2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

ALABAMA POWER COMPANY
PLANT GORGAS
BOTTOM ASH LANDFILL

January 31, 2022

Prepared for

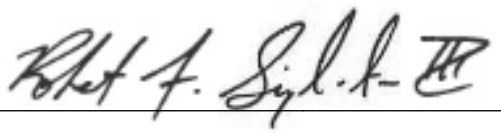
Alabama Power Company
Birmingham, Alabama

By

Southern Company Services
Earth Science and Environmental Engineering

CERTIFICATION STATEMENT

This *2021 Annual Groundwater Monitoring and Corrective Action Report, Alabama Power Company - Plant Gorgas Bottom Ash Landfill* has been prepared in accordance with the United States Environmental Protection Agency's coal combustion residual rule (40 CFR Part 257, Subpart D), ADEM Admin. Code Ch. 335-13-15, and Part E of ADEM Administrative Order No. 18-096-GW, under the supervision of a licensed professional engineer in the State of Alabama. As such, I certify that the information contained herein is true and accurate to the best of my knowledge.



1/31/2022

Robert F. Singleton, III — Date

AL Registered Professional Geologist No. 1584

1/31/2022

Gregory Whetstone, PE — Date

AL Registered Professional Engineer No. 27885

EXECUTIVE SUMMARY

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart D), the State of Alabama Department of Environmental Management (ADEM) Admin. Code Ch. 335-13-15, and ADEM Administrative Order (AO) No. 18-096-GW, this 2021 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document 2021 semi-annual assessment groundwater monitoring activities at the Alabama Power Company (APC) William Crawford Gorgas Electric Generating Plant (Plant Gorgas) Bottom Ash Landfill (BALF) and to satisfy the requirements of § 257.90(e), ADEM Admin. Code r. 335-13-15-.06(1)(f), and Part E of AO 18-096-GW. Semi-annual assessment monitoring and associated reporting for the Plant Gorgas BALF were performed in accordance with the monitoring requirements § 257.90 through § 257.95 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(6).

The Semi-Annual Progress Reports have historically been provided to the Department in March and September. ADEM approved this approach and revised timeline for submittals on March 16, 2021. In an effort to streamline and provide more thorough reports to ADEM, APC requested and received approval to combine the information provided in the Semi-Annual Progress Reports described in Part E of AO No. 18-096-GW into the Semi-Annual Groundwater Monitoring and Corrective Action Reports on March 15, 2021. APC will now provide the Department with the combined semi-annual reports in January and July of each year.

The CCR unit began the monitoring period in assessment monitoring pursuant to § 257.95 and ADEM Admin. Code r. 335-13-15-.06(6). Statistically significant increases (SSIs) of Appendix III constituents over background were identified in the results of the first detection monitoring event and assessment monitoring was initiated in January 2018. Statistically significant levels (SSLs) of the Appendix IV constituent arsenic were identified in one well while in assessment monitoring. Consequently, an Alternate Source Demonstration (ASD) was submitted to ADEM for arsenic SSLs above the GWPS in June 2019.

APC completed an Assessment of Corrective Measures (ACM) report, submitted to ADEM in June 2019, to address the occurrence of constituents in groundwater at statistically significant levels (SSL) at the Plant Gorgas Ash Pond and Gypsum Pond. In February 2020, APC revised the ACM to include the BALF.

Since the submittal of the ACM, investigations have been performed to select effective corrective measures to address the SSL at the BALF. A Groundwater Remedy Selection Report was prepared to meet the

requirements of § 257.97, ADEM Admin. Code r. 335-13-15-.06(8), and Part C of AO No.18-096-GW and submitted to ADEM on December 17, 2021. Within 90 days of remedy section, a Corrective Action Groundwater Monitoring Program document presenting the groundwater corrective action remedies to be implemented at the Site will be submitted to ADEM in March 2022.

The Corrective Action Groundwater Monitoring Program is being prepared to meet § 257.98 and ADEM Admin. Code r. 335-13-15-.06(9) to detect potential downgradient changes in groundwater quality and assess the efficacy of the selected groundwater corrective action remedies. This Monitoring Program has been developed to meet the requirements of CFR § 257.98(a)(1) and ADEM Admin. Code r. 335-13-15-.06(9)(a)1. and will supplement the ongoing CCR compliance groundwater monitoring currently being performed at the Site. However, the pending ASD review decision by the Department has implications on future actions for the site. If approved, the site will return to assessment monitoring.

The following summarizes results and activities conducted during the 2021 monitoring period:

- Statistical evaluations of the February and July 2021 assessment monitoring data identified an SSL of arsenic above the GWPS in one well (MW-12).
- Submitted the Semi-Annual Remedy Selection and Design Progress Report in June 2021, which included the BALF.
- Submitted the 2021 Semi-Annual Groundwater Monitoring and Corrective Action Report on July 31, 2021.
- Submitted the Groundwater Remedy Selection Report in December 2021, which included the BALF.

The CCR unit concluded the monitoring period in assessment monitoring and APC will begin implementing the selected groundwater remedies identified in the Groundwater Remedy Selection Report submitted to ADEM in December 2021. If the pending ASD is approved, the Site will return to assessment monitoring.

The following routine future actions will be taken or are recommended for the site:

- Develop the Corrective Action Groundwater Monitoring Program and submit the Groundwater Remedy Monitoring Plan in March 2022, which will include the BALF.

- Conduct the first semi-annual assessment monitoring event in 2022 and submit the semi-annual groundwater monitoring and corrective action report summarizing the findings to ADEM by July 31, 2022.

Executive Summary Table.
Monitoring Period Summary
Plant Gorgas - Bottom Ash Landfill

Assessment Monitoring Inintiated: January 15, 2018
Monitoring Period: January 1 - December 31, 2021
Beginning Status: Assessment
Ending Status: Assessment

Statistical Analysis Results *

Appendix III SSIs

Parameter	Wells
Boron	MW-10, MW-11, MW-12
Calcium	NA
Chloride	MW-7, MW-8, MW-11, MW-12
Fluoride	MW-7, MW-8, MW-11
pH	MW-7, MW-8, MW-10, MW-11
Sulfate	NA
TDS	NA

Appendix IV SSLs

Parameter	Wells
Arsenic	MW-12

* See the attached report for further details regarding statistical exceedances and alternate source demonstrations.

Assessment of Corrective Measures & Groundwater Remedy

Assessment of Corrective Measures

Date Initiated: January 13, 2019
Date Complete: June 12, 2019
Revised to Include the Bottom Ash Landfill: February 28, 2020
Public Meeting Date: July 1, 2020

Groundwater Remedy

Selected During Period: Yes
Selection Date: December 17, 2021
Initiated During Period: No
Ongoing During Period: No

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

ABBREVIATIONS

ACM	Assessment of Corrective Measures
ADEM	Alabama Department of Environmental Management
AL	Alabama
APC	Alabama Power Company
APCEL	APC Environmental Laboratory
ASD	Alternate Source Demonstration
ASTM	Alabama Power Company Environmental Laboratory
BGS	below ground surface
CCR	Coal Combustion Residual
CEC	cation exchange capacity
CFR	Code of Federal Regulations
COC	chain of custody
COI	constituents of interest
CSM	conceptual site model
DO	dissolved oxygen
EPA	United States Environmental Protection Agency
ft	feet
GW	groundwater
GWPS	Groundwater Protection Standard(s)
LCL	Lower Confidence Limit(s)
m	meter
mg/L	milligram per liter
MNA	monitored natural attenuation
MSL	mean sea level
MW-	denotes “Monitoring Well”
NCDS	National Coal Data System
NELAP	National Environmental Laboratory Accreditation
NTU	nephelometric turbidity unit
ORP	oxidation reduction potential
pCi/L	picocuries per liter
PE	Professional Engineer
PG	Professional Geologist
PL	prediction limits
PQL	practical quantitation limit
PVC	polymerizing vinyl chloride
QA/QC	quality assurance/quality control
RL	reporting limit
RPD	relative percent difference
SEM	scanning electron microscopy
SM	Standard Method(s)
SSE	selective sequential extraction
SSI	statistically significant increase

SSL	statistically significant level
TAL	Test America, Inc.
TOC	top of casing
TDS	total dissolved solids
USGS	Unites States Geological Survey
UTLs	Upper Tolerance Limits
XRD	X-ray diffraction
XRF	X-ray fluorescence

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart D), the State of Alabama Department of Environmental Management (ADEM) Admin. Code Ch. 335-13-15, and ADEM Administrative Order (AO) No. 18-096-GW, this *2021 Annual Groundwater Monitoring and Corrective Action Report* has been prepared to document 2021 semi-annual assessment groundwater monitoring activities at the Plant Gorgas Bottom Ash Landfill (BALF) and to satisfy the requirements of § 257.90(e), ADEM Admin. Code r. 335-13-15-.06(1)(f), and Part E of AO No. 18-096-GW. Semi-annual assessment monitoring and associated reporting for Plant Gorgas BALF is performed in accordance with the monitoring requirements § 257.90 through § 257.95 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(6).

On March 15, 2021, in an effort to streamline reporting cycles and provide a single set of comprehensive semi-annual reports to ADEM, APC requested approval to re-locate the discussion of delineation results routinely provided in Semi-Annual Progress Reports to Semi-Annual Groundwater Monitoring and Corrective Action Reports. The Semi-Annual Progress Reports have historically been provided to the Department in March and September and covers content described in Part E of Administrative Order No. 18-096-GW. ADEM approved this approach and revised timeline for submittals on March 15, 2021. Semi-Annual Groundwater Monitoring and Corrective Action Reports will now include an update on groundwater delineation activities completed since the submittal of the Facility Plan for Groundwater Investigation (November 13, 2018) and will continue until released in writing by ADEM.

2.0 MONITORING PROGRAM STATUS

The site is currently in assessment monitoring and is evaluating groundwater corrective action alternatives. In accordance with § 257.94(e) and ADEM Admin. Code r. 335-13-15-.06(5)(e), APC implemented assessment monitoring in January 2018. SSIs of Appendix III and an SSL of an Appendix IV parameter (arsenic) were identified at the Plant Gorgas BALF during the first and second semi-annual sampling events conducted in 2021. An ASD was submitted to ADEM for arsenic SSLs above the GWPS in June of 2019. The Plant Gorgas ACM prepared under § 257.96, ADEM Admin. Code r. 335-13-15-.06(7), and AO No. 18-096-GW was amended to include the Bottom Ash Landfill in February 2020.

In accordance with § 257.95 and ADEM Admin. Code r. 335-13-15-.06(6), APC will continue semi-annual assessment monitoring, including all monitoring wells in the certified groundwater monitoring system and any well installed to characterize the horizontal and vertical extent of SSLs.

3.0 SITE LOCATION AND DESCRIPTION

The Alabama Power Company (APC) William Crawford Gorgas Electric Generating Plant (Plant Gorgas) is located in southeastern Walker County, Alabama, approximately 15 miles south of Jasper, at 460 Gorgas Road, Parrish, AL 35580. Based on visual inspection of USGS topographic quadrangle maps and GIS plant boundary files provided by SCS, the plant occupies portions of Sections 7, 8, 9, 16, 17, 18, 19, 20, 21, 28 and 29, Township 16 South, Range 6 West and Section 12, 13 and 24, Township 16 South, Range 7 West (USGS, 1975; USGS, 1983).

Plant Gorgas Bottom Ash Landfill (BALF) is located east-northeast of the main power generation facility and is bordered to the north by Highway 269 and to the south by the Mulberry Fork of the Black Warrior River. **Figure 1**, **Site Location Map**, depicts the location of the Plant and landfill with respect to the surrounding area.

3.1 PHYSICAL SETTING

Plant Gorgas is in the Black Warrior River basin, an area typified by moderate relief, with river and stream valleys having dendritic drainage patterns. Elevations at the Site range from approximately 260 feet above mean sea level (MSL) near the Mulberry Fork and Baker Creek to over 500 feet above MSL along a northwest trending ridge approximately 1,000 feet northwest of the plant and in upland areas on the western part of the property. Near the landfill, the land surface generally slopes from north to south and towards the Mulberry Fork of the Black Warrior River. **Figure 2, Site Topographic Map**, provides the topography of the Site.

Two natural surface water bodies drain Plant Gorgas property. Baker Creek flows from northwest to southeast through the central portion of the plant before draining into the Mulberry Fork of the Black Warrior River. The Mulberry Fork flows from east to west as it bends around the southern border of the plant property.

3.2 SITE GEOLOGY AND HYDROGEOLOGY

Plant Gorgas lies in the Warrior Basin physiographic region (Sapp and Emplaincourt, 1975), a late Paleozoic basin formed as a result of flexure and sediment loading associated with Appalachian and Ouachita orogenies. The bedrock geology is dominated by clastic sedimentary rocks of the Lower Pottsville Formation. Deeper stratigraphy is marked by carbonates, shales, chert, and sandstones of Mississippian to

Cambrian in age (Raymond et al., 1988). Plant Gorgas is directly underlain by rocks belonging to the Pratt Coal Group (Ward II et al., 1989). In general, the Pratt Group consists of mudstone, shale, fine-grained sandstone, and interbedded coal. **Figure 3**, **Site Geologic Map**, illustrates the surface geology at the Site and neighboring areas.

Plant Gorgas is directly underlain by rocks belonging to the Pratt Coal Group (Ward II et al., 1989) of the Upper Pottsville Formation. In general, the Pratt Coal Group consists of mudstone, shale, fine-grained sandstone, and interbedded coal in fining-upward sequences. The Pratt Coal Group generally contains three named coal seams, each separated by 25 to 50 feet of intra-burden. In descending order, they are the Pratt, Nickel Plate, and American coal seams. Locally, Pratt Coal Group strata gently dip (0.5-1.0 degrees) to the south and south-southwest.

Strip mining was conducted over a large portion of the area down to the American seam. As a result, the overburden around the BALF is dominated by backfilled mine overburden (mine spoils) and is characterized by weathered shale and sandstone boulders with lenses of fine sediments and small amounts of coal fragments and coarse sediments. Geologic logs generated during various on-site investigations indicate that the depth to rock varies significantly, ranging from as little as 5 feet (un-mined areas) to as much as 155 feet below ground surface (BGS). Beneath the BALF, subsurface geology is characterized by thin remnants of mine backfill and un-mined portions of the Pratt Coal Group consisting predominantly of mudstone and sandstone. **Figure 4a**, **Geologic Cross-Section A-A'** and **Figure 4b Geologic Cross-Section B-B'**, illustrate the geologic layering beneath the Site.

Two water-bearing zones are present beneath the Site: (1) the mine overburden/top-of-rock interface, and (2) the underlying Pottsville aquifer. The mine overburden/top of rock interface is usually a thin zone of saturation overlying rock and is not laterally continuous across all portions of the Site. Depth to this zone generally ranges from 100 to 115 feet beneath the Site.

The Pottsville aquifer system is the primary aquifer in Walker County. Although on a regional scale there are other aquifer systems in the vicinity of Plant Gorgas, the Pottsville aquifer system is the most significant. The nearest exposure of the Valley and Ridge aquifer system occurs in central Jefferson County, approximately 25 miles east of Plant Gorgas. The nearest exposure of the Tuscaloosa aquifer system occurs in northwesternmost Walker County, approximately 30 miles northwest of Plant Gorgas. The Tuscaloosa aquifer system is not considered a primary source of groundwater in Walker County (Stricklin, 1989).

The Pottsville aquifer system is composed primarily of Pennsylvanian-aged sandstones, shales, conglomerates, and coal. Groundwater flow primarily occurs through coal seams or rock fabric discontinuities such as bedding planes and fractures. Groundwater in the Pottsville aquifer system is commonly regarded as confined due to large permeability contrasts within the aquifer (Stricklin, 1989). Recharge to the Pottsville aquifer system is largely through infiltration of precipitation and to a lesser extent, downward seepage of river water at hydraulically favored locations. Recharge is accommodated largely by fracture enhanced permeability. Major recharge zones to the Pottsville aquifer system are related to major geologic structures such as large fault zones or along systematic fold axes (Pashin, 2007). Although the Pottsville aquifer system is the primary aquifer in Walker County, groundwater use is relatively limited. According to O'Rear et al., 1972, groundwater use accounted for approximately 15% of total water use in Walker County in 1966. By 2005, groundwater use had declined to less than 1% of total water use in Walker County, or 1.14 million gallons per day (mgd) of groundwater out of a total water use of 969.5 mgd (USGS, 2005).

3.2.1 Pottsville Formation – Rock Chemistry

Published data indicate that elevated arsenic concentrations occur in the Southern Appalachian coal strata where Site monitoring wells are screened. Numerous publications document elevated trace metals in Pottsville and Pottsville coal strata (Kolker et al., 1999, Diehl et al., 2004, Goldhaber et al., 2002). For instance, according to the USGS National Coal Data System (NRCDS), the average concentration of arsenic (72 ppm) in the Pottsville coal strata is three times that of the average of other coal basins (Bragg et al., 1997). Of the U.S. coal analyses for arsenic that are at least three standard deviations above the mean, approximately 90% are from the coal fields of Alabama (Diehl et al., 2004). The United States Geological Survey (USGS) maintains an inventory of coal quality that includes trace metal concentration data. It shows arsenic concentrations range from 1.08 milligrams per kilograms (mg/kg) to 611.0 mg/kg with a mean of 47 mg/kg for Walker County (USGS Coal Quality Database).

Similarly, 75 Pratt Coal Group samples from the Pratt, Nickel Plate, and American coal seams analyzed by the USGS and inventoried in the USGS National Coal Resources Data System (NCRDS) showed the following ranges of other trace metals:

- Boron – 6.3 to 83.6 ppm (average of 35 ppm).
- Cobalt – 1.6 to 19.8 ppm (average of 8 ppm).
- Molybdenum – 0.8 to 22.2 ppm (average of 5 ppm).

