameter
Well Total Depth
Screen Length
Depth to Water

ARGWA-13 2 in 43.31 ft 10 ft 23.54 ft Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.8979633 L
Calculated Sample Rate 300 sec
Stabilization Drawdown
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:07:20	900.02	18.14	5.76	1188.42	1.53	23.86	1.35	112.76
Last 5	13:12:20	1200.01	18.14	5.76	1195.32	0.74	23.86	1.19	114.72
Last 5	13:17:20	1500.01	18.12	5.76	1196.76	0.44	23.87	1.08	116.10
Last 5	13:22:20	1800.01	18.10	5.76	1193.95	0.30	23.87	1.05	117.86
Last 5	13:27:20	2100.01	18.10	5.75	1188.34	0.24	23.88	1.05	119.50
Variance 0			-0.02	0.00	1.44			-0.11	1.38
Variance 1			-0.03	-0.00	-2.81			-0.03	1.76
Variance 2			-0.00	-0.00	-5.61			-0.00	1.64

Notes

ARGWA-13 sample time 1300

Date: 2020-09-29 10:47:19

Project Information: Operator Name Company Name Project Name Site Name Latitude Longitude Sonde SN	Andreas Shoredits Wood E&IS Plant Arkwright ARGWA-14 0° 0' 0" 0° 0' 0" 642533	Pump Information: Pump Model/Type Tubing Type Tubing Diameter Tubing Length	QED dedicated HDPE 0.17 in 68 ft
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	53.45 ft
Well Information: Well ID Well diameter Well Total Depth Screen Length Depth to Water	ARGWA-14 2.00 in 58.45 ft 10 ft 42.07 ft	Pumping Information: Final Pumping Rate Total System Volume Calculated Sample Rate Stabilization Drawdown Total Volume Pumped	80 mL/min 0.7835128 L 300 sec 58.8 in 4 L

-0.01

-0.03

Low-Flow Sa	ımpling Stabiliz	zation Summary	/						
	Time	Elapsed	Temp C	рН	SpCond μS	/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:14:52	1800.00	19.76	6.88	255.40	0.95	46.21	6.54	46.20
Last 5	10:19:52	2100.00	19.78	6.84	242.42	0.74	46.72	6.30	46.38
Last 5	10:24:52	2399.99	19.77	6.82	232.46	0.88	47.32	6.06	46.30
Last 5	10:29:52	2699.98	19.76	6.81	224.74	0.82	47.75	5.89	46.17
Last 5	10:34:52	2999.98	19.73	6.80	218.85	0.85	48.31	5.76	46.00
Variance 0			-0.00	-0.02	-9.96			-0.24	-0.07
Variance 1			-0.01	-0.01	-7.72			-0.17	-0.13

Notes

Variance 2

Start purging well @ 09:46, stop @ 10:34; Initial purge rate of 100 ml/min reduced to 80-85 ml/min @ 09:50; Significant drawdown could not be avoided and purge rate was lowered to only slightly below 100 ml/min; Collect sample @ 10:35; pH during sample collection is 6.80; Weather is cloudy with light rain 72 degrees F

-5.90

-0.13

-0.17

Grab Samples ARGWA-14 Groundwater sample



Date: 2020-09-29 14:10:10

Project Information: Pump Information:

Operator Name Pump Model/Type Ever Guillen QED dedicated Company Name WOOD **Tubing Type** HDPE Project Name Plant Arkwright CCR Tubing Diameter 0.17 in ARGWC-7 Tubing Length Site Name 50.20 ft

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 613229

Turbidity Make/Model HACH 2100Q Pump placement from TOC 45.20 ft

Tailbuilty Make/Model 11/1/611 2100 4

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWC-7 Well diameter Total System Volume 0.7040638 L 2 in Calculated Sample Rate Well Total Depth 50.20 ft 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water **Total Volume Pumped** 7 L 22.22 ft