- Lithium – 1.4 to 128 ppm (average of 28 ppm).

Bulk geochemical analyses of Pottsville stratigraphy from the Site and of the Pratt and American coal seams from Plant Gorgas were conducted on recovered core. The data reflect arsenic concentrations between 4.9 mg/kg and 32.6 mg/kg in siltstone/mudstones and concentrations of 28.9 and 384.4 mg/kg in two coal seams analyzed. The average arsenic concentration was roughly 34 mg/kg in these samples tested, which is in good agreement with data observed in the USGS NCRDS.

Similarly, 17 Pratt Coal Group samples collected from the Site provided the following ranges of other trace metals:

- Arsenic – 0 to 384.1 ppm (average of 43.8 ppm).
- Boron – 20.8 to 114 ppm (average of 49 ppm).
- Cobalt – 2.79 to 31.2 ppm (average of 18.6 ppm).
- Molybdenum – 0 to 4.38 ppm (average of 1.06 ppm).

Trace metal enrichment and pyrite origins have been linked to post-depositional (post-coalification) deformation and trace metal laden hydrothermal fluids upwelling during Alleghanian tectonism. Diehl et al., (2004) and Goldhaber et al., (2002) describe “high-pyrite” coals as a source of elevated arsenic and other trace metals. In these publications, pyrite occurrence is observed within coal banding, woody cellular fill structures, mineral overgrowths and structural fills such as veins and microfaults.

Furthermore, the process of strip mining and backfilling these materials can increase the availability of trace metals to groundwater. These mining processes and practices lead to the physical weakening and enhanced weathering of rock which, along with changed hydrodynamics, can lead to elevated and highly variable concentrations across a historic mine site.

3.2.2 Uppermost Aquifer

The principal aquifer system from a local and regional perspective is the Pottsville aquifer. The Pottsville aquifer is also the uppermost aquifer beneath the Site. In the Pottsville, two types of secondary porosity were observed to yield groundwater: (1) fractured intervals and (2) bedding plane weaknesses associated with fissile, siderite-banded, iron-claystone sequences. Fractured intervals are sporadic across the Site and tend to occur with greater density in the upper 100 feet of rock. The upper portions of the Pottsville aquifer system beneath the proposed disposal facilities indicate unconfined to confined, fractured, and extremely

anisotropic conditions. The Pottsville aquifer system functions as a series of confined to semi-confined water producing zones (aquifers) because of the large permeability contrasts within the strata (Stricklin, 1989). Depth to groundwater varies significantly across the Site and is wholly dependent on encountering a fractured interval or zone of fissile, iron-claystone.

Monitoring wells installed at the mine overburden/top of rock interface monitor the quality of water passing to the Pottsville Formation. This water quality itself can be highly variable and enriched in trace metals owing to the heterogeneity of mine backfill deposits and mineralogy (e.g. clay minerals and sulfides). Based on published data, groundwater quality produced from the Pottsville Formation can be characterized by high concentrations of sulfate, iron, and other trace metals (Jennings and Cook, 2010). Trace metals in Pottsville Formation groundwater are associated with sulfide minerals contained in organic-rich strata (e.g., mudstones and coal seams) and siliceous/carbonate healed fractures and joints. Trace element enrichment is likely the result of migrating hydrothermal fluids generated during the late Paleozoic Allegheny orogeny (Diehl et al., 2004). Arsenic, antimony, molybdenum, selenium, copper, thallium, and mercury are elevated in Warrior Basin coal strata (Goldhaber et al., 2002).

3.2.3 Flow Interpretation

Groundwater flow at the Site is a subdued replica of the natural topography where gravity is the dominant force driving flow. Groundwater flows from higher topographic elevations north of the Site to lower topographic elevations to the south and generally, towards the Mulberry Fork of the Black Warrior River. Mine spoil layering and complex Pottsville Formation lithofacies contribute to the vertical and horizontal heterogeneity present within the aquifer system and overlying saturated mine spoils. This heterogeneity focuses groundwater flow along more permeable pathways, such as parallel to coal seams and bedding plains, or along vertical or sub-vertical discontinuities in the rock fabric. A potentiometric surface map for the Site is presented in a later section.

3.3 GROUNDWATER MONITORING SYSTEM

Pursuant to § 257.91 and ADEM Admin. Code r. 335-13-15-.06(2), Plant Gorgas has installed a groundwater monitoring system to monitor groundwater within the uppermost aquifer. The certified groundwater monitoring system for the Plant Gorgas BALF is designed to monitor groundwater passing the waste boundary of the CCR unit within the uppermost aquifer. Wells were located to serve as upgradient or downgradient monitoring locations based on groundwater flow direction as determined by the potentiometric surface elevation contour maps. All groundwater monitoring wells were designed and

constructed using "Design and Installation of Groundwater Monitoring Wells in Aquifers," ASTM Subcommittee D18.21, as a guideline.

3.3.1 Monitoring Wells

Well locations at the site are designated as upgradient, downgradient, piezometer (water-level only), vertical delineation, and horizontal delineation. The following subsections provide a summary of well designations and, if applicable, changes or modifications to the well network or designations. As described in the site Groundwater Monitoring Plan, modifications to the well network or designation must first be approved by ADEM.

The location and designation of site wells are presented in **Figure 5, Monitoring Well Location Map. Table 1a**, **Compliance Monitoring Well Network Details** and **Table 1b, Delineation Well Network Details** summarize the monitoring well construction details and design purpose for the Plant Gorgas BALF.

3.3.1.1 Upgradient Wells

Data used to establish background water quality or selection of upgradient wells include (1) review of groundwater elevation data and potentiometric surface contour maps to determine groundwater flow direction and (2) a screening of Appendix III CCR indicator parameters for apparently elevated concentrations.

Monitoring well locations MW-1 through MW-4 serve as upgradient locations for the BALF. Upgradient wells are screened within the same hydrostratigraphic interval as downgradient locations and are representative of background groundwater quality at the site. Groundwater generally flows from higher topographic elevations north of the site to lower topographic elevations to the south, and generally towards the Mulberry Fork of the Black Warrior River. Upgradient wells are located north of the BALF as determined by water level monitoring and potentiometric surface maps constructed for the site.

3.3.1.2 Downgradient Wells

Monitoring well locations MW-7, MW-8, MW-10, MW-11, and MW-12 serve as downgradient locations for the BALF. Downgradient locations are located lateral to and south of the BALF as determined by water level monitoring and potentiometric surface maps.

3.3.1.3 Piezometers

There are currently no piezometers installed in the groundwater monitoring well network.

3.3.1.4 Delineation Wells

Pursuant to § 257.95(g)(1), ADEM Admin. Code r. 335-13-15-.06(6)(g), and AO 18-096-GW, an additional monitoring well was installed to characterize the vertical extent of GWPS exceedances identified during assessment monitoring. One vertical delineation well (MW-12V) was installed adjacent to MW-12 to aid in defining the vertical extent of groundwater impacts. A second more shallow vertical delineation well targeting perched water above the MW-12 well screen interval could not be installed because overburden was dry down to the top of rock and a water-bearing zone was not observed.

3.3.1.5 Monitoring Well Replacement and Abandonment

During 2021, no monitoring well replacement or abandonment activities occurred.

3.4 GROUNDWATER MONITORING HISTORY

In accordance with § 257.94(b) and ADEM Admin. Code r. 335-13-15-.06(5)(b), eight independent samples were collected from each upgradient and downgradient well and analyzed for the constituents listed in Appendix III and IV prior to October 17, 2017. Background groundwater monitoring was performed at the Gorgas BALF from April 2016 through October 2017. Groundwater sampling for the first detection monitoring event after the background period was performed in November 2017.

Based on results of the 2017 Annual Groundwater and Corrective Action Monitoring Report, APC initiated an assessment monitoring program on January 15, 2018. Pursuant to 40 CFR § 257.95(a) and ADEM Admin. Code r. 335-13-15-.06(6)(a), monitoring wells were sampled for all Appendix IV parameters in February 2018, within 90 days of initiating the assessment monitoring program.

Statistical evaluations of 2018 assessment monitoring data identified statistically significant increases (SSIs) of Appendix III constituents. Statistically significant levels (SSLs) of Appendix IV constituent arsenic were identified in one well above the GWPS. An alternate source demonstration (ASD) was prepared that demonstrated the SSL was not caused by a release from the BALF. While pending ADEM review of the ASD, the Site entered Assessment of Corrective Measures. Pursuant to 40 CFR §257.95(g)(1), ADEM Admin. Code r. 335-13-15-.06(6)(g)2., and AO No. 18-096-GW, and additional monitoring well (**Table 1b, Figure 5**) was installed to characterize the vertical extent of potential GWPS exceedances. Existing well locations monitoring the Gorgas Gypsum Landfill and downgradient of the exceedance location provide sufficient coverage for horizontal delineation. The vertical delineation well installed at the Site is routinely and concurrently sampled with the compliance monitoring well network.

3.4.1 Available Monitoring Data

Laboratory analytical data is available for the groundwater monitoring history outlined in **Section 3.4.** Tabulated results for Appendix III and Appendix IV constituents by monitoring well are included in **Appendix A**, **Groundwater Analytical Data**.

3.4.2 Historical Groundwater Flow

Historical groundwater elevations and potentiometric surface maps show that groundwater flow patterns are consistent across monitoring events and as described in **Section 3.2.4**. Tables summarizing groundwater elevations from all groundwater monitoring events are included in **Appendix B, Historical Groundwater Elevations Summary**.

3.4.3 Monitoring Variance

The groundwater monitoring program at the site is operating under a Variance granted by ADEM on April 15, 2019, to conform State monitoring requirements under the CCR rule to Federal requirements. The variance:

1. Retains boron as an Appendix III detection monitoring parameter and excludes it as an Appendix IV assessment monitoring parameter.
2. Authorizes the use of Federally-published GWPS of 0.006 milligrams per liter (mg/L) for cobalt, 0.015 mg/L for lead, 0.040 mg/L for lithium, and 0.100 mg/L for molybdenum in lieu of background where those levels are greater than background levels.

3.5 GROUNDWATER SAMPLING AND ANALYSIS

Site compliance wells are sampled semi-annually between: (1) late winter – mid spring and (2) early to late fall. The temporal spacing between sampling events is sufficient to ensure that sampling events yield independent groundwater samples and generally, represent different climatic or meteorological seasons which often foster a degree of natural variability in groundwater quality.

During routine semi-annual monitoring events, all compliance wells are sampled and analyzed for Appendix III and Appendix IV constituents. Additional general chemistry constituents (major ions and anions) are now being collected routinely as well. These non-compliance parameters will be periodically analyzed to explore seasonal changes in geochemical facies in Site groundwater.

The following subsections summarize the sequential steps and process for the sampling, handling/transport, and analysis of compliance-related groundwater samples at the Site.

3.5.1 Groundwater Sample Collection

Prior to recording water levels and collecting samples, each well was opened and allowed to equilibrate to atmospheric pressure. Within a 24-hour period, depths to groundwater were measured to the nearest 0.01 foot with an electronic water level indicator with depth referenced from the top of the inner PVC well casing. Groundwater elevations were calculated by subtracting the depth to groundwater from surveyed top-of-casing (TOC) elevations.

Groundwater samples were collected from monitoring wells using low-flow sampling procedures in accordance with § 257.93(a) and ADEM Admin. Code r. 335-13-15-.06(4)(a). All monitoring wells at Plant Gorgas are equipped with a dedicated pump. Monitoring wells were purged and sampled using low-flow sampling procedures. In this procedure, field water quality parameters (pH, turbidity, conductivity, and dissolved oxygen) are measured to determine stabilization and groundwater samples are collected when the following stabilization criteria are met:

- 0.2 standard units for pH.
- 5% for specific conductance.
- 0.2 Mg/L or 10% for DO > 0.5 mg/l (whichever is greater).
- Turbidity measurements less than 5 NTU.
- Temperature and ORP – record only, no stabilization criteria.

During purging and sampling an In-Situ Aqua Troll instrument was used to monitor and record field parameters. Once stabilization was achieved, samples were collected and submitted to the laboratory following standard chain-of-custody (COC) protocol. Field data recorded in support of groundwater sampling activities for the monitoring events are included in **Appendix C, Laboratory and Field Records**.

3.5.2 Sample Preservation and Handling

Groundwater samples were collected within the designated size and type of laboratory-supplied containers required for specific parameters. Sample bottles were pre-preserved by the laboratory.

Where temperature control was required, samples were placed in an ice-packed cooler and cooled to less than 6 °C immediately after collection. Blue ice or other cooling packs were not used for cooling samples. An ice-packed cooler was on hand when samples were collected.

3.5.3 Chain of Custody

A COC record was used to track sample possession from the time of collection to the time of receipt at the laboratory. All samples were handled under strict COC procedures beginning in the field. COC records are included with the analytical laboratory reports included in **Appendix C**.

3.5.4 Laboratory Analysis

Laboratory analyses were performed by the APC Environmental Laboratory (APCEL) in Calera, Alabama or Pace Analytical Services, LLC (Pace) in Greensburg, Pennsylvania. Both APCEL and Pace are accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintain a NELAP certification for all parameters analyzed**. Table 2, Parameters and Reporting Limits**, lists assessment monitoring constituents analyzed from Site groundwater. Groundwater data and COC records for the monitoring events are presented in **Appendix C**.

3.5.5 Monitoring Period Sampling Events

As required by § 257.90(e) and ADEM Admin. Code r. 335-13-15-.06(1)(f), the following describes monitoring-related activities performed during the preceding year. Semi-annual Assessment Monitoring sampling events occurred in February 2021 and July 2021.

The first semi-annual assessment monitoring event took place between February 22, 2021 and February 24, 2021. A groundwater monitoring report summarizing data and activities from the first semi-annual sampling event was submitted to the Department in July 2021. The second semi-annual assessment monitoring event took place between July 12, 2021 and July 21, 2021.

Groundwater samples were analyzed for the full list of Appendix III and Appendix IV parameters during each Assessment Monitoring event. All groundwater sampling activities were conducted by APC Field and Water Services. Pace Analytical Services performed the laboratory analyses of Radium-226 and Radium-228 (reported combined). APCEL performed the remaining Appendix III and Appendix IV analyses. Analytical data from the groundwater monitoring events is included as Appendix C, in accordance with the requirements of § 257.90(e)(3) and ADEM Admin. Code r. 335-13-15-.06(1)(f)3.

4.0 GROUNDWATER ELEVATIONS AND FLOW

During the first semi-annual sampling event, groundwater elevations ranged from 307.39 to 419.94 feet NAVD88 (feet above reference 1988 North American Datum) in BALF monitoring wells. **Figure 6a, Potentiometric Surface Contour Map (February 22, 2021)** depicts groundwater elevations and inferred groundwater flow.

During the second semi-annual sampling event, groundwater elevations ranged from 305.03 to 421.54 feet NAVD88 (feet above reference 1988 North American Datum) in BALF monitoring wells. **Figure 6b, Potentiometric Surface Contour Map (July 12, 2021)** depicts groundwater elevations and inferred groundwater flow.

As shown on **Figures 6a** and **6b,** the general direction of lateral groundwater flow is to the southeast, consistent with historic observations. As indicated by groundwater elevations from paired wells MW-12 and MW-12V, an upward vertical gradient appears to exist between shallow and deeper flow zones. This indicates that (1) both vertically confining conditions exist and (2) deeper, older groundwater is upward flowing. Recent available groundwater elevation data have been tabulated and included in **Table 3, Recent Groundwater Elevations Summary.** All available groundwater elevation data recorded since 2016 have been tabulated and included in **Appendix B.**

4.1 GROUNDWATER FLOW VELOCITY CALCULATIONS

Because the geology at the BALF is not homogeneous or isotropic with respect to groundwater flow, groundwater velocity calculations using derivations of Darcy's Law, or other methods, will not fully represent the spatial variability across the site. Groundwater flow velocity calculations are provided as a general estimate of groundwater flow velocity at the site based on available information and assumptions described below.

The hydrogeologic characteristics of mine spoils and fractured rock can produce preferential groundwater flow paths, so groundwater velocity is much more variable than in uniform porous media such as sand. These flow paths correspond to more permeable lenses in mine spoil and fractures, zones of fracture concentration, bedding planes, and other discontinuities in the rock. Therefore, groundwater flow velocity at the Site will be highly variable.

Slug testing provided horizontal hydraulic conductivities for the uppermost aquifer between 5.11 x 10^{-3} centimeters per second (cm/sec) and 2.47 x 10^{-4} cm/sec. The average hydraulic conductivity value used in the calculations is 2.83 x 10^{-3} cm/sec or 8.01 feet/day. An estimated effective porosity of 0.15 is used in the flow rate calculations. The hydraulic gradient was calculated between well pairs is shown in **Appendix D, Horizontal Groundwater Flow Velocity Calculations**.

An estimate of horizontal flow velocity was calculated using the commonly-used derivative of Darcy's Law:

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

Where:

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

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

i = Horizontal hydraulic gradient

n_e = Effective porosity

Appendix D presents the estimated horizontal flow velocity calculated using groundwater elevation data from the first and second semi-annual sampling events in 2021. Darcy's Law provides an approximate horizontal flow velocity because, as stated above, the Site is not homogeneous or isotropic with respect to groundwater flow.

5.0 EVALUATION OF GROUNDWATER QUALITY DATA

During each sampling event, quality assurance/quality control samples (QA/QC) were collected at a rate of one sample per every group of 10 well samples. These QA/QC samples include well duplicates, equipment blanks, and field blanks. Routine analyses of field QA/QC samples are a method for evaluating whether artificial bias could have been introduced into lab results by ways of sampling activities or equipment.

5.1 DATA VALIDATION – QUALITY ASSURANCE/QUALITY CONTROL

Analytical precision is measured through the calculation of the relative percent difference (RPD) of two data sets generated from a similar source. Here, a comparison of results between samples and field duplicate samples are used as measure of laboratory precision. Where field duplicates are collected, the RPD between the sample and duplicate sample is calculated as:

$$RPD = \frac{Conc1 - Conc2}{(Conc1 + Conc2)/2}$$

Where:

RPD = Relative Percent Difference (%)

Conc1 = Higher concentration of the sample or field duplicate

Conc2 = Lower concentration of the sample or field duplicate

Where the RPD are below 20%, the difference is considered acceptable and no further action is needed. Where an RPD is greater than 20%, further evaluation is required to attempt to determine the cause of the difference and potentially result in qualified data. **Table 4a**, **Relative Percent Difference Calculations,** provides the RPDs for sample and sample duplicates during the first and second semi-annual monitoring events of 2021. All RPDs were below 20% for the 2021 sampling events.

Barium was detected at a low level in the equipment blank collected for the downgradient compliance wells during the first semi-annual sampling event. This detection was an estimated concentration, above the MDL

but below the RL, and qualified in the laboratory analytical report with a "J flag." The concentration reported is well below established background concentrations and the GWPS. However, if concentrations are detected above the MDL in equipment QC samples, original results less than five times the equipment QC detection are flagged with a (+) U* and MDL/RL values modified based upon the blank concentration. Because detections for barium in each of the wells were greater than five times the equipment QC detection, updated qualifiers and MDL/RL values are not necessary.

Arsenic was detected at a low level in the equipment blank collected from the downgradient compliance wells during the second semi-annual sampling event. This detection was an estimated concentration of 0.000080 mg/L and qualified in the laboratory analytical report with a "J flag." The concentration reported is well below established background concentration and the GWPS. Because detections for arsenic in each of the wells were greater than five times the equipment QC detection, updated qualifiers and MDL/RL values are not necessary.

Table 4b, Field QC: Blank Detections summarizes the results of QC sample detections for the first and second 2021 semi-annual monitoring events.

5.2 STATISTICAL METHODOLOGY AND TESTS

The Sanitas groundwater statistical software is used to perform the statistical analyses. Sanitas is a decision support software package that incorporates the statistical tests required of Subtitle C and D facilities by EPA regulations. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) as well as with the USEPA Unified Guidance (2009).

5.2.1 Appendix III Evaluation

Intrawell prediction limits, combined with a 1-of-2 verification resample plan, are used to evaluate calcium, chloride, fluoride, sulfate, and total dissolved solids (TDS). Interwell prediction limits, combined with a 1-of-2 verification resample plan, are used for boron and pH to determine whether there has been a statistically significant increase (SSI) over background groundwater quality. Intrawell prediction limits use screened historical data within a given well to establish limits for parameters at that well. The most recent sample from the same well is compared to its respective background to identify SSIs over background. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to identify SSIs.

Groundwater Stats Consulting demonstrated that these test methods were appropriate in the October 2017 Statistical Analysis Plan, which was updated in the September 2019 data screening evaluation. Time series plots were used to screen proposed background data for suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective. Suspected outliers at all wells for Appendix III parameters are formally tested using Tukey's box plot method and, when identified, flagged in the computer database.

The following adjustments were made:

- No statistical analyses are required on wells and analytes containing 100% non-detects (EPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in the background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the practical quantitation limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data.
- Non-parametric prediction limits are used on data containing greater than 50% non-detects.

5.2.2 Appendix IV Evaluation

When in assessment monitoring, Appendix IV constituents are sampled semi-annually, and concentrations are compared to GWPS. Following the Unified Guidance, spatial variation for Appendix III parameters is tested using the ANOVA; this test is not prescribed for Appendix IV constituents. Unlike the statistical evaluation of Appendix III constituents (where single-sample results are compared to the statistical limit), Appendix IV analysis uses the pooled results from each downgradient well to develop a well-specific Confidence Interval that is compared to the statistical limit. The statistical limit is either the Interwell Tolerance limit (i.e. background) calculated using the pool of all available upgradient well data (see Chapter 7 of the Unified Guidance), or an applicable groundwater protection standard such as the MCL. Appendix IV background data are screened for outliers and extreme trending patterns that would lead to artificially elevated statistical limits.

Parametric tolerance limits (i.e. UTLs) were calculated using pooled upgradient well data for Appendix IV parameters with a target of 95% confidence and 95% coverage. The confidence and coverage levels for nonparametric tolerance limits are dependent on the number of background samples. The UTLs were then used as the GWPS.

As described in 40 CFR §257.95(h)(1)-(3) and the ADEM variance, the GWPS is:

(1) The maximum contaminant level (MCL) established under 40 CFR § 141.62 and 141.66.
(2) Where an MCL has not been established:
    (i) Cobalt 0.006 mg/).
    (ii) Lead 0.015 mg/L.
    (iii) Lithium 0.040 mg/L.
    (iv) Molybdenum 0.100 mg/L.
(3) Background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.

In assessment monitoring, when the Lower Confidence Limit (LCL), or the entire interval, exceeds the GWPS as discussed in the USEPA Unified Guidance (2009), the result is recorded as an SSL. GWPS for Appendix IV constituents are updated on a biennial schedule. This schedule was initiated in 2019 with updates generally occurring after the second semi-annual sampling event of each biennial year. Data from upgradient wells collected between updates may still be used to support ASDs if merited.

5.3 STATISTICAL EXCEEDANCES

Analytical data from the first and second semi-annual monitoring events in 2021 were statistically analyzed in accordance with the Professional Engineer (PE)-certified Statistical Analysis Plan (October 2017) and revised in the August 2020 data screening evaluation performed by Groundwater Stats Consulting. Appendix III statistical analysis was performed to determine if constituents had returned to background levels. Appendix IV assessment monitoring parameters were evaluated to determine if concentrations statistically exceeded the established groundwater protection standard.

5.3.1 Appendix III Constituents

Based on review of the Appendix III statistical analysis presented in **Appendix E, Statistical Analysis**, Appendix III constituents have not returned to background levels.

5.3.2 Appendix IV Constituents

Table 5, Summary of Background Levels and Groundwater Protection Standards, summarizes the background limit established at each monitoring well and the GWPS. A summary table of the statistical limits accompanies the prediction limits in **Appendix E.**

Statistical analysis of Appendix IV data identified the following SSL over GWPS at the listed well for the first and second 2021 semi-annual groundwater monitoring event:

- MW-12: Arsenic.

Table 6a, First Semi-Annual Monitoring Event Analytical Summary and **Table 6b, Second Semi-Annual Monitoring Event Summary** provide a summary of all constituent concentrations for the first and second semi-annual monitoring events of 2021.

Limited groundwater analytical data are available for delineation wells installed at the site. Therefore, groundwater quality is simply compared to the GWPS. A review of analytical data derived from delineation wells revealed no exceedances of the GWPS during the first or second 2021 semi-annual sampling events. Details regarding the installation and sampling of these wells, and future proposed actions were submitted to ADEM in a delineation report on May 13, 2019.

6.0 ALTERNATE SOURCE DEMONSTRATION

Section 257.95(g)(3)(ii) and ADEM Admin. Code r. 335-13-15-.06(6)(g)4.(ii) allow the owner or operator to demonstrate that a source other than the CCR unit caused an SSL and that the SSL was the result of an alternate source, or that the SSL resulted from errors in sampling, analysis or statistical evaluation, or natural variation in groundwater quality. An ASD was prepared for arsenic and submitted to ADEM in June 2019.

Multiple lines of evidence support the conclusion that the SSL of arsenic in well MW-12 is naturally occurring and not the result of the BALF. The ASD satisfies Federal rules and precludes the need to complete an ACM under § 257.96.

Four key lines of evidence provide overwhelming support for an alternate source:

1. Documented data on naturally occurring arsenic in subsurface materials at the Site (further supported by numerous publications on elevated trace metals in the Pottsville formation).
2. Relative absence of arsenic occurring in BALF pore-water samples (lack of CCR source).
3. Boron isotopic analyses conclusively demonstrating that groundwater sampled in compliance well MW-12 does not have a CCR signature.
4. Spatial Pattern – wells adjacent and downgradient of MW-12, as well as the paired vertical delineation well (MW-12V), exhibit non-detected or low-level concentrations of arsenic and therefore, do not provide any indications of an arsenic plume.

However, ADEM has yet to approve the ASD for arsenic, and consequently an ACM is required according to the State rules (ADEM Admin. Code r. 335-13-15-.06(6)(g)5.). APC amended the current Plant Gorgas ACM that was prepared under § 257.96, ADEM Admin. Code r. 335-13-15-.06(7), and AO No. 18-096-GW to include the BALF in February 2020.

7.0 GROUNDWATER ASSESSMENT

As required by Part E of the Order (AO 18-096 GW) and correspondence from ADEM (March 2021), this report provides an update of groundwater delineation activities completed since the submittal of the Facility Plan for Groundwater Investigation (November 13, 2018). The primary purpose of this plan was to identify the horizontal and vertical extent of groundwater impacts defined by EPA Appendix IV groundwater protection standards.

A comprehensive groundwater delineation report summarizing findings was submitted to ADEM in September 2020. The conclusions and results presented indicate that groundwater delineation has been completed to a sufficient degree to define the spatial extent of groundwater impacts and to inform a groundwater remedy selection plan.

7.1 CHRONOLOGY OF DELINEATION ACTIVITIES

Beginning in 2019, Semi-Annual Progress Reports have routinely been provided to ADEM semi-annual in March and September. APC requested approval to combine information typically provided in the Semi-Annual Progress Reports with Semi-Annual Groundwater Monitoring and Corrective Action Reports on March 16, 2021. APC will now provide the Department with a discussion of delineation results and activities in each semi-annual groundwater monitoring and corrective action report until released in writing.

7.1.1 Delineation Wells

Part B of the Order requires the installation of additional wells as necessary to define the extent of groundwater impacts. The following documents delineation activities completed at the Plant Gorgas BALF since submittal of the Facility Plan for Groundwater Investigation on November 13, 2018.

- Installed one vertical delineation well on January 9, 2019. A second shallow vertical delineation boring (MW-12SV) was attempted, but no groundwater was observed. Therefore, a shallow vertical delineation well was not installed.
- Developed vertical delineation well MW-12V in March 2019.
- Collected groundwater samples from MW-12V on March 12, 2019.
- Submitted a Groundwater Investigation Report to the Department on May 13, 2019. This report recommended no further delineation and data gathered indicated strong potential for an alternate source.

- Submitted an Alternate Source Demonstration for arsenic over the GWPS at well MW-12 to the Department in July 2019.
- On December 30, 2019, provided the Department with a response to comments received from the Department on November 14, 2019.
- Submitted a revised Assessment of Corrective Measures that included the BALF to the Department in February 2020.
- Submitted a Semi-Annual Progress and Groundwater Delineation Report documenting groundwater investigation activities on September 30, 2020.
- Responded to the February 3, 2021 ADEM Semi-Annual Progress and Groundwater Delineation Reports comments letter on March 5, 2021.

7.1.2 Nature and Quantity of Release

Part B of the Order also required collecting data on the nature and estimated quantity of material released. To collect data regarding the nature of the source and estimated quantity of material released, sampling of bottom ash pore-water at two (2) locations was conducted. One of the locations was dry, indicating that portions of the BALF are unsaturated or contain very little water. Bottom ash pore-water from the other location was sampled for all EPA Appendix III and IV constituents. Groundwater quality data was compared to source water and leachate composition to provide a basis for evaluating the degree to which the source area has contributed constituents to groundwater. A case for an alternative source was previously submitted to the Department in July 2019 documenting both natural arsenic in geologic materials at the site and a relative lack of arsenic in pore-water collected from the BALF.

7.1.3 Discussion of Delineation Results

Groundwater Monitoring and Corrective Action reports for the Plant Gorgas BALF have identified SSLs in groundwater for arsenic at MW-12. Isoconcentration maps for arsenic is presented in **Figure 7a, Arsenic Concentrations Map (February 2021)** and **Figure 7b, Arsenic Concentrations Map (July 2021).**

Isoconcentration lines shown on **Figures 7a** and **7b** are data-driven contours derived from the spatial distribution of constituent concentrations in the well network. When spatially distributed objects are correlated (i.e., objects close together with similar characteristics are compared), mathematical interpolation can be used to predict quantities between the objects. In this case, the Geostatistical Analyst tool within ArcGIS was utilized to interpolate constituent concentrations between well locations within the area where concentrations were above laboratory method detection limits.

In cases where concentrations decrease below the GWPS in between well pairs, the extent of groundwater impacts are interpreted from the interpolated (predicted) data set. This takes into account the spatial pattern of decreasing concentrations observed in nearby wells.

A total of eight (8) compliance monitoring wells associated with the downgradient Gypsum Landfill exist between MW-12 and the property boundary. While these compliance wells are not associated with the BALF, they do act as de facto horizontal delineation wells since they are screened similarly to compliance wells at the BALF. These wells negate the technical need for horizontal delineation wells. Therefore, as shown on **Figure 5** and **Table 1b**, one vertical delineation well, MW-12V, has been installed at the site to assess potential impacts.

At the site, arsenic has exceeded the GWPS at compliance well MW-12. **Figures 7a** and **7b** show the extent of arsenic concentrations over the 0.01 mg/L GWPS. Spatially, arsenic concentrations appear concentrated in the immediate vicinity of MW-12, and a lack of exceedances in vertical delineation well MW-12V indicates impacts are limited to the uppermost aquifer. As discussed in **Section 6.0**, a strong case for an alternative source was previously submitted to the Department in July 2019 documenting both natural arsenic in geologic materials at the site and a relative lack of arsenic in pore-water collected from the BALF.

7.2 STATUS OF DELINEATION

Groundwater delineation activities at the site were completed in 2019. As shown on **Figures 7a** and **7b**, the vertical and horizontal extent of arsenic has been delineated and is characterized by an isolated pocket of elevated arsenic likely limited to the well screen interval of the MW-12. The previously submitted ASD provides conclusive lines of evidence that the BALF is not the source of elevated arsenic concentrations in this well.

8.0 EVALUATION OF GROUNDWATER CORRECTIVE MEASURES

Groundwater remedy selection has occurred in the following two stages: 1) completing an ACM to identify potentially feasible remedies for the Site after the initial determination that GWPSs have been exceeded; and 2) evaluating potential remedies to develop a site-specific remedy plan.

8.1 REMEDY SELECTION

Since submittal of the revised ACM in February 2020 (Anchor QEA 2020), extensive investigations have been performed to select effective corrective measures for COIs in groundwater at the Site. Semi-annual and annual status reports regarding investigations and evaluation have been submitted to the Department and posted to the Site's CCR compliance webpage. Based on investigations and evaluation, the following corrective measures were proposed in the Groundwater Remedy Selection Report submitted in December 2021 to address GWPS exceedances at the Plant Gorgas BALF:

1) Source control,
2) Monitored Natural Attenuation (MNA); and,
3) Adaptive site management

8.1.1 Source Control

Source control measures at BALF were completed by the consolidation and closure of the Unit. The Notice of Closure Completion for the BALF was submitted on December 3, 2020. BALF was closed by consolidation and capping the CCR in place to prevent stormwater infiltration. This facility is a landfill that contained dry stacked material; therefore, dewatering, as typically required at impoundments, was not needed to facilitate closure.

As part of closure, the BALF was consolidated from an area of approximately 56 acres to an area of 27 acres. The consolidated footprint occupies an area where dry stacking of ash had taken place for several years, so the area was dry and stable. The groundwater level is approximately 40 feet or more below the consolidated footprint.

The final cover system for the BALF is composed of a composite cover system incorporating a 60-millimeter high-density polyethylene (HDPE) geomembrane overlain with a geocomposite, both covered with 18 inches of protective soil and six inches of topsoil. This cover system meets the requirements of 40 CFR § 257.102(d)(3)(i)(I) and (II) and ADEM Admin. Code r. 335-13-15-.07(3)(d)3.(i)(I) and (II).

Infiltration of liquids is prevented by the presence of both an 18-inch infiltration/protective layer and the 60-millimeter HDPE geomembrane. A minimum 6-inch erosion layer of soil capable of sustaining native plant growth covers the infiltration layer and provides erosion protection for the final cover system. Sloping of the final cover system promotes drainage of runoff from the area and further minimizes potential for infiltration. The final cover system was installed over the consolidated area, eliminating direct exposure of CCR to the surrounding environment and limiting the likelihood of a release of CCR constituents to groundwater.

8.1.2 Monitored Natural Attenuation (MNA)

MNA is a selected remedy for the BALF. The trends observed in concentration versus time and concentration versus distance graphs provide evidence that natural attenuation is currently occurring in several areas at the Site, even without source control. Concentration versus distance graphs along nine upgradient-to-downgradient well transects at the nearby Ash Pond indicate that arsenic concentrations are generally decreasing with distance from the respective Unit boundary.

Based on the geochemical investigations, several lines of evidence support multiple attenuating mechanisms for arsenic. The major attenuating mechanisms include the sorption on iron oxides and precipitation of arsenate phases.

All COIs are subject to physical attenuation mechanisms such as dispersion and flushing, which will contribute to decreased concentrations with time and distance from the BALF. Rates of attenuation were determined by extrapolating recent decreasing trends on the concentration versus time graphs to the GWPS for areas where decreasing trends were observed. Depending on the COI and well (area), MNA alone is estimated to achieve GWPSs within 24 years, not considering the benefits of closure. This time frame is reasonable compared to other, more aggressive corrective action technologies, which are not expected to achieve GWPSs in less than 24 years.