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	1		+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:47:06	900.03	18.74	5.93	0.16	1.85	22.48	4.06	69.88
Last 5	13:52:06	1200.03	18.66	5.93	0.16	2.49	22.48	4.05	69.85
Last 5	13:57:06	1500.03	18.61	5.92	0.16	1.53	22.48	4.06	70.92
Last 5	14:02:06	1800.03	18.65	5.90	0.16	0.27	22.48	4.06	70.79
Last 5	14:07:06	2100.02	18.71	5.92	0.16	0.38	22.48	4.06	70.28
Variance 0			-0.05	-0.00	-0.00			0.01	1.07
Variance 1			0.04	-0.02	0.00			0.00	-0.14
Variance 2			0.06	0.01	0.00			-0.00	-0.50

Notes

Sampled at 1415

Date: 2020-10-01 11:15:02

Project Information: Pump Information:

Operator Name Andreas Shoredits Pump Model/Type QED dedicated Company Name Wood E&IS **Tubing Type** HDPE Tubing Diameter **Project Name** Plant Arkwright 0.17 in Tubing Length Site Name ARGWC-8 48 ft

Latitude 32° 55' 31.57" Longitude -83° -42' -29.55"

Sonde SN 642533

Turbidity Make/Model Hach 2100Q Pump placement from TOC 38.22 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID ARGWC-8 170 mL/min Total System Volume 0.6942443 L Well diameter 2.00 in Calculated Sample Rate Well Total Depth 43.22 ft 300 sec Screen Length Stabilization Drawdown 10 ft 1 in Depth to Water 25.90 ft **Total Volume Pumped** 11.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:36:34	2699.99	20.80	6.44	452.62	7.86	26.02	0.18	24.17
Last 5	10:41:34	2999.98	20.84	6.44	452.34	6.10	26.02	0.18	23.62
Last 5	10:46:34	3299.97	20.91	6.44	452.22	5.26	26.02	0.17	23.25
Last 5	10:51:34	3599.97	20.92	6.44	452.06	4.88	26.02	0.18	23.16
Last 5	10:56:34	3899.96	21.02	6.44	452.61	4.48	26.02	0.18	22.90
Variance 0			0.07	-0.00	-0.12			-0.01	-0.37
Variance 1			0.01	0.00	-0.16			0.01	-0.09
Variance 2			0.10	0.00	0.55			-0.00	-0.25

Notes

Start purging well @ 09:52, stop @ 10:56; Initial purge rate of 400 ml/min reduced to 185 ml/min @ 09:57, to 175 ml/min @ 10:07, to 170 ml/min @ 10:37; Collect sample @ 11:00; pH during sampling is 6.44; Weather is sunny 55 degrees F

Grab Samples ARGWC-8

Groundwater sample

Date: 2020-10-01 14:47:14

Project Information: Pump Information:

Operator Name Ever Guillen Pump Model/Type QED dedicated Company Name WOOD **Tubing Type HDPE** Project Name Plant Arkwright CCR Tubing Diameter 0.17 in ARGWC-9 Tubing Length Site Name 38.2 ft

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 613229

Turbidity Make/Model HACH 2100Q Pump placement from TOC 33.2 ft

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWC-9 Well diameter Total System Volume 0.6505027 L 2 in Calculated Sample Rate Well Total Depth 38.2 ft 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water **Total Volume Pumped** 20.62 ft 19 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:24:07	1500.02	20.39	5.79	79.17	9.56	20.88	6.59	88.28
Last 5	14:29:07	1800.02	20.48	5.80	79.07	7.62	20.88	6.62	87.52
Last 5	14:34:07	2100.02	20.48	5.79	79.13	6.01	20.88	6.59	88.96
Last 5	14:39:07	2400.02	20.48	5.77	79.13	4.86	20.88	6.59	88.47
Last 5	14:44:07	2700.01	20.53	5.78	79.16	3.43	20.88	6.57	87.94
Variance 0			0.00	-0.01	0.06			-0.03	1.45
Variance 1			0.00	-0.02	0.01			-0.00	-0.49
Variance 2			0.04	0.01	0.03			-0.02	-0.53

Notes

Sampled at 1450

Date: 2020-10-01 10:56:55

Project Information: Pump Information:

Operator Name Ever Guillen Pump Model/Type QED dedicated Company Name WOOD **Tubing Type** HDPE Project Name Plant Arkwright CCR Tubing Diameter 0.17 in ARGWC-10 Tubing Length Site Name 38.35 ft