Column studies were performed to assess the ability for the aquifer (soil) to chemically attenuate COIs and to help determine the stability of the attenuated COIs. Column studies indicate arsenic is attenuated by aquifer media (residual soils). The attenuation capacity of aquifer soils determined from column testing was scaled up to the entire volume of the aquifer downgradient of the Unit but within the property boundary. The extrapolation showed attenuating capacity of the aquifer greatly exceeds the mass of arsenic requiring attenuation.

Selective sequential extraction (SSE) was performed on samples of well solids (precipitates) and soils used in the column studies to assess the stability of the attenuated COIs and their host minerals. Several of the well solids (precipitates) extracts, particularly lithium, were below detection limits for the COIs. Based on available SSE data for well solids (precipitates), arsenic was primarily in the F4 (oxidizable) fraction, with some in the F2 (exchangeable) and F5 (residual) fractions. For SSE of the post-column soils, arsenic was primarily in the F2 (exchangeable) and F5 (residual) fractions, with some in the F3 (reducible) and F4 (oxidizable) fractions. Therefore, arsenic is expected to remain immobile (not remobilize back into groundwater) because is attenuated primarily in stable mineral phases.

Reactive transport modeling was performed along simulated fracture pathways in rock and demonstrated that the migration of arsenic is significantly retarded (slower) as compared to a nonreactive constituent such as chloride. The attenuation of arsenic is dominated by geochemical reactions near the fracture.

8.1.3 Adaptive Site Management

As applied here, adaptive site management is a component of the corrective action monitoring program, in which monitoring results are continually evaluated to determine if the system is making progress toward achieving remedy goals. Based on system performance—either achieving goals or not making expected progress—the remedy system may need to be adapted or changed. Adaptation of the system may include ceasing actions no longer necessary or changing the system because it is not performing as expected. The adaptive site management approach plans for changes at the Site and provides a process to make changes as necessary.

8.2 CORRECTIVE ACTION MONITORING PROGRAM

As required by 40 CFR § 257.98(a) and ADEM Admin. Code r. 335-13-15-.06(9)(a), the owner/operator must implement the groundwater remedy within 90 days of selecting a remedy, including establishing a corrective action groundwater monitoring program. That monitoring program must perform the following actions: 1) meet the assessment monitoring requirements of 40 CFR § 257.95 and ADEM Admin. Code r. 335-13-15-.06(6); 2) document the effectiveness of the remedy; and 3) demonstrate compliance with the GWPS. A corrective action groundwater monitoring program providing site-specific remedy monitoring details will be submitted within 90 days of the Groundwater Remedy Selection Report (Anchor, 2021).

8.3 REMEDY IMPLEMENTATION

In accordance with 40 CFR § 257.97(d) and ADEM Admin. Code r. 335-13-15-.06(8)(d), a schedule was developed for implementing and completing remedial activities at the Site. As described in **Section 8.1.1**, unit closure is complete at the BALF. The MNA process is currently being implemented at the Site, although a formalized process to evaluate and document the process has not been established. MNA will be implemented by establishing the detailed MNA sampling, analysis, and evaluation plan within 90 days as part of the corrective action groundwater monitoring program.

9.0 SUMMARY AND CONCLUSIONS

Based on the results of statistical analysis presented in this report, the BALF remains in assessment monitoring.

An ASD was prepared to address historical arsenic GWPS exceedances at compliance well MW-12 in June 2019. This ASD was prepared in accordance with § 257.95(g)(3)(ii) and ADEM Admin Code r. 335-13-15-.06(6)(g)4.(ii) under the direction of a licensed professional engineer with Southern Company Services. ADEM has not yet approved the ASD for arsenic, so APC has amended the current Plant Gorgas ACM to include the BALF.

The certified compliance monitoring well network is sampled on a semi-annual basis. The groundwater samples were analyzed for all Appendix III and IV parameters. Statistical evaluations of the February and July 2021 assessment monitoring data identified an SSL (arsenic) of Appendix IV constituents above the GWPS but did not identify any new or additional SSLs beyond those reported in the 2018 Groundwater Monitoring and Corrective Action Report.

In accordance with § 257.95(d) and Alabama Admin. Code r. 335-13-15-.06(6)(d), APC will continue semi-annual assessment monitoring.

The pending ASD review decision by the Department has direction implications on future actions for the site. If approved, the site will return to assessment monitoring.

The following future actions will be taken or are recommended for the site:

- Develop the Corrective Action Groundwater Monitoring Program and submit the Groundwater Remedy Monitoring Plan in March 2022, which will include the BALF;
- Submit a Proposed Monitoring Well Installation plan for 1 to 2 additional downgradient compliance wells at or closer to the new closed BALF footprint; and
- Conduct the first semi-annual assessment monitoring event in 2022 and submit the semi-annual groundwater monitoring and corrective action report summarizing the findings to ADEM by July 31, 2022.

10.0 REFERENCES

Alabama Department of Environmental Management (ADEM), 2018, Solid Waste Program, Division 13, ADEM Admin. Code r. 335-13-15.

Anchor, QEA, 2020, Assessment of Corrective Measures, Plant Gorgas.

Anchor, QEA, 2021, Groundwater Remedy Selection Report Plant Gorgas.

Anchor QEA, 2021, Semi-Annual Remedy Selection and Design Progress Report Plant Gorgas.

ASTM Standard D5092, 2004(2010)e1, Standard Practice for Design and Installation of Groundwater Monitoring Wells, ASTM International, West Conshohocken, PA, DOI 10.1520/D5092-04R10E01, www.astm.org.

Bragg, L.J., Oman, J.K., Tewalt, S.J., Oman, C.L., Rega, N.H., Washington, P.M., and Finkelman, R.B., 1997, U.S. Geological Survey Coal Quality (COALQUAL) database; version 2.0, U.S.

Diehl, S.F., Goldhaber, M.B., and Hatch, J.R., 2004, Modes of occurrence of mercury and other trace-elements in coals from the warrior field, Black Warrior Basin, Northwestern Alabama, International Journal of Coal Geology, v. 59, p. 193-208.

Geological Survey of Alabama (GSA), 2010b, Digital Geologic Map of Alabama, URL: http://www.gsa.state.al.us, accessed November, 2010.

Goldhaber, M.B., Lee, R.C., Hatch, J.R., Pashin, J.C., and Treworgy, J., 2002, The role of large-scale fluid flow in subsurface arsenic enrichment, In: Welch, A., Stollenwerk, K (Eds.), Arsenic in Ground Water: Occurrence and Geochemistry, v. 5, p. 127-176.

Jennings, S.P., and Cook, M.R., 2010, A Report to the Hanceville Water Works and Sewer Board, Open File Report 1001.

Kolker, A., and Nordstrom, D.K. 1997, Occurrence and Micro-Distribution of Arsenic in Pyrite, U.S. Geological Survey.

O'Rear, D.M., Wahl, K.D., and Jefferson, P.O., 1972, Water availability and geology of Walker County, Alabama: Geological Survey of Alabama Map 120, 21p.

Palmer, C.A., Oman, C.L., Park, A.J., and Luppens, J.A., 2015, The U.S. Geological Survey coal quality (COALQUAL) database version 3.0: U.S. Geological Survey Data Series 975, 43 p.with appendixes, http://dx.doi.org/10.3133/ds975.

Pashin, J.C., and Raymond, D.E., 2004, Glacial-eustatic control of coalbed methane reservoir distribution (Pottsville Formation; Lower Pennsylvanian) in the Black Warrior Basin of Alabama: Tuscaloosa, Alabama, University of Alabama College of Continuing Studies, 2004 International Coalbed Methane Symposium Proceedings, Paper 0413, 15 p.

Pashin, J.C., 2007, Hydrodynamics of Coalbed Methane Reservoirs in the Black Warrior Basin: Key to Understanding Reservoir Performance and Environmental Issues, Applied Geochemistry, v. 22, I. 10, p. 2257-2272.

Raymond, D.E., Osborne, W.E., Copeland, C.W. Jr, and Neathery, T.L., 1988, Alabama Stratigraphy: Alabama Geological Survey Circular, v. 140, p. 1-97.

Sapp, C.D., and Emplaincourt, J., 1975, Physiographic regions of Alabama, Special Map 168, Geological Survey of Alabama.

Stricklin, V.E., 1989, Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama: Area 3, U.S. Geological Survey, Water-Resources Investigations Report 88-4120.

USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance.

USEPA. 2011. Data Validation Standard Operating Procedures. Science and Ecosystem Support Division. Region IV. September.

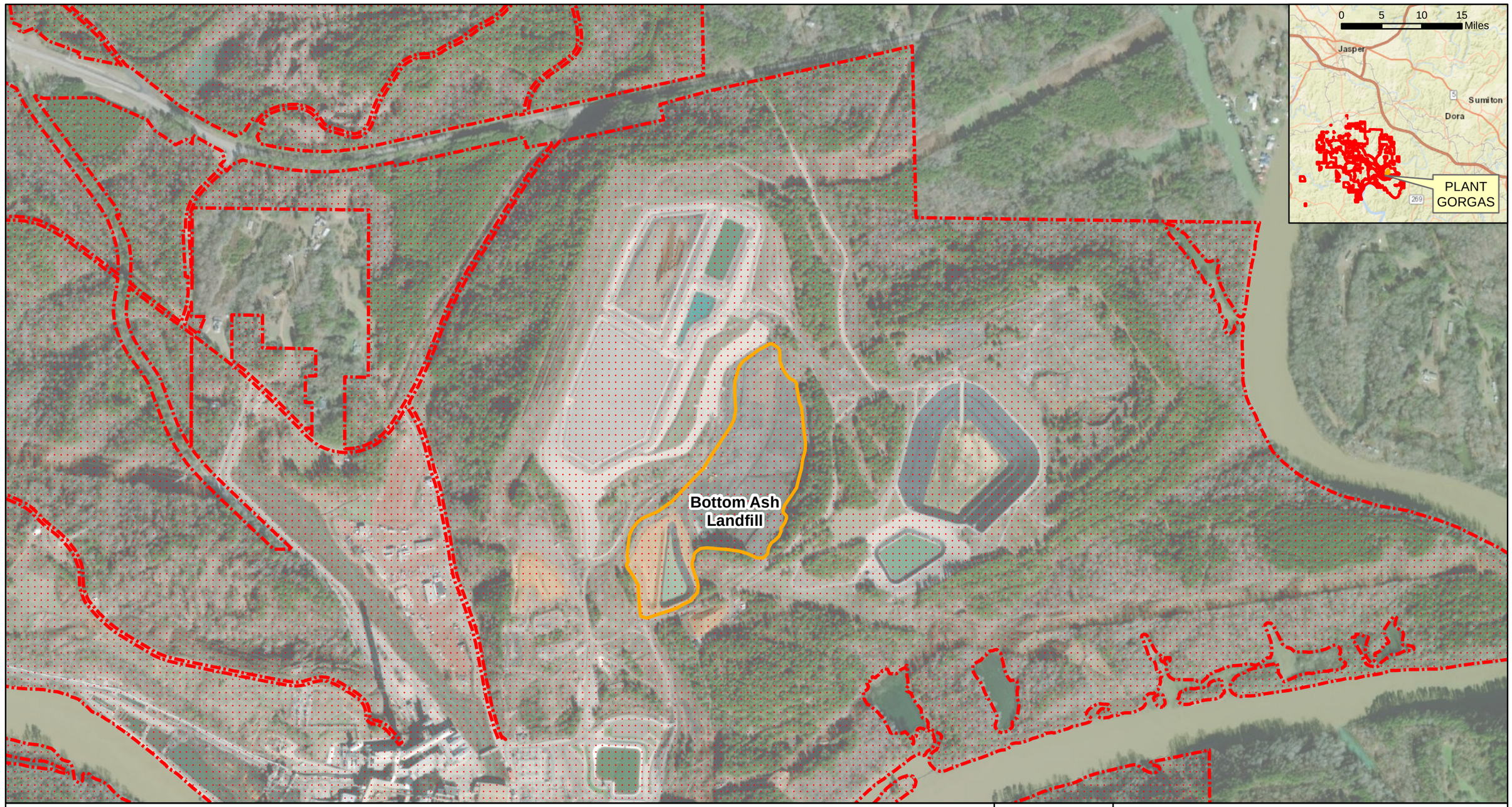
USEPA. 2014. National Functional Guidelines for Inorganic Superfund Data Review. Office of Superfund Remediation and Technology Innovation (OSRTI). August.

USEPA. 2015. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. *40 CFR Parts 257and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule.* [EPA-HQ-RCRA–2009– 0640; FRL–9919–44–OSWER]. RIN–2050–AE81. April.

United States Geological Survey (USGS), 1975 (Photo revised 1983), Goodsprings Quadrangle, 7.5 Minute Series Topographic Map.

Ward II, W.E., Barnett, R.L., Rheams, L.J., 1989, Coal Resources of Walker County, Alabama, Geological Survey of Alabama, Special Map 205.

Figures



Legend

- Bottom Ash Landfill Boundary (Approximate)
- Property Boundary (Approximate)

N

0 500 1,000 2,000 3,000 Feet

SCALE	1:9000
DATE	11/5/2020
DRAWN BY	KAR
CHECKED BY	GBD

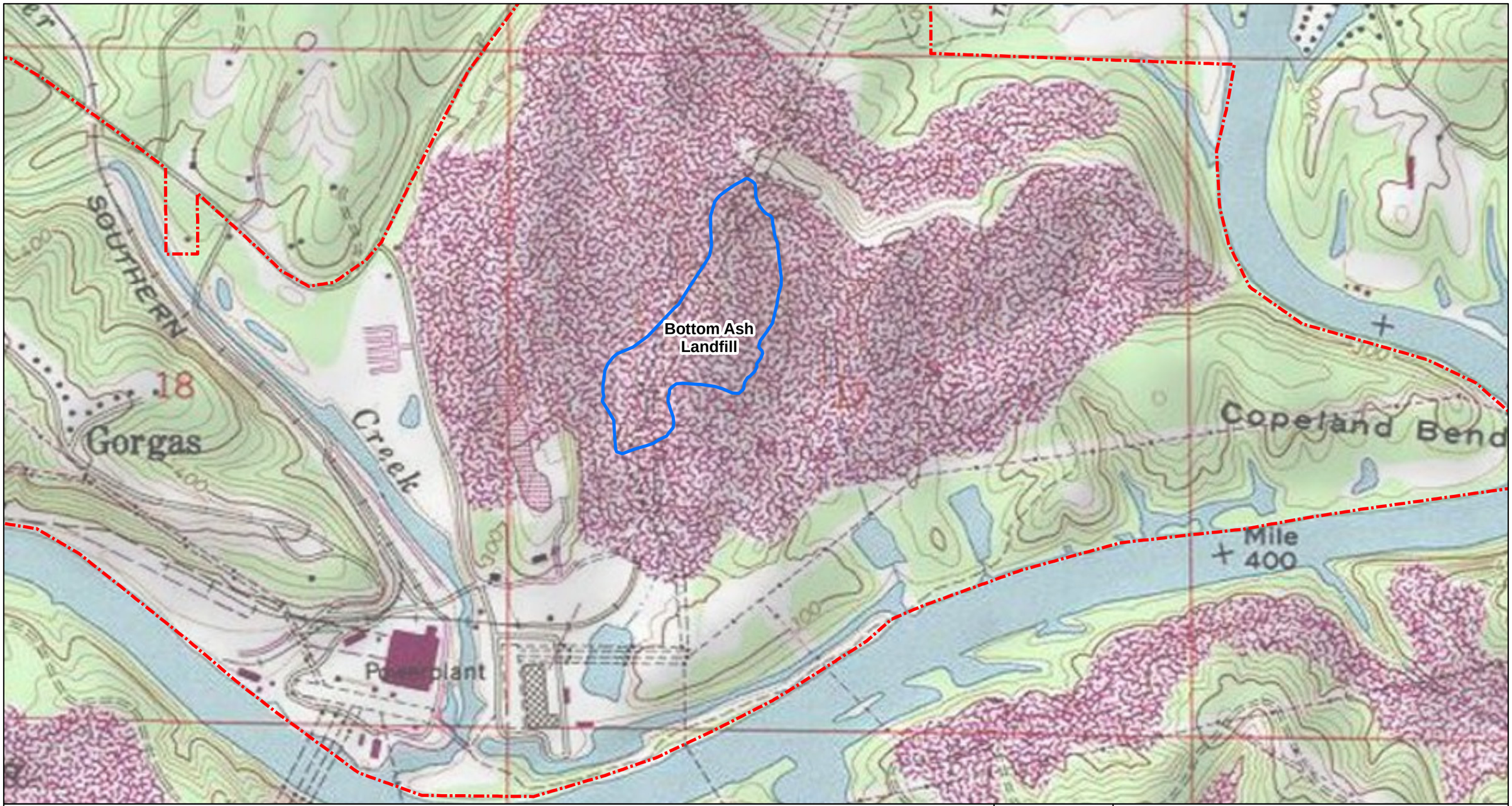
DRAWING TITLE

SITE LOCATION MAP
PLANT GORGAS BOTTOM ASH LANDFILL

FIGURE NO

FIGURE 1

Southern Company



Legend

- Property Boundary (Approximate)
- Bottom Ash Landfill Boundary (Approximate)

N

0 500 1,000 2,000 3,000 Feet

SCALE	1:9000
DATE	3/23/2020
DRAWN BY	KAR
CHECKED BY	GBD

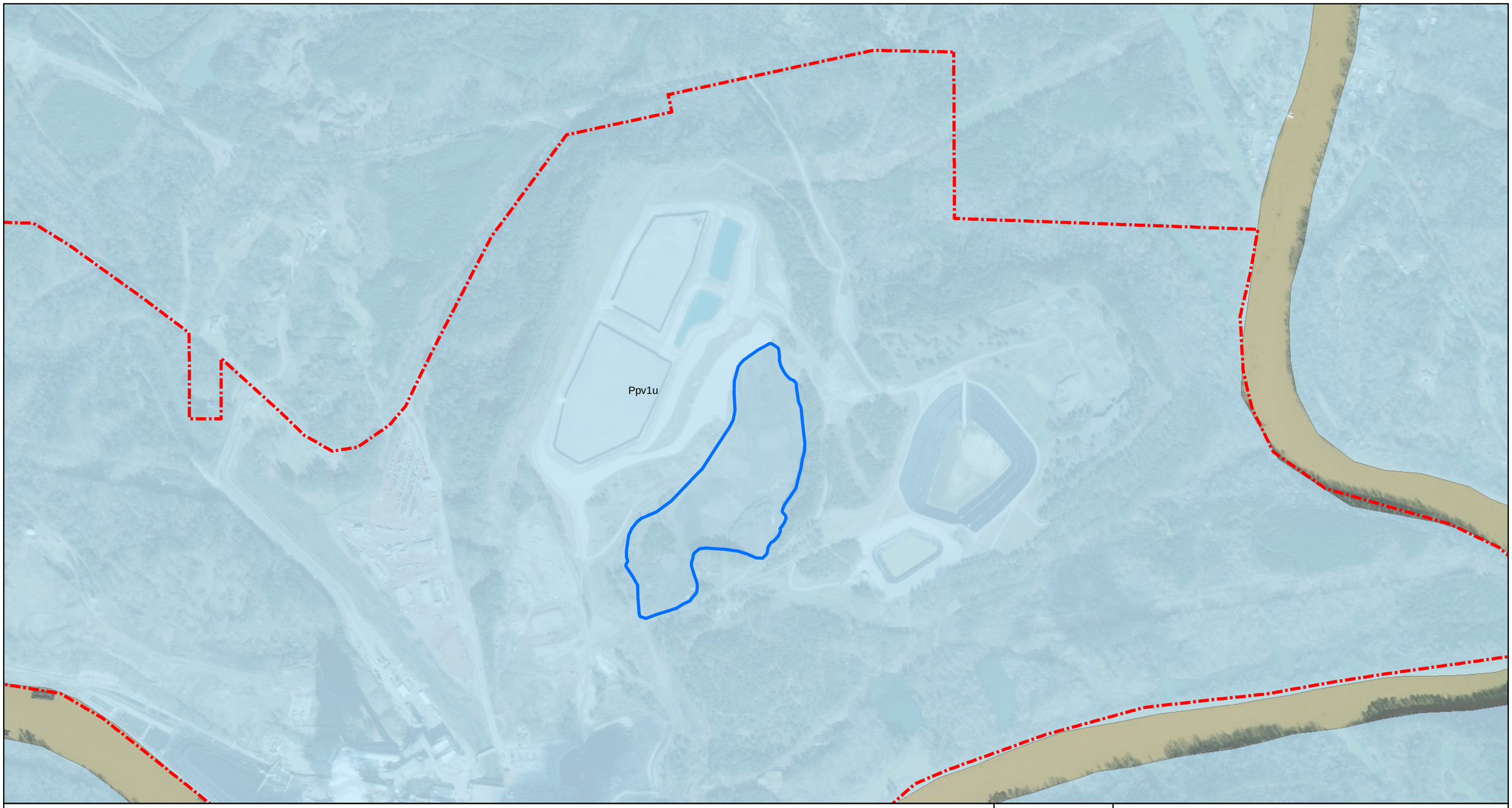
DRAWING TITLE

SITE TOPOGRAPHIC MAP
PLANT GORGAS BOTTOM ASH LANDFILL

FIGURE NO

FIGURE 2

Southern Company



Legend

Property Boundary (Approximate)

Bottom Ash Landfill Boundary (Approximate)

Geologic Units

Pottsville Formation (upper part), Appalachian Plateaus (Ppv1u)

N

0 500 1,000 2,000 3,000 Feet

SCALE	1:9000
DATE	3/23/2020
DRAWN BY	KAR
CHECKED BY	GBD

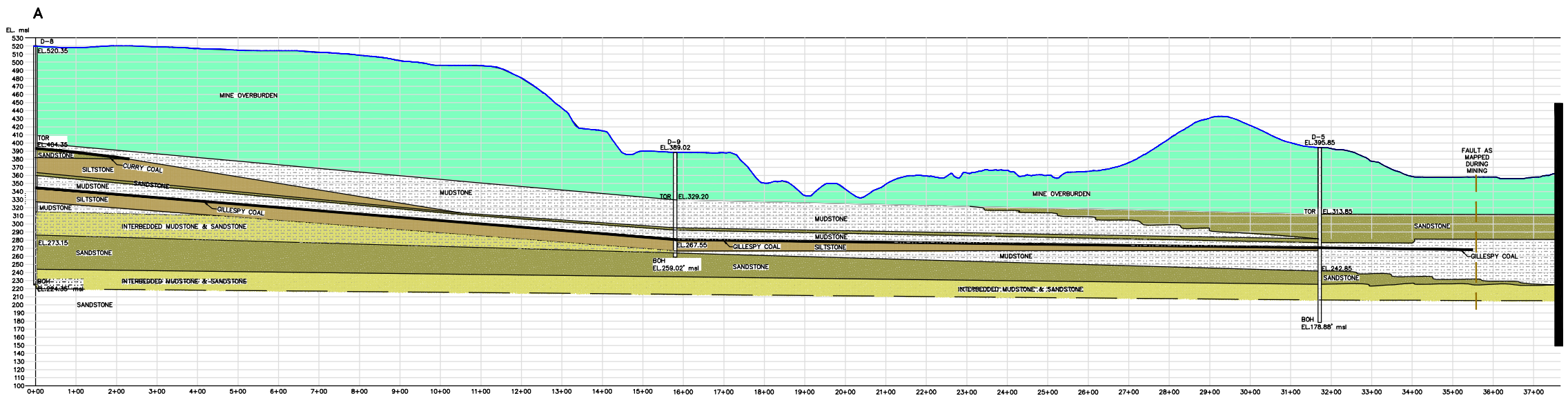
DRAWING TITLE

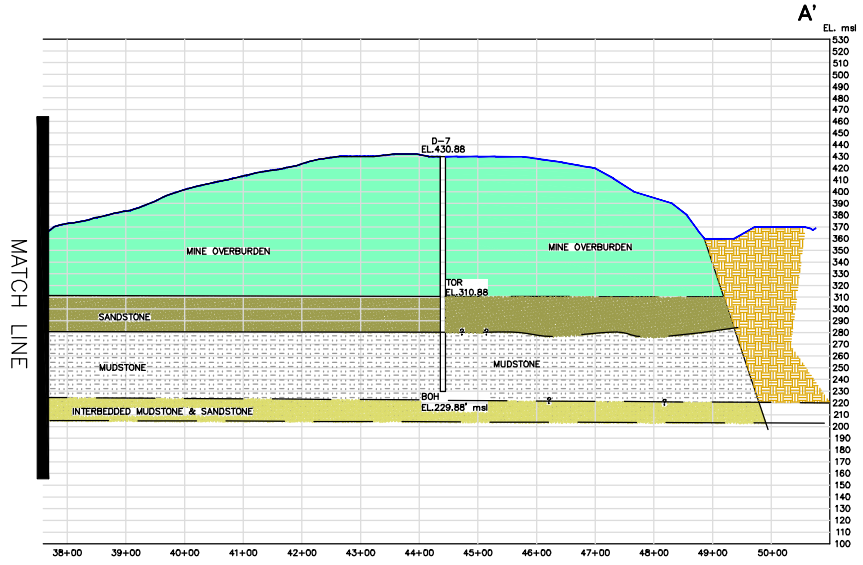
SITE GEOLOGIC MAP
PLANT GORGAS BOTTOM ASH LANDFILL

FIGURE NO

FIGURE 3

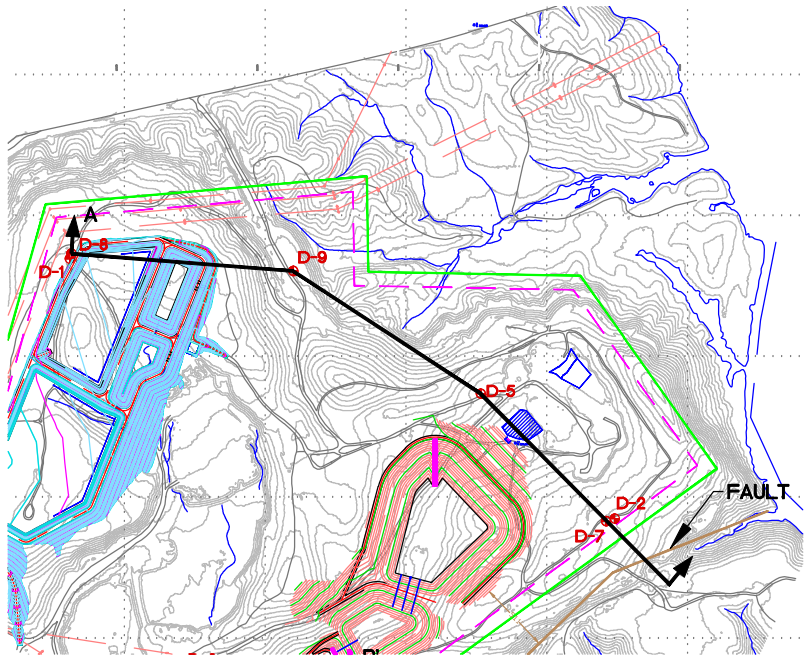
Southern Company





SECTION A–A'
SCALE: VERT: 1"= 100'
HORIZ: 1"= 200'

SECTION A–A'
SCALE: VERT: 1"= 100'
HORIZ: 1"= 200'



STATE PLAN
NAD 27
WEST ZONE

GRAPHIC SCALE
800 0 400 800 1600 3200
(IN FEET)
1 inch = 800ft.

REVISION	DATE

REVISION	DATE

REVISION	DATE
0	07/07/2017

ISSUED FOR REPORT

Southern Company Services
Engineering and Construction Services
FOR
Alabama Power Company

PLANT GORGAS
UNIT 8, UNIT 9 AND UNIT 10
CCB STORAGE FACILITY
GEOLOGIC CROSS SECTION A–A'

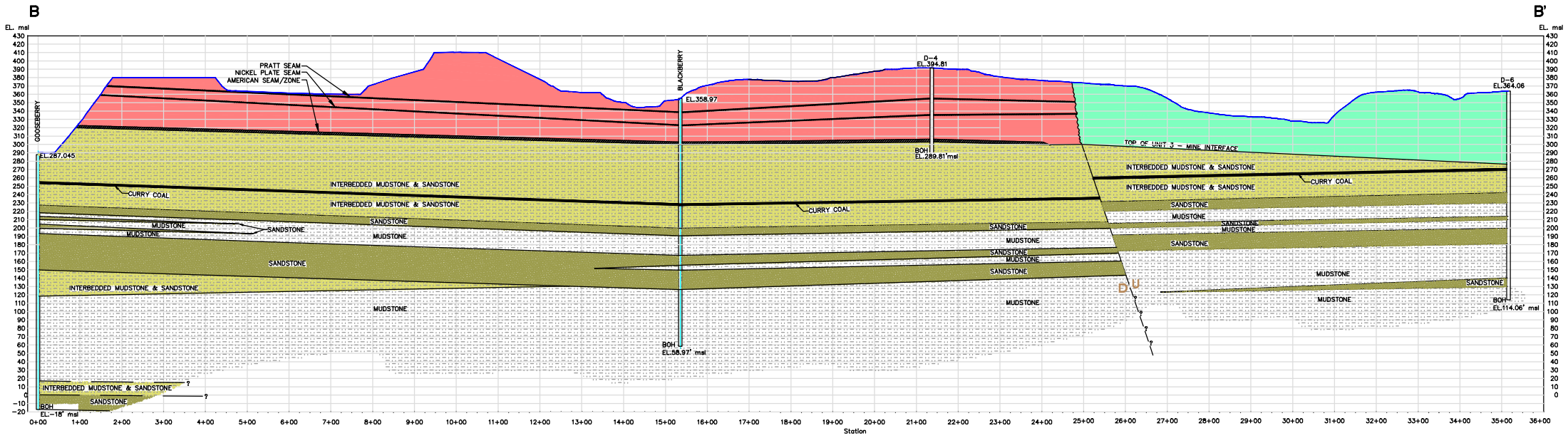
BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR

BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR

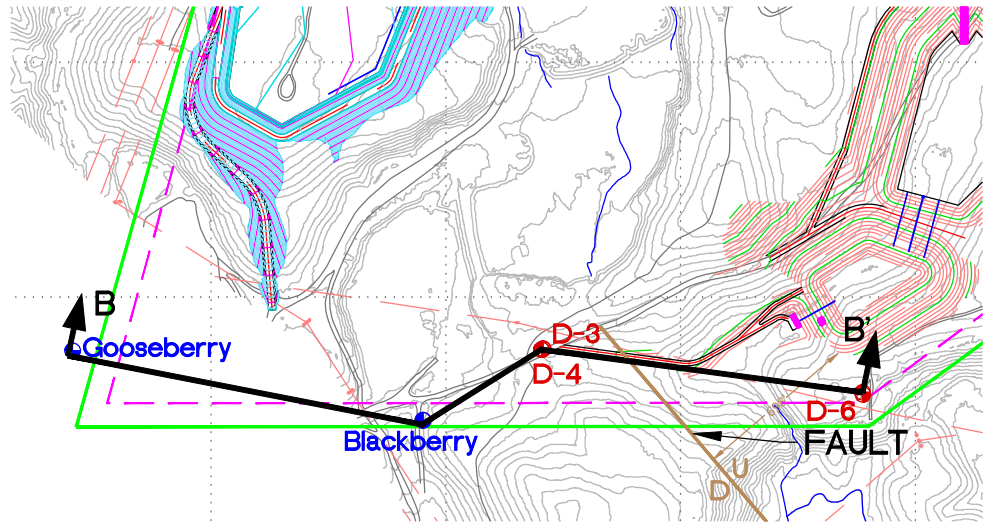
BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR
GBD	GBD	SCB	XXX	XXX	XXX	XXX

SCALE	DRAWING NUMBER	SHEET	CONT'D	REV
AS SHOWN	**FIGURE 4A**	1	FINAL	0

ANSI C: 22x17 Acad2013



SECTION B–B'
SCALE: VERT: 1"= 100'
HORIZ: 1"= 200'



STATE PLAN
NAD 27
WEST ZONE

GRAPHIC SCALE
500 0 250 500 1000 2000
(IN FEET)
1 inch = 500ft.

REVISION	DATE

REVISION	DATE

REVISION	DATE
0	07/07/2017

ISSUED FOR REPORT

Southern Company Services
Engineering and Construction Services
FOR
Alabama Power Company

PLANT GORGAS
UNIT 8, UNIT 9 AND UNIT 10
CCB STORAGE FACILITY
GEOLOGIC CROSS SECTION B–B'

BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR

BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR

BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR
GBD	GBD	SCB	XXX	XXX	XXX	XXX

SCALE	DRAWING NUMBER	SHEET	CONT'D	REV
AS SHOWN	**FIGURE 4B**	1	FINAL	0

ANSI C: 22x17 Acad2013

Legend

- Downgradient Monitoring Well
- Upgradient Monitoring Well
- Vertical Delineation Monitoring Well
- Bottom Ash Landfill Boundary (Approximate)