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 613229

Turbidity Make/Model HACH 2100Q Pump placement from TOC 33.35 ft

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWC-10 Well diameter Total System Volume 0.6511722 L 2 in Calculated Sample Rate Well Total Depth 38.35 ft 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water **Total Volume Pumped** 21.30 ft 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:35:15	3600.01	19.27	5.84	104.44	10.60	21.58	4.40	81.97
Last 5	10:40:15	3900.01	19.24	5.83	104.30	8.38	21.58	4.39	81.51
Last 5	10:45:15	4200.00	19.28	5.81	104.25	6.02	21.58	4.36	81.60
Last 5	10:50:15	4500.00	19.32	5.82	104.57	4.64	21.58	4.37	81.17
Last 5	10:55:15	4800.00	19.37	5.83	103.94	3.91	21.58	4.36	80.26
Variance 0			0.05	-0.02	-0.05			-0.02	0.09
Variance 1			0.04	0.00	0.32			0.01	-0.43
Variance 2			0.05	0.01	-0.63			-0.02	-0.90

Notes

Sampled at 1100

Date: 2020-09-29 13:14:23

Project Information: Pump Information:

Operator Name Andreas Shoredits Pump Model/Type **QED** dedicated Company Name Wood E&IS **Tubing Type** HDPE Project Name Plant Arkwright Tubing Diameter 0.17 in Tubing Length Site Name ARGWC-15 48 ft

Latitude 32° 54' 55.62" Longitude -83° -42' -31.22"

Sonde SN 642533

Turbidity Make/Model Hach 2100Q Pump placement from TOC 38 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID ARGWC-15 90 mL/min Total System Volume 0.6942443 L Well diameter 2.00 in Calculated Sample Rate Well Total Depth 43.0 ft 300 sec Screen Length Stabilization Drawdown 10 ft 27 in Depth to Water 28.43 ft **Total Volume Pumped** 2.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	12:34:06	600.02	19.56	7.23	252.30	2.55	29.45	4.13	43.62
Last 5	12:39:06	900.02	19.40	7.18	250.02	2.23	29.95	3.83	41.54
Last 5	12:44:06	1200.01	19.31	7.13	246.67	2.15	30.41	3.98	41.24
Last 5	12:49:06	1500.00	19.34	7.12	245.37	1.92	30.84	4.01	40.88
Last 5	12:54:06	1800.00	19.30	7.11	244.56	2.02	31.14	3.98	40.44
Variance 0			-0.09	-0.05	-3.36			0.15	-0.30
Variance 1			0.03	-0.01	-1.30			0.04	-0.36
Variance 2			-0.04	-0.00	-0.81			-0.03	-0.43

Notes

Start purging well @ 12:26, Stop @ 12:59; Initial purge rate of 100 ml/min reduced to 90 ml/min @ 12:30; Sample collected @ 13:05; pH during sampling is 7.11; Weather is cloudy with light rain 67 degrees F

Grab Samples ARGWC-15 Groundwater sample

Date: 2020-09-29 15:37:58

Project Information: Pump Information:

Pump Model/Type Operator Name Ever Guillen QED dedicated Company Name Tubing Type WOOD **HDPE** 0.17 in Project Name Plant Arkwright CCR Tubing Diameter ARGWC-16 Tubing Length Site Name 34.52 ft

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 613229

Turbidity Make/Model HACH 2100Q Pump placement from TOC 29.52 ft

Well Information: Pumping Information:

Final Pumping Rate 200 mL/min Well ID ARGWC-16 Well diameter Total System Volume 0.6340774 L 2 in Calculated Sample Rate Well Total Depth 34.52 ft 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water **Total Volume Pumped** 8 L 20.21 ft