N

0 250 500 1,000 1,500 Feet

SCALE	1:6000
DATE	6/23/2020
DRAWN BY	KWR
CHECKED BY	GBD

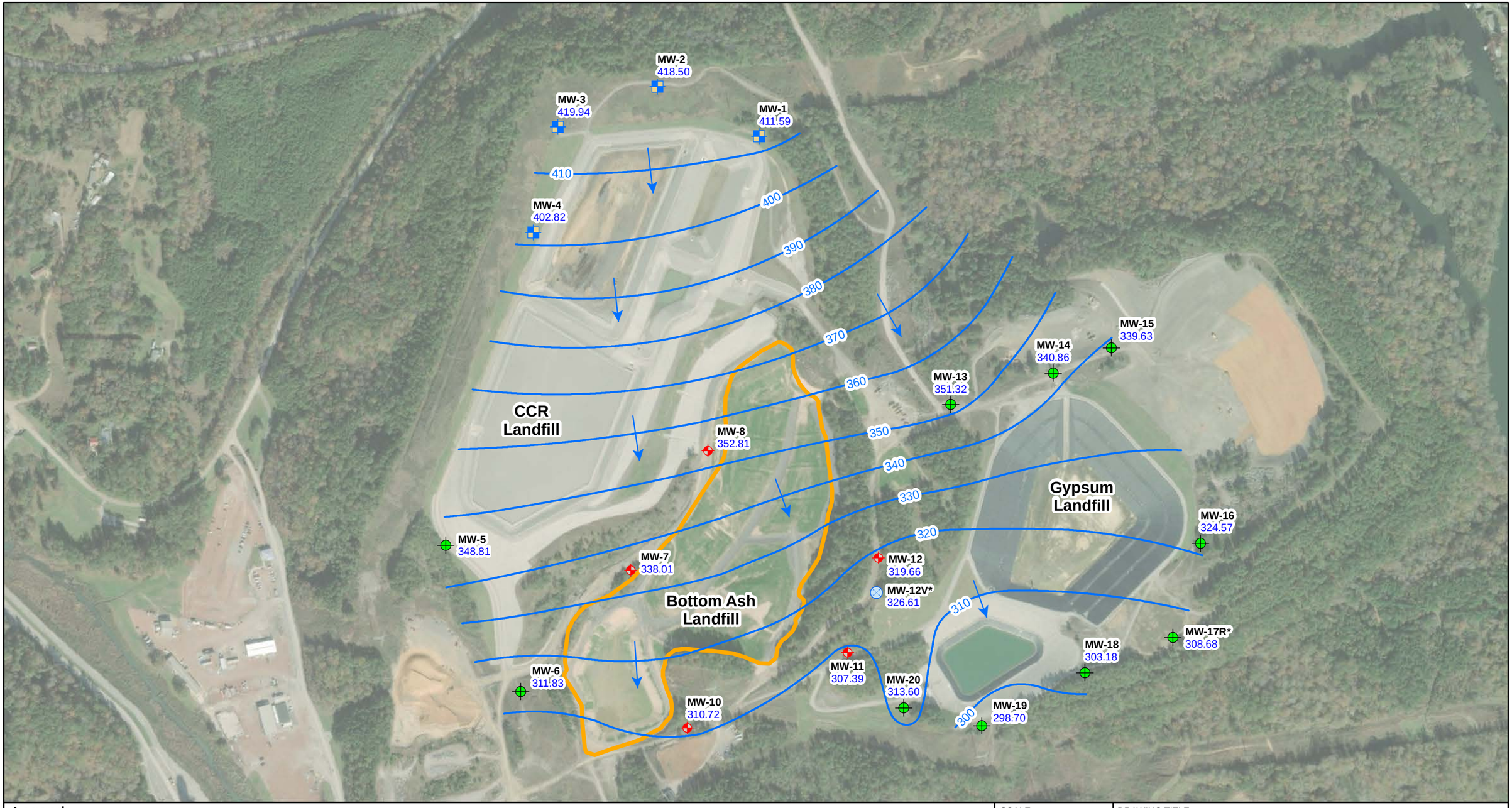
DRAWING TITLE

MONITORING WELL LOCATION MAP
PLANT GORGAS BOTTOM ASH LANDFILL

FIGURE NO

FIGURE 5

Southern Company



Legend

- Downgradient Monitoring Well
- Upgradient Monitoring Well
- Vertical Delineation Well
- Monitoring Well
- **MW-1** / 411.59 — Well ID / Groundwater Elevation
- Potentiometric Surface Contour (ft NAVD88)
- Approximate Groundater Flow Direction
- Bottom Ash Landfill Boundary (Approximate)

N

0 250 500 1,000 1,500 2,000 Feet

NOTES: 1. NAVD88 indicates North American Vertical Datum of 1988.
2. MW-10, screened across American Coal Seam, was factored into contouring.
3. *MW-12V and MW-17R are screened entirely in rock and were not factored into contouring.

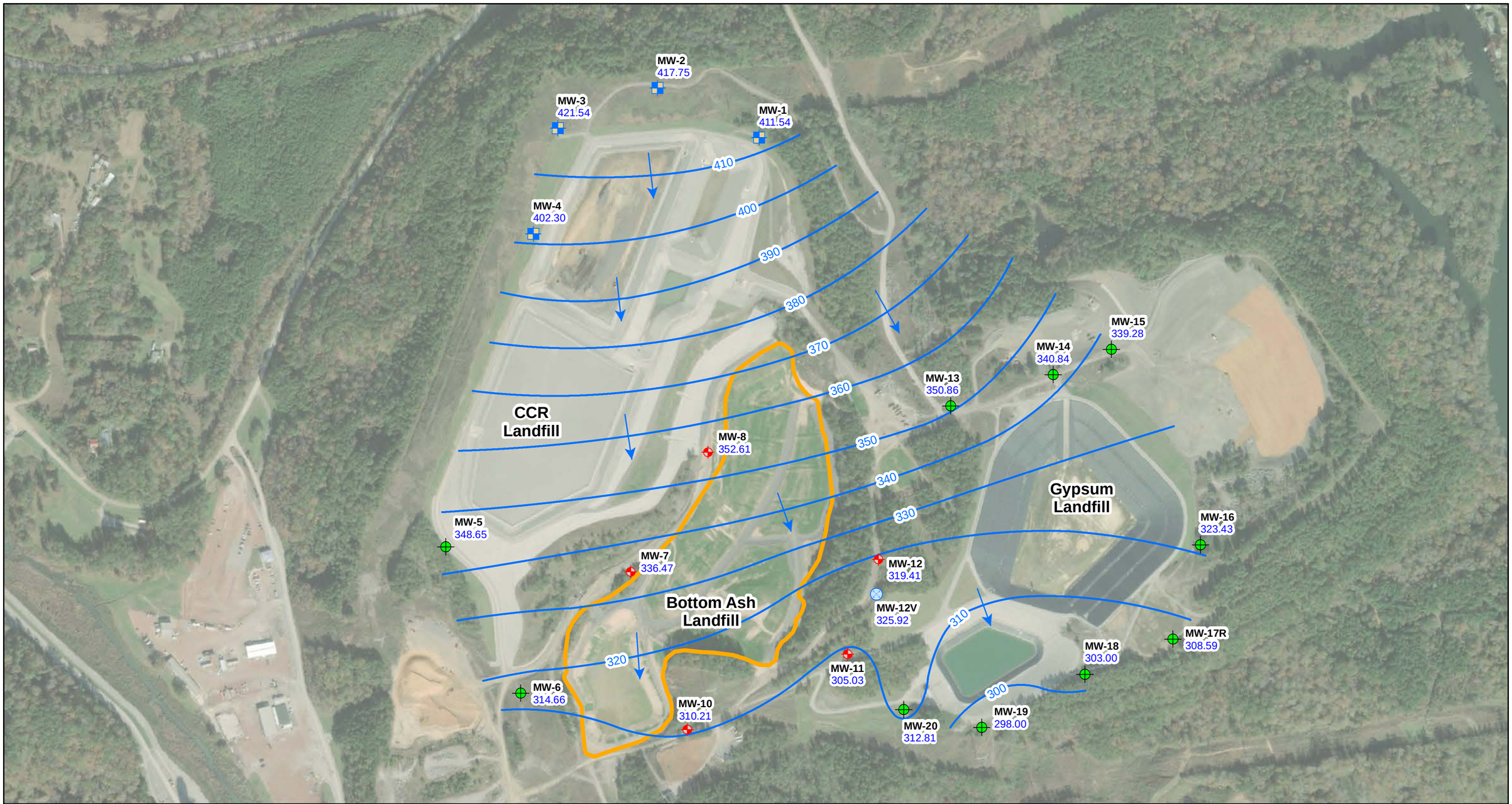
SCALE	1:6000
DATE	6/7/2021
DRAWN BY	KAR
CHECKED BY	GBD

DRAWING TITLE

POTENTIOMETRIC SURFACE CONTOUR MAP FEBRUARY 22, 2021 PLANT GORGAS BOTTOM ASH LANDFILL

FIGURE NO **FIGURE 6A**

Southern Company



Legend

- Downgradient Monitoring Well
- Upgradient Monitoring Well
- Vertical Delineation Well
- Monitoring Well
- **MW-1** / 411.54 — Well ID / Groundwater Elevation
- Potentiometric Surface Contour (ft NAVD88)
- Approximate Groundater Flow Direction
- Bottom Ash Landfill Boundary (Approximate)

N

0 250 500 1,000 1,500 2,000 Feet

NOTES: 1. NAVD88 indicates North American Vertical Datum of 1988.
2. MW-10, screened across American Coal Seam, was factored into contouring.
3. *MW-12V and MW-17R are screened entirely in rock and were not factored into contouring.

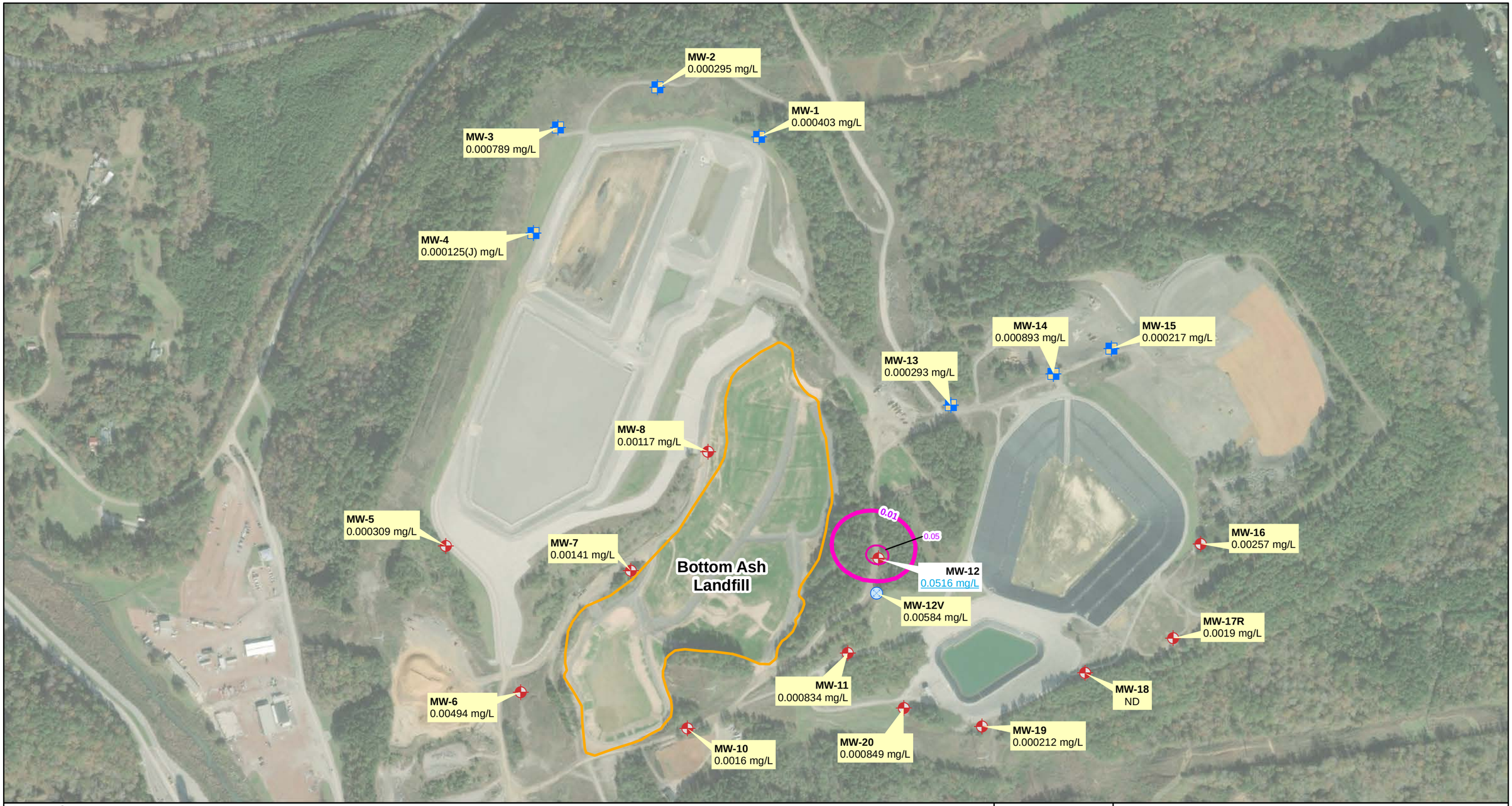
SCALE	1:6000
DATE	12/1/2021
DRAWN BY	KWR
CHECKED BY	GBD

DRAWING TITLE

POTENTIOMETRIC SURFACE CONTOUR MAP
JULY 12, 2021
PLANT GORGAS BOTTOM ASH LANDFILL

FIGURE NO **FIGURE 6B**

Southern Company



Legend

- Arsenic GWPS Isoconcentration Contour (0.01 mg/L)
- Arsenic Isoconcentration Contour (mg/L)
- Downgradient Monitoring Well
- Upgradient Monitoring Well
- Vertical Delineation Monitoring Well
- Bottom Ash Landfill Boundary

N

0 250 500 1,000 1,500 Feet

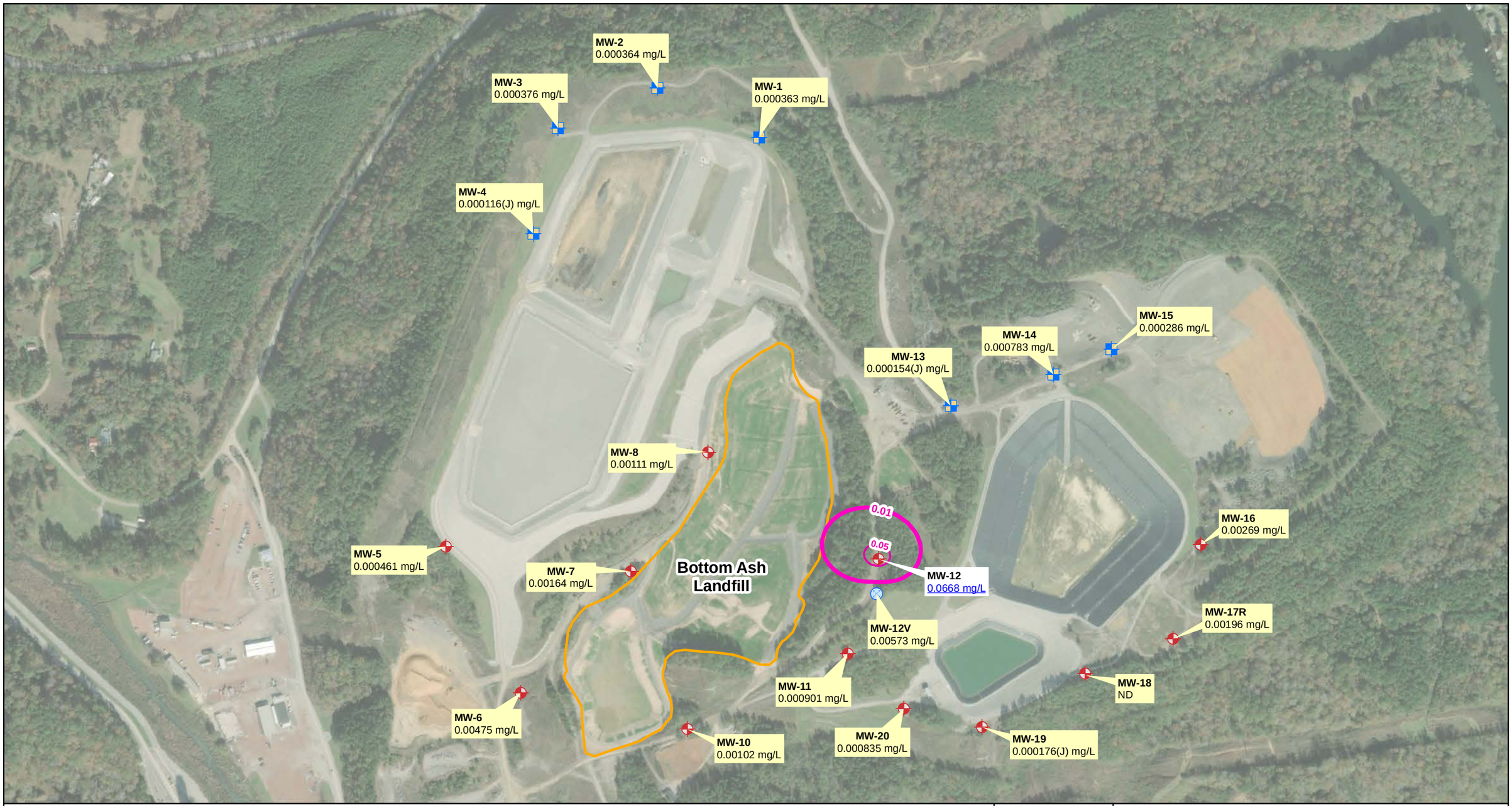
NOTES:
1. Groundwater samples were collected from February 22 to 24, 2021.
2. ND indicates concentration not detected above laboratory Method Detection Limit (MDL) of 0.000068 mg/L.
3. Concentrations underlined in blue exceed the arsenic Groundwater Protection Standard of 0.01 mg/L.
4. J value indicates estimated concentration greater than or equal to the laboratory MDL and less than the laboratory Reporting Limit (RL).
4. Vertical delineation well MW-12V is screened across a deeper stratigraphic interval.

SCALE	1:6000
DATE	1/6/2022
DRAWN BY	KAR
CHECKED BY	GBD

DRAWING TITLE
ARSENIC CONCENTRATIONS MAP
FEBRUARY 2021
PLANT GORGAS BOTTOM ASH LANDFILL

FIGURE NO
FIGURE 7A

Southern Company



Legend

- Arsenic GWPS Isoconcentration Contour (0.01 mg/L)
- Arsenic Isoconcentration Contour (mg/L)
- Downgradient Monitoring Well
- Upgradient Monitoring Well
- Vertical Delineation Monitoring Well
- Bottom Ash Landfill Boundary

N

0 250 500 1,000 1,500 Feet

NOTES:
1. Groundwater samples were collected on July 12, July 20, and July 21, 2021.
2. ND indicates concentration not detected above laboratory Method Detection Limit (MDL) of 0.000068 mg/L.
3. Concentrations underlined in blue exceed the arsenic Groundwater Protection Standard of 0.01 mg/L.
4. J value indicates estimated concentration greater than or equal to the laboratory MDL and less than the laboratory Reporting Limit (RL).
4. Vertical delineation well MW-12V is screened across a deeper stratigraphic interval.

SCALE	1:6000
DATE	1/6/2022
DRAWN BY	KAR
CHECKED BY	GBD

DRAWING TITLE
ARSENIC CONCENTRATIONS MAP
JULY 2021
PLANT GORGAS BOTTOM ASH LANDFILL

FIGURE NO
FIGURE 7B

Southern Company

Tables

Southern Company

Table 1a. - Compliance Monitoring Well Network Details
Plant Gorgas Bottom Ash Landfill (BALF)

Well ID	Hydraulic Location	Geologic Unit	Latitude	Longitude	Ground Surface Elevation (ft NAVD)	Top Of Casing Elevation (ft NAVD)	Well Depth (ft BTOC)	Top Of Screen Elevation (ft NAVD)	Bottom Of Screen Elevation (ft NAVD)	Screen Length (ft)	Date Of Installation
WELL NETWORK											
MW-1	Upgradient	Mine Spoil - Pottsville Fm Interface	33.65827	-87.19083	499.19	502.38	104.5	405.10	395.10	10	1/15/2014
MW-2	Upgradient	Mine Spoil - Pottsville Fm Interface	33.65899	-87.19258	498.54	502.17	91.0	417.90	407.90	10	10/23/2014
MW-3	Upgradient	Mine Spoil - Pottsville Fm Interface	33.65841	-87.1943	522.23	525.90	115.5	417.10	407.10	10	10/23/2014
MW-4	Upgradient	Mine Spoil - Pottsville Fm Interface	33.65689	-87.19473	516.67	517.89	126.7	400.40	390.40	10	2/19/2012
MW-7	Downgradient	Mine Spoil - Pottsville Fm Interface	33.65221	-87.19625	391.59	394.59	74.0	330.99	320.99	10	10/29/2014
MW-8	Downgradient	Mine Spoil - Pottsville Fm Interface	33.65009	-87.19496	413.15	416.10	72.3	354.25	344.25	10	1/16/2014
MW-10	Downgradient	Pottsville Fm - American Coal Seam	33.65184	-87.19305	391.66	395.10	108.6	306.86	286.86	20	7/24/2012
MW-11	Downgradient	Mine Spoil - Pottsville Fm Interface	33.65355	-87.19172	403.69	406.96	135.0	282.36	272.36	10	10/30/2014
MW-12	Downgradient	Mine Spoil - Pottsville Fm Interface	33.64956	-87.19209	470.70	474.24	169.0	315.60	305.60	10	11/3/2014

Notes:
ft = feet; ft NAVD = elevation in feet, referenced to North American Vertical Datum; ft BTOC = depth, referenced in feet below top of casing
(1) Coordinates have been transformed into WGS84 from NAD 27/83, State Plane, Alabama, feet.
(2) Vertical elevations are in feet relative to the North American Vertical Datum (NAVD)1988.
(3) Total well depth accounts for sump if data provided on well construction logs.

Table 1b. - Delineation Well Network Details
Plant Gorgas Bottom Ash Landfill (BALF)

Well ID	Hydraulic Location	Geologic Unit	Latitude	Longitude	Ground Surface Elevation (ft NAVD)	Top Of Casing Elevation (ft NAVD)	Well Depth (ft BTOC)	Top Of Screen Elevation (ft NAVD)	Bottom Of Screen Elevation (ft NAVD)	Screen Length (ft)	Date Of Installation
WELL NETWORK											
MW-12V	Vertical Delineation	Pottsville Fm - Pratt Coal Group	33.65064	-87.18932	478.64	481.32	206.1	285.64	275.64	10	3/1/2019

Notes:
ft = feet; ft NAVD = elevation in feet, referenced to North American Vertical Datum; ft BTOC = depth, referenced in feet below top of casing
(1) Coordinates have been transformed into WGS84 from NAD 27/83, State Plane, Alabama, feet.
(2) Vertical elevations are in feet relative to the North American Vertical Datum (NAVD)1988.
(3) Total well depth accounts for sump if data provided on well construction logs.

Southern Company

Table 2. Parameters And Reporting Limits

Plant Gorgas Bottom Ash Landfill
02/22/2021 - 07/21/2021

Appendix III Parameters			
Parameters	**Analytical Methods**	**Reporting Limits**	**Units of Measure**
Boron	EPA 200.7	0.1015	mg/L
Calcium	EPA 200.7	4.06-20.3	mg/L
Chloride	SM4500Cl E	1-16	mg/L
Fluoride	SM4500F G 2017	0.1	mg/L
pH (Field)	Field Sampling	NA	SU
Sulfate	SM4500SO4 E 2011	32-160	mg/L
TDS	NA	NA	mg/L
Appendix IV Parameters			
Parameters	**Analytical Methods**	**Reporting Limits**	**Units of Measure**
Antimony	EPA 200.8	0.001015	mg/L
Arsenic	EPA 200.8	0.000203	mg/L
Barium	EPA 200.8	0.000203	mg/L
Beryllium	EPA 200.8	0.001015	mg/L
Cadmium	EPA 200.8	0.000203	mg/L
Chromium	EPA 200.8	0.001015	mg/L
Cobalt	EPA 200.8	0.000203	mg/L
Fluoride	SM4500F G 2017	0.1	mg/L
Lead	EPA 200.8	0.000203	mg/L
Lithium	EPA 200.7	0.02	mg/L
Mercury	EPA 245.1	0.0005	mg/L
Molybdenum	EPA 200.8	0.000203	mg/L
Selenium	EPA 200.8	0.001015	mg/L
Thallium	EPA 200.8	0.000203	mg/L
Combined Radium 226 + 228	Total Radium Calculation	NA	pCi/L

Notes:
1. Reporting Limit values can display range depending upon matrix interferences and dilution factors
2. pH is a field acquired parameter and does not have a laboratory method or reporting limit
3. Combined Radium 226 + 228 – product of radium-226 + radium-228; reporting limits presented are sum of radium 226, radium 228 reporting limits
4. EPA 200.7 – EPA methodology for the "Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry"
5. EPA 200.8 - EPA methodology for the "Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)"
6. SM 2320, 2540, 4500 – Standard Methods for Examination of Water and Wastewater.
7. Total Radium Calculation – Term used herein for EPA 9315 + EPA 9320
8. EPA 9315 – Used for Radium-226; SW-846: Alpha-Emitting Radium Isotopes, part of Test Methods for Evaluation Solid Waste, Physical/Chemical Methods
9. EPA 9320 – Used for Radium-228; SW-846: Alpha-Emitting Radium Isotopes, part of Test Methods for Evaluation Solid Waste, Physical/Chemical Methods

Southern Company

Table 3. - Recent Groundwater Elevations Summary

Plant Gorgas Bottom Ash Landfill (BALF)

Well Name	Top of Casing Elevation (ft. AMSL)	Groundwater Elevation (ft. AMSL)											
		2/12/2018	4/9/2018	5/21/2018	10/29/2018	11/19/2018	3/13/2019	5/13/2019	10/7/2019	4/6/2020	7/13/2020	2/22/2021	7/12/2021
MW-1	502.25	410.89	411.35	411.47	410.62	410.80	412.11	411.77	410.79	412.16	411.22	411.59	411.54
MW-2	502.12	419.29	417.32	417.33	416.30	417.67	417.70	417.64	416.63	417.81	416.93	418.50	417.75
MW-3	525.90	418.49	416.25	416.28	414.85	416.31	418.31	416.40	415.17	417.64	415.34	419.94	421.54
MW-4	518.63	402.67	402.22	402.24	400.18	402.08	402.68	402.43	400.33	402.59	401.42	402.82	402.30
MW-7	394.59	336.82	335.68	336.60	334.01	337.61	339.54	338.44	334.13	338.34	335.86	338.01	336.47
MW-8	416.10	353.44	353.50	353.55	353.08	353.37	353.47	353.32	352.22	353.52	353.04	352.81	352.61
MW-10	395.10	310.54	310.12	310.25	309.62	310.39	311.24	310.79	309.60	310.96	309.95	310.72	310.21
MW-11	406.96	310.49	311.06	310.75	308.52	310.79	311.11	309.87	306.74	308.79	306.56	307.39	305.03
MW-12	474.24	319.49	319.56	320.02	318.96	319.45	321.63	320.45	318.90	320.45	319.34	319.66	319.41
MW-12V	481.32	--	--	--	--	--	327.31	--	326.23	328.00	326.53	326.61	325.92

Notes:
1. ft. AMSL - feet above mean sea level
2. -- Not Measured

Table 4a. Relative Percent Difference (RPD) Calculations

Plant Gorgas Bottom Ash Landfill (BALF)

02/23/2021 - 07/20/2021

MW-16				
Sample Date = 2/23/2021				
Analyte	**Units**	**Original Result**	**Duplicate Result**	**RPD (%)**
Boron	mg/L	0.0487	0.0475	2.49%
Calcium	mg/L	317	319	0.63%
Chloride	mg/L	3.08	3.08	0.00%
Fluoride	mg/L	0.161	0.163	1.23%
Sulfate	mg/L	1330	1320	0.75%
TDS	mg/L	2480	2440	1.63%
Arsenic	mg/L	0.00257	0.00245	4.78%
Barium	mg/L	0.0127	0.0123	3.20%
Cobalt	mg/L	0.01	0.01	0.00%
Lithium	mg/L	0.02	0.0197	1.51%
Molybdenum	mg/L	0.000486	0.000524	7.52%
MW-19				
Sample Date = 2/24/2021				
Analyte	**Units**	**Original Result**	**Duplicate Result**	**RPD (%)**
Boron	mg/L	0.0393	0.0391	0.51%
Calcium	mg/L	332	328	1.21%
Chloride	mg/L	2.02	1.98	2.00%
Fluoride	mg/L	0.343	0.337	1.76%
Sulfate	mg/L	1970	1900	3.62%
TDS	mg/L	3070	3060	0.33%
Arsenic	mg/L	0.000212	0.000218	2.79%
Barium	mg/L	0.00981	0.00981	0.00%
Cobalt	mg/L	0.0382	0.0379	0.79%
Lithium	mg/L	0.0739	0.0752	1.74%
Molybdenum	mg/L	0.000197	0.000194	1.53%

Table 4a. Relative Percent Difference (RPD) Calculations

Plant Gorgas Bottom Ash Landfill (BALF)

02/23/2021 - 07/20/2021

MW-6				
Sample Date = 7/20/2021				
Analyte	**Units**	**Original Result**	**Duplicate Result**	**RPD (%)**
Calcium	mg/L	348	351	0.86%
Chloride	mg/L	4.04	4.05	0.25%
Fluoride	mg/L	0.131	0.138	5.20%
Sulfate	mg/L	1930	2000	3.56%
TDS	mg/L	3090	2980	3.62%
Arsenic	mg/L	0.00475	0.00451	5.18%
Barium	mg/L	0.0143	0.0137	4.29%
Cadmium	mg/L	0.00058	0.00063	8.32%
Cobalt	mg/L	0.216	0.216	0.00%
Lithium	mg/L	0.18	0.18	0.00%
MW-1				
Sample Date = 7/12/2021				
Analyte	**Units**	**Original Result**	**Duplicate Result**	**RPD (%)**
Calcium	mg/L	149	152	1.99%
Chloride	mg/L	2.19	2.25	2.70%
Fluoride	mg/L	0.125	0.112	10.97%
Sulfate	mg/L	1560	1500	3.92%
TDS	mg/L	2210	2210	0.00%
Arsenic	mg/L	0.00036	0.0003	19.01%
Barium	mg/L	0.00991	0.00984	0.71%
Cadmium	mg/L	0.00193	0.00185	4.23%
Cobalt	mg/L	0.0556	0.0549	1.27%
Lithium	mg/L	0.0266	0.0267	0.38%
Selenium	mg/L	0.0028	0.00245	13.33%

Notes:

1. The RPD calculations presented are for analyte pairs where original and duplicate results are valid, unqualified detections.
2. RPD calculation results less than or equal to 20% are considered acceptable.
3. Results greater than 20% are given data validation flags to indicate RPD criteria failure. Communication to sampling team and lab may be necessary to explore nature of RPD failure(s).

Table 4b. - Field QC: Blank Detections

Plant Gorgas Bottom Ash Landfill (BALF)
02/22/2021 - 07/21/2021

Parameters Detected Above MDL					
Sample Date	**QC Location**	**Parameter**	**Blank Concentration**	**Units**	**MDL**
02/25/2021	EB-1	Barium	0.000179 J	mg/L	0.000101
07/21/2021	EB-1	Arsenic	8E-05 J	mg/L	0.00007

Notes:
1. Lab qualifiers have been appended to result when applicable
2. MDL = Method Detection Limit
3. Only Appendix 4 Constituents were compared and validated. Radium data was not validated.
4. mg/L = milligrams per liter

Table 5. Summary of Background Levels and Groundwater Protection Standards

Plant Gorgas Bottom Ash Landfill (BALF)

Appendix III Analytes			
Analyte	**Units**	**Background**	**GWPS**
Fluoride	mg/L	0.6	4
Appendix IV Analytes			
Analyte	**Units**	**Background**	**GWPS**
Antimony	mg/L	0.003	0.006
Arsenic	mg/L	0.005	0.01
Barium	mg/L	0.0165	2
Beryllium	mg/L	0.0185	0.0185
Cadmium	mg/L	0.0121	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.386	1.07
Lead	mg/L	0.00692	0.015
Lithium	mg/L	0.323	0.419
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.01	0.1
Selenium	mg/L	0.0209	0.05
Thallium	mg/L	0.001	0.002
Combined Radium 226 + 228	pCi/L	0.862	5

Notes:
1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. Background concentrations/limits are used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and ADEM Rule 335-13-15-.06(h).
4. GWPS are generally updated on a 2 year basis which began in the Fall of 2019 (Fall 2019, Fall 2021, etc).

Table 6a. First Semi-Annual Monitoring Event Analytical Summary

Plant Gorgas Bottom Ash Landfill (BALF)

02/22/2021 - 02/24/2021

Analyte	Units	GROUNDWATER MONITORING WELLS									
		MW-1	MW-2	MW-3	MW-4	MW-7	MW-8	MW-10	MW-11	MW-12	MW-12V
		02/22/2021	02/22/2021	02/22/2021	02/22/2021	02/23/2021	02/23/2021	02/23/2021	02/24/2021	02/24/2021	02/24/2021
Appendix III											
Boron	mg/L	0.0307 J	<0.03	<0.03	0.0397 J	0.0803 J	0.0731 J	0.205	0.108	0.193	0.16
Calcium	mg/L	151	178	312	271	292	306	151	325	346	293
Chloride	mg/L	2.16	1.72	2.22	1.52	7.85	17.9	3.63	113	11.2	101
Fluoride	mg/L	0.082 J	0.209	0.246	0.357	0.2	0.208	0.202	0.107	0.172	0.17
pH_Field	SU	5.06	6.1	5.59	6.19	6.7	6.73	6.45	6.67	5.83	6.83
Sulfate	mg/L	1400	864	3040	2040	1320	1420	747	1330	2280	1220
TDS	mg/L	2230	1620	4670	3190	2320	2550	1110	2370	3810	2240
Appendix IV											
Antimony	mg/L	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507
Arsenic	mg/L	0.000403	0.000295	0.000789	0.000125 J	0.00141	0.00117	0.0016	0.000834	0.0516	0.00584
Barium	mg/L	0.0107	0.0132	0.00981	0.0111	0.014	0.014	0.0201	0.015	0.0123	0.0185
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	0.00128	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	0.00184	8.96e-005 J	0.00536	8.96e-005 J	<6.8e-005	<6.8e-005	0.000148 J	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	0.000382 J	<0.000203	0.00035 J	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
Cobalt	mg/L	0.0657	0.0161	0.0515	<6.8e-005	0.00294	0.00796	0.0167	0.00026	0.0442	0.000378
Combined Radium 226 + 228	pCi/L	0.677 U	0.434 U	0.472 U	0 U	0.696 U	0.685 U	0.329 U	0.869 U	1.24	0.865 U
Lead	mg/L	<6.8e-005	<6.8e-005	8.8e-005 J	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000178 J	<6.8e-005
Lithium	mg/L	0.0301	0.0625	0.126	0.0558	0.131	0.166	0.223	0.3	0.0949	0.345
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	0.000131 J	0.00107	0.0129	<6.8e-005	0.00148	8.8e-005 J	0.00174
Selenium	mg/L	0.00241	<0.000507	0.0181	0.00222	<0.000507	<0.000507	0.00217	<0.000507	<0.000507	<0.000507
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantita

Table 6b. Second Semi-Annual Monitoring Event Analytical Summary

Plant Gorgas Bottom Ash Landfill (BALF)