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	1		+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:15:04	1200.03	18.91	5.50	498.15	0.53	20.38	0.58	89.60
Last 5	15:20:04	1500.03	18.95	5.48	497.95	0.57	20.38	0.58	90.13
Last 5	15:25:04	1800.02	18.92	5.49	497.63	0.39	20.38	0.59	88.03
Last 5	15:30:04	2100.02	18.88	5.50	497.16	0.34	20.38	0.58	87.21
Last 5	15:35:04	2400.02	18.83	5.50	496.46	0.21	20.38	0.58	86.73
Variance 0			-0.02	0.01	-0.32			0.00	-2.10
Variance 1			-0.04	0.01	-0.46			-0.01	-0.82
Variance 2			-0.05	0.00	-0.71			-0.00	-0.48

Notes

Sampled at 1540

Date: 2020-09-29 15:03:25

Project Information: Pur	ump Information:
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Operator Name Andreas Shoredits Pump Model/Type **QED** dedicated Company Name Tubing Type Wood E&IS HDPE Project Name Plant Arkwright Tubing Diameter 0.17 in Tubing Length Site Name ARGWC-17 39 ft

Latitude 32° 54' 55.62" Longitude -83° -42' -31.22"

Sonde SN 642533

Turbidity Make/Model Hach 2100Q Pump placement from TOC 29.5 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID ARGWC-17 220 mL/min Total System Volume Well diameter 2.00 in 0.6540735 L Calculated Sample Rate Well Total Depth 34.50 ft 300 sec Screen Length Stabilization Drawdown 0.84 in 10 ft Depth to Water 21.72 ft **Total Volume Pumped** 8.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	1		+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:29:00	1200.02	19.06	5.74	207.64	11.00	22.32	0.49	52.18
Last 5	14:34:00	1500.01	19.06	5.74	207.09	6.78	22.30	0.39	48.80
Last 5	14:39:00	1800.01	19.09	5.75	207.64	4.46	22.31	0.33	46.50
Last 5	14:44:00	2100.00	19.03	5.75	208.59	2.86	22.30	0.29	44.90
Last 5	14:49:00	2399.99	19.06	5.75	208.92	2.58	22.30	0.26	44.11
Variance 0			0.03	0.00	0.55			-0.07	-2.30
Variance 1			-0.06	0.01	0.95			-0.04	-1.60
Variance 2			0.03	-0.00	0.32			-0.03	-0.79

Notes

Start purging well @ 14:10, Stop @ 14:49; Purge rate maintained between 230 and 220 ml/min; Collect sample @ 14:55; pH during sample collection is 5.75; Weather is cloudy 64 degrees F

Grab Samples ARGWC-17 Groundwater sample

Date: 2020-09-30 16:14:15

Project Information: Pump Information:

Operator Name Ever Guillen Pump Model/Type QED dedicated Company Name WOOD **Tubing Type** HDPE Project Name Plant Arkwright CCR Tubing Diameter 0.17 in ARGWC-18 Tubing Length Site Name 50.65 ft

Latitude 0° 0' 0"

Longitude 0° 0' 0"

Sonde SN 613229

Turbidity Make/Model HACH 2100Q Pump placement from TOC 45.65 ft

Well Information: Pumping Information:

Final Pumping Rate 100 mL/min Well ID ARGWC-18 Well diameter Total System Volume 0.7060724 L 2 in Calculated Sample Rate Well Total Depth 50.65 ft 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water **Total Volume Pumped** 40 L 28.33 ft

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:50:22	8099.98	22.31	5.97	575.66	11.70	28.61	0.23	73.06
Last 5	15:55:22	8399.97	22.24	5.97	576.53	11.60	28.61	0.22	73.08
Last 5	16:00:22	8699.97	22.25	5.98	576.39	11.40	28.61	0.22	72.92
Last 5	16:05:38	9015.97	22.31	5.97	577.47	11.10	28.61	0.24	72.88
Last 5	16:10:38	9315.97	22.27	5.98	576.61	11.00	28.61	0.23	72.84
Variance 0			0.01	0.00	-0.14			-0.00	-0.15
Variance 1			0.06	-0.00	1.08			0.02	-0.04
Variance 2			-0.04	0.00	-0.87			-0.01	-0.04

Notes

Restart

Sampled at 1615

Date: 2020-09-30 17:59:13

Project Information: Pump Information:

Operator Name Andreas Shoredits Pump Model/Type QED Sample Pro Company Name Wood E&IS **Tubing Type** HDPE Project Name Tubing Diameter Plant Arkwright 0.17 in Tubing Length Site Name ARAMW-3 72 ft

Latitude 32° 55′ 32.16″ Longitude -83° -42′ -30.06″

Sonde SN 642533

Turbidity Make/Model Hach 2100Q Pump placement from TOC 62 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID ARAMW-3 170 mL/min Total System Volume 0.5113665 L Well diameter 2.00 in Calculated Sample Rate Well Total Depth 67.87 ft 300 sec Screen Length Stabilization Drawdown 5.2 in 10 ft Depth to Water 25.33 ft **Total Volume Pumped** 19.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	า		+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	16:17:23	6005.92	20.37	6.40	354.67	5.98	25.69	6.75	-3.54
Last 5	16:22:23	6305.91	20.35	6.41	353.13	5.40	25.70	6.68	-3.88
Last 5	16:27:23	6605.91	20.40	6.41	353.77	5.34	25.70	6.61	-3.56
Last 5	16:32:23	6905.90	20.34	6.40	355.32	5.10	25.70	6.63	-2.35
Last 5	16:37:23	7205.90	20.41	6.41	355.87	4.81	25.70	6.52	-2.62
Variance 0			0.04	0.01	0.64			-0.06	0.32
Variance 1			-0.05	-0.02	1.56			0.01	1.22
Variance 2			0.07	0.02	0.54			-0.11	-0.27

Notes

Start purging well @ 14:38, stop @ 16:37; Initial purge rate of 170 ml/min increased to 180 ml/min @ 14:48, to 175 ml/min @ 15:08, to 170 ml/min @ 15:43; Turbidity remained > 10 NTU up to 13.4 L purge and was < 6 NTU after 15.9 L; Water has sulfurous odor, fine silt sized particles, and small bubbles; Collect sample @ 16:45; pH during sampling is 6.41; Weather is sunny 72 degrees F

Grab Samples ARAMW-3 Groundwater sample



Date: 2020-09-30 12:52:40

Project Information:

Operator Name Andreas Shoredits

Company Name Wood E&IS
Project Name Plant Arkwright
Site Name ARAMW-4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 642533

Hach 2100Q

Pump Information:

Pump Model/Type QED Sample Pro

Tubing TypeHDPETubing Diameter0.17 inTubing Length62 ft

Pump placement from TOC 52 ft

Well Information:

Turbidity Make/Model

Well ID ARAMW-4
Well diameter 2.00 in
Well Total Depth 57.72 ft
Screen Length 10 ft
Depth to Water 21.48 ft

Pumping Information:

Final Pumping Rate 180 mL/min
Total System Volume 0.4667322 L
Calculated Sample Rate 300 sec
Stabilization Drawdown
Total Volume Pumped 19 L

Low-Flow Sampling Stabilization Summary

Time		Elapsed	Temp C	рН	SpCond μS/cm Turb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:15:54	5700.93	19.46	5.97	1568.76	5.24	21.44	7.48	2.40
Last 5	12:20:54	6000.92	19.50	5.96	1555.87	5.18	21.43	7.31	3.00
Last 5	12:25:54	6300.91	19.51	5.95	1565.35	4.70	21.44	7.21	3.82
Last 5	12:30:54	6600.91	19.53	5.94	1552.57	4.67	21.43	7.08	4.28
Last 5	12:35:54	6900.91	19.58	5.94	1541.98	4.84	21.43	6.98	4.87
Variance 0			0.00	-0.01	9.48			-0.10	0.82
Variance 1			0.02	-0.00	-12.78			-0.13	0.46
Variance 2			0.05	-0.00	-10.59			-0.10	0.59

Notes

Start purging well @ 10:41, stop @ 12:36; Initial purge rate of 170 ml/min increased to 190-210 ml/min @ 10:47, lowered to 180 ml/min @ 11:42; Water has strong sulfurous odor and silt sized grains visible in sample; Turbidity remained > 10 NTU until approximately 12 L purged; Collect sample @ 12:40; pH during sampling is 5.94; Weather is sunny 60 degrees F

Grab Samples ARAMW-4 Groundwater sample

Date: 2020-10-01 15:14:15

Project Information:

Operator Name Andreas Shoredits
Company Name Wood E&IS

Project Name Plant Arkwright
Site Name ARAMW-6
Latitude 32° 55' 31.57"
Longitude -83° -42' -29.55"

Sonde SN 642533

Turbidity Make/Model Hach 2100Q

Well Information:

Well ID ARAMW-6
Well diameter 2.00 in
Well Total Depth 32.33 ft
Screen Length 10 ft
Depth to Water 13.43 ft

Pump Information:

Pump Model/Type QED Sample Pro

27 ft

Tubing TypeHDPETubing Diameter0.17 inTubing Length37 ft

Pump placement from TOC

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.3551467 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 22.5 L

Low-Flow Sampling Stabilization Summary

	Time		Temp C	рН	SpCond µS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:31:07	6901.91	21.39	6.37	361.45	5.58	13.87	0.21	9.08
Last 5	14:36:07	7201.90	21.38	6.37	360.62	5.22	13.87	0.22	9.86
Last 5	14:41:07	7501.90	21.32	6.37	361.00	4.87	13.87	0.22	10.02
Last 5	14:46:07	7801.89	21.38	6.37	360.27	4.70	13.87	0.22	10.36
Last 5	14:51:07	8101.88	21.37	6.37	359.69	4.74	13.87	0.21	10.61
Variance 0			-0.06	-0.00	0.37			-0.00	0.16
Variance 1			0.06	-0.00	-0.72			-0.00	0.34
Variance 2			-0.01	0.00	-0.58			-0.01	0.26

Notes

Start purging well @ 12:38, stop @ 14:51; Initial purge rate of 180 ml/min reduced to 175 ml/min @ 12:52, to 170 ml/min @ 13:12, to 160 ml/min @ 13:37, and to final purge rate of 150-155 ml/min @ 14:22; Turbidity remained near constant between 5 and 10 NTU after purging 8.5 L; Collect sample @ 14:55; pH during sample collection is 6.37; Weather is sunny 75 degrees F



		Great Carlo	orgia Pa	Versite S		Data (GW)		
Site Name	PlantA	rkwright	DD J	W.C.I. WOULD WO	aminimist.	The same of the sa		
	Sample	Sample	///-	Equipment	T	Date: 9/29/20 - 10/1/20		
Well ID	Date	Time	Field Blank	Blank	Field D			
FR-01	9/29/20		FB-01	Dialik	Field Dup.	Additional Comments		
ARGNA-12	9/29/20	1127	1 D-01			Field Blank For Ash Pond 3		
ARGWA-13	9/29/20	1330			<u> </u>			
ARGWA-5	9/29/20	1050						
ARGWA-3	9/29/20	1225						
ARGWC-7	9/29/20	1415						
ARGWC-16	9/29/20	1540						
Argina-14		1035						
PRGWC-15	9/29/20	130.5						
ARGWC-17	9/29/20	1455		-				
Dup-01	9/29/20				Dup. Al	D 1: 4- ENDCUIA = (DUD a)		
EB-01	9/30/2 6	0905		EB-01	DUPSOI	Duplicate of ARGWC-17 (DUP-01) Equip Blank of QED Sample Pro Bladder Pump		
ABAMW-4	9/30/20	1240				Equip Diank OF aEDSample Pro Bladder Mump		
<u> ARAMW-3</u>	9/30/20	1645						
ARGWC-18	9/30/20	1615						
ARGWC-10		1100						
ARGWC-9	10/1/20	1450						
1R AVIW-6		1455						
ARGWC-8	10/1/20	1100		-				
			,					
Additional o	comments :	Field	Blank F	B-01 wa	s taken a	+ Ash Pord 3 wine ASTM Type T deionized		
Additional comments: Field Blank FB-DI was taken at Ash Pord 3 using ASTM Type I deionized water (7732-18-5). Equip blank EB-OI was collected from the GED Sample Pro Bladder Pump ID# 8655 using ASTM Type I deionized water (7732-18-5).								
Pump ID# 8655 using ASTM Type I deignized water (7732-18-5)								
			7	71		142 14 2/1		
								