07/12/2021 - 07/21/2021

Analyte	Units	GROUNDWATER MONITORING WELLS									
		MW-1	MW-2	MW-3	MW-4	MW-7	MW-8	MW-10	MW-11	MW-12	MW-12V
		7/12/2021	7/12/2021	7/12/2021	7/12/2021	7/20/2021	7/20/2021	7/20/2021	7/21/2021	7/20/2021	7/20/2021
Appendix III											
Boron	mg/L	<0.03	<0.03	<0.03	0.0411 J	0.0721 J	0.0656 J	0.201	0.104	0.227	0.149
Calcium	mg/L	152	159	252	242	254	281	149	322	330	283
Chloride	mg/L	2.19	2.36	2.13	1.56	6.35	14.3	3.64	73.8	9.85	59.2
Fluoride	mg/L	0.112	0.196	0.287	0.35	0.286	0.262	0.268	0.16	0.219	0.224
pH_Field	SU	5.13	6.16	5.86	6.06	6.58	6.64	6.46	6.74	5.53	6.84
Sulfate	mg/L	1560	763	2380	1930	1170	1500	665	1420	2500	1220
TDS	mg/L	2210	1390	3510	3000	2110	2420	1080	2210	3680	2190
Appendix IV											
Antimony	mg/L	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Arsenic	mg/L	0.0003	0.000364	0.000376	0.000116 J	0.00164	0.00111	0.00102	0.000901	0.0668	0.00573
Barium	mg/L	0.00991	0.013	0.00857	0.0108	0.0142	0.0141	0.0208	0.0159	0.012	0.0186
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	0.000951 J	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	0.00193	8.27e-005 J	0.000937	8.19e-005 J	<6.8e-005	<6.8e-005	8.07e-005 J	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	0.000389 J	0.000251 J	0.000307 J	0.000302 J	<0.000203	<0.000203	0.000213 J	<0.000203	0.000276 J	<0.000203
Cobalt	mg/L	0.0556	0.0155	0.00567	<6.8e-005	0.00561	0.00714	0.0131	0.000254	0.046	0.000181 J
Combined Radium 226 + 228	pCi/L	0.476 U	0.155 U	0.114 U	0.301 U	0.356 U	0.42 U	0.344 U	0.951 U	1.15 U	0.763 U
Lead	mg/L	<6.8e-005	<6.8e-005	8.42e-005 J	<6.8e-005	<6.8e-005	9.44e-005 J	7.67e-005 J	<6.8e-005	0.000231	<6.8e-005
Lithium	mg/L	0.0266	0.0495	0.0808	0.0533	0.096	0.151	0.196	0.271	0.0769	0.33
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	0.000138 J	0.00086	0.000329	7.69e-005 J	0.0013	0.000169 J	0.00188
Selenium	mg/L	0.00245	<0.000508	0.0133	0.00155	<0.000508	<0.000508	0.000982 J	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantita

Appendix A

Appendix A.
Historical Groundwater Analytical Data
Gorgas BALF
2016-Present

Analytes	Wells	MW-1																								
	Date	04/26/2016	06/20/2016	08/08/2016	08/24/2016	10/03/2016	10/26/2016	11/21/2016	01/17/2017	03/22/2017	04/18/2017	05/30/2017	08/23/2017	02/13/2018	05/22/2018	06/12/2018	10/17/2018	11/19/2018	05/14/2019	10/08/2019	10/16/2019	02/03/2020	04/06/2020	07/13/2020	08/03/2020	02/22/2021	07/12/2021
Appendix III																										
Boron	mg/L	0.0231 J	0.0227 J	0.0278 J	0.0247 J	0.0307 J	0.0241 J	0.0202 J	0.0201 J	0.0224 J	<0.02	<0.02	0.0253 J	--	0.0224 J	0.0214 J	0.0216 J	0.0237 J	<0.0609	<0.03	0.0385 J	<0.03	<0.03	<0.03	<0.03	0.0307 J	<0.03
Calcium	mg/L	147	152	150	142	139	133	144	131	141	149	140	152	--	166	203	171	154	167	157	157	172	149	147	148	151	149
Chloride	mg/L	1.94	2.09	2.18	2.22	2.34	2.34	2.5	2.68	2.4	2.4	2.6	2.7	--	2.3	2.3	--	1.7 J	2.28	2.31	2.42	2.07	2.01	2.1	2.05	2.16	2.19
Fluoride	mg/L	0.146 J	0.148 J	0.137 J	0.133 J	0.103 J	0.05 J	0.047 J	0.09 J	0.12	0.12	0.13	0.16	0.14	0.16	0.16	--	0.15	0.119	0.0924 J	0.0756 J	0.0982 J	0.101	0.0678 J	<0.06	0.082 J	0.112
pH_Field	SU	5.2	5.18	5.12	--	5.21	5.2	5.19	5.17	5.2	5.2	5.14	5.12	5.18	5.2	5.15	5.12	5.09	5.19	5.12	5.16	5	5.21	5.14	5.08	5.06	5.13
Sulfate	mg/L	1490	1420	1460	1450	1460	1330	1420	1350	1500	1300	1400	1500	--	2100	1500	--	1300	1560	1540	1680	1510	1530	1450	1370	1400	1560
TDS	mg/L	2080	2060	2070	2040	2110	2000	2070	1930	2060	2140	2240	2160	--	2380	2400	2220	2360	2340	2330	3650	2380	2240	2240	2200	2230	2210
Appendix IV																										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	0.00137 J	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.000403	0.000363
Barium	mg/L	0.00941 J	0.00951 J	0.00991 J	0.00949 J	0.0105	0.00931 J	0.00879 J	0.00929 J	0.00938 J	0.00964 J	0.00982 J	--	0.00937 J	0.0102	0.0104	0.00952 J	0.00915 J	0.00913 J	0.0109	0.0106	0.00995 J	0.00971 J	0.0101	0.0107	0.0107	0.00991
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	0.00196	0.0021	0.00206	0.00182	0.00188	0.00175	0.00197	0.002	0.0019	0.00159	0.00214	--	0.0018	0.00201	0.00217	0.00228	0.00156	0.00238	0.00218	0.00225	0.00182	0.00184	0.0019	0.00237	0.00184	0.00185
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.000382 J	0.000487 J
Cobalt	mg/L	0.0343	0.0413	0.0513	0.0471	0.0525	0.0527	0.0569	0.0768	0.0535	0.0442	0.0465	--	0.062	0.0443	0.0512	0.0751	0.0825	0.0485	0.0778	0.08	0.0495	0.0417	0.0532	0.0722	0.0657	0.0549
Combined Radium 226 + 228	pCi/L	0.622	0.159 U	0.511 U	0.566 U	0.537 U	0.636	0.807	0.308 U	0.344 U	0.934	0.149 U	--	0.774	-0.091 U	1.18	--	0.862	0.509	1.47	0.204 U	0.521 U	0.309 U	0.219 U	-0.127 U	0.677 U	0.476 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005
Lithium	mg/L	0.0264 J	0.0246 J	0.0229 J	0.0236 J	0.0229 J	0.0227 J	0.0236 J	0.0228 J	0.0238 J	0.0242 J	0.0229 J	--	0.0233 J	0.0263 J	0.0251 J	0.025 J	0.0241	0.026 J	0.0268	0.0263	0.0292	0.0278	0.028	0.0259	0.0301	0.0266
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005
Selenium	mg/L	0.00261 J	0.00242 J	0.00253 J	<0.002	0.00211 J	<0.002	<0.002	<0.002	0.0022 J	0.0027 J	0.00316 J	--	0.00211 J	0.00372 J	0.00409 J	<0.002	<0.002	0.00316 J	<0.002	<0.002	0.00272 J	0.00275 J	0.0025 J	0.00278 J	0.00241	0.00245
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect

Appendix A.
Historical Groundwater Analytical Data
Gorgas BALF
2016-Present

Analytes	Wells	MW-2																										
	Date	04/25/2016	05/05/2016	06/20/2016	08/08/2016	08/24/2016	10/03/2016	10/26/2016	11/21/2016	01/17/2017	03/22/2017	04/18/2017	05/31/2017	08/23/2017	02/13/2018	05/22/2018	06/12/2018	10/17/2018	11/19/2018	05/14/2019	10/08/2019	10/16/2019	02/03/2020	04/06/2020	07/13/2020	08/03/2020	02/22/2021	07/12/2021
Appendix III																												
Boron	mg/L	0.0241 J	--	0.0284 J	0.034 J	0.0316 J	0.0367 J	0.0331 J	0.035 J	0.0259 J	0.0243 J	0.0206 J	0.0234 J	0.0267 J	--	0.0251 J	0.0275 J	0.0321 J	0.0324 J	<0.0609	0.0371 J	0.0419 J	<0.03	<0.03	<0.03	0.0317 J	<0.03	<0.03
Calcium	mg/L	123	--	168	180	180	184	171	179	188	155	156	151	155	--	172	179	200	221	168	190	194	172	152	163	172	178	159
Chloride	mg/L	1.9	--	3.43	3.31	3.23	3.21	3.35	3.34	3.58	3	2.6	4.4 J	4.4	--	3.2	3.7	--	3	2.98	4.26	4.04	2.48	2.43	4.05	4.03	1.72	2.36
Fluoride	mg/L	0.149 J	--	0.148 J	0.134 J	0.129 J	0.086 J	0.027 J	0.027 J	0.066 J	0.13	0.16	0.13	0.16	0.22	0.17	0.16	--	0.18	0.17	0.164	0.114	0.182	0.207	0.132	0.122	0.209	0.196
pH_Field	SU	5.94	--	5.96	5.88	--	5.91	5.84	5.82	5.87	6.01	6.02	5.85	5.89	6.21	6.04	5.95	5.9	6.03	6.07	5.96	5.98	5.95	6.21	5.84	5.95	6.1	6.16
Sulfate	mg/L	745	--	964	1100	1130	1140	1060	1100	1160	900	870	1100	920	--	1200	860	--	1000	948	1230	1170	803	786	843	907	864	763
TDS	mg/L	1260	--	1620	1740	1720	1800	1800	1740	1960	1510	1580	1730	1550	--	1500	1550	1740	1990	1480	1840	1830	1440	1440	1540	1650	1620	1390
Appendix IV																												
Antimony	mg/L	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	0.000989 J	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	0.00111 J	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.000295	0.000364
Barium	mg/L	0.0134	--	0.0165	0.0162	0.0139	0.0164	0.0138	0.0144	0.0135	0.0132	0.012	0.0126	--	0.0127	0.0131	0.0138	0.0137	0.0115	0.0109	0.0151	0.0146	0.0122	0.0125	0.0145	0.0147	0.0132	0.013
Beryllium	mg/L	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000311 J	<0.0002	<0.0002	0.000212 J	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	8.96e-005 J	8.27e-005 J
Chromium	mg/L	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000203	0.000251 J
Cobalt	mg/L	0.0487	--	0.0767	0.103	0.093	0.0964	0.0904	0.0857	0.0745	0.0328	0.0242	0.0441	--	0.0179	0.028	0.0366	0.0745	0.0225	0.0222	0.0674	0.073	0.0193	0.0116	0.0405	0.0589	0.0161	0.0155
Combined Radium 226 + 228	pCi/L	--	-0.0718 U	0.295 U	0.231 U	0.65	0.845	0.994	0.537 U	-0.0159 U	0.279 U	0.32 U	0.178 U	--	0.804	0.0077 U	-0.315 U	--	0.654	0.579	0.493 U	0.046 U	-0.0245 U	0.212 U	0.0814 U	0.888 U	0.434 U	0.155 U
Lead	mg/L	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005
Lithium	mg/L	0.0353 J	--	0.0583	0.0627	0.0651	0.0622	0.0293 J	0.0667	0.0636	0.0464 J	0.0446 J	0.0496 J	--	0.0615	0.0465 J	0.0472 J	0.0633	0.0584	0.0445	0.0677	0.0661	0.0534	0.0496	0.0615	0.0611	0.0625	0.0495
Mercury	mg/L	<0.00025	--	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000507	<0.000508
Thallium	mg/L	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect

Appendix A.
Historical Groundwater Analytical Data
Gorgas BALF
2016-Present

Analytes	Wells	MW-3																								
	Date	04/25/2016	06/22/2016	08/09/2016	08/24/2016	10/04/2016	10/26/2016	11/21/2016	01/18/2017	03/22/2017	04/18/2017	05/31/2017	08/23/2017	02/13/2018	05/24/2018	06/12/2018	11/19/2018	04/10/2019	05/14/2019	10/08/2019	10/16/2019	02/03/2020	04/06/2020	07/13/2020	08/03/2020	02/22/2021	07/12/2021
Appendix III																										
Boron	mg/L	0.028 J	0.0433 J	0.0429 J	0.0431 J	0.04 J	0.0375 J	0.0406 J	0.0548 J	0.0344 J	<0.02	0.0454 J	0.0425 J	--	0.0339 J	0.0371 J	0.0514 J	<0.03	<0.0609	0.0537 J	0.05 J	--	<0.03	0.0366 J	0.0424 J	<0.03	<0.03
Calcium	mg/L	224	266	260	274	243	254	263	431	318	296	306	298	--	297	318	387	348	254	371	346	--	177	264	285	312	252
Chloride	mg/L	1.32	1.46	1.35	1.47	1.59	1.27	1.38	1.34	2	2.2	1.5 J	1.8 J	--	1.6 J	1.4 J	<1.4	2.25	2.28	1.36	1.4	--	1.72	1.34	1.17	2.22	2.13
Fluoride	mg/L	0.243 J	0.269 J	0.363	0.346	0.266 J	0.266 J	0.244 J	0.385	0.41	0.29	0.37	0.55	0.27	0.6	0.53	0.31	0.273	0.281	0.225	0.106	--	0.314	0.13	0.0766 J	0.246	0.287
pH_Field	SU	5.56	5.57	5.67	5.63	5.69	5.56	5.42	5.11	4.52	5.84	4.56	4.77	5.67	5.19	4.79	3.77	5.54	5.71	4.98	4.51	--	5.91	5.16	5.06	5.59	5.86
Sulfate	mg/L	1890	2100	2050	2190	1950	1980	2060	2620	3200	2500	2800	2600	--	2700	2500	3000	2460	2460	2950	2820	--	1670	2130	2330	3040	2380
TDS	mg/L	2720	3250	3050	3080	2900	2940	3090	4020	4180	4440	3970	4050	--	3680	3820	4710	3680	3580	4720	4210	--	2630	3650	3760	4670	3510
Appendix IV																										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0008	0.000978 J	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00122 J	<0.001	<0.001	--	<0.001	<0.001	0.00103 J	0.0012 J	<0.001	<0.001	0.0048 J	0.00389 J	--	<0.001	0.0032 J	0.00426 J	0.000789	0.000376
Barium	mg/L	0.00803 J	0.0101	0.00889 J	0.00962 J	0.00984 J	0.00878 J	0.00833 J	0.00966 J	0.00991 J	0.00976 J	0.00866 J	--	0.00821 J	0.00977 J	0.00997 J	0.0109	0.0101	0.00922 J	0.0154	0.0128	--	0.00931 J	0.0142	0.0166	0.00981	0.00857
Beryllium	mg/L	0.00122 J	0.00144 J	0.00331	0.00308	0.00129 J	0.0071	0.00689	0.0169	0.00686	<0.0006	0.00547	--	<0.0006	0.00164 J	0.00306	0.0185	<0.0006	<0.0006	0.0084	0.0103	--	<0.0006	0.0021 J	0.00405	<0.000406	<0.000406
Cadmium	mg/L	0.0121	0.00163	0.00122	<0.0002	0.000689 J	0.00136	0.00171	0.003	0.00473	0.00117	0.00296	--	0.00232	0.00459	0.00351	0.00309	0.00337	0.0013	0.00598	0.00448	--	0.000645 J	0.0089	0.00652	0.00536	0.000937
Chromium	mg/L	0.00373 J	0.00606 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00945 J	0.0105	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00035 J	0.000307 J
Cobalt	mg/L	0.232	0.332	0.311	0.271	0.148	0.236	0.241	0.347	0.271	0.00324 J	0.225	--	0.00661 J	0.158	0.291	0.386	0.0144	0.00536	1.07	0.848	--	<0.002	0.47	0.64	0.0515	0.00567
Combined Radium 226 + 228	pCi/L	0.484 U	0.2 U	0.378 U	0.131 U	0.514 U	0.755	0.7	0.606	0.927	0.334 U	0.8	--	0.649	0.448 U	0.234 U	0.521	--	0.176 U	0.833 U	0.0279 U	0.0246 U	0.569 U	0.53	0.765 U	0.472 U	0.114 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	0.00692	<0.001	<0.001	<0.001	0.00108 J	--	<0.001	<0.001	0.002 J	8.8e-005 J	8.42e-005 J
Lithium	mg/L	0.0964	0.156	0.122	0.138	0.0966	0.134	0.167	0.237	0.203	0.0764	0.218	--	0.0964	0.145	0.194	0.323	0.0905	0.0828	0.419	0.337	--	0.0689	0.256	0.27	0.126	0.0808
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0141	0.0158	0.00632 J	--	0.0209	0.00918 J	0.00836 J	0.00439 J	0.0113	0.0119	0.00256 J	0.00286 J	--	0.01	0.0134	0.0146	0.0181	0.0133
Thallium	mg/L	0.000205 J	<0.0002	<0.0002	<0.0002	<0.0002	0.000209 J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	0.000226 J	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect

Appendix A.
Historical Groundwater Analytical Data
Gorgas BALF
2016-Present

Analytes	Wells	MW-4																							
	Date	04/25/2016	06/20/2016	08/09/2016	08/24/2016	10/03/2016	10/26/2016	11/21/2016	01/18/2017	03/22/2017	04/18/2017	05/31/2017	08/23/2017	02/13/2018	05/23/2018	06/12/2018	11/19/2018	04/10/2019	05/14/2019	10/10/2019	10/16/2019	02/03/2020	04/06/2020	07/14/2020	02/22/2021	07/12/2021
Appendix III																									
Boron	mg/L	0.0414 J	0.0434 J	0.0453 J	0.0451 J	0.0511 J	0.0507 J	0.0458 J	0.0445 J	0.0432 J	0.0409 J	0.0392 J	0.042 J	--	0.0433 J	0.0478 J	0.0526 J	0.0438 J	<0.0609	0.0487 J	0.0505 J	--	0.0428 J	0.0441 J	0.0397 J	0.0411 J
Calcium	mg/L	261	295	318	319	293	311	320	417	292	302	284	297	--	296	355	289	356	254	302	356	--	222	259	271	242
Chloride	mg/L	1.53	1.85	1.95	2.07	2.02	2.07	2.39	1.9	1.5 J	1.6 J	2.1	2.3	--	2	1.7 J	<1.4	1.88	1.82	1.93	1.92	--	1.5	1.61	1.52	1.56
Fluoride	mg/L	0.372	0.361	0.326	0.329	0.287 J	0.194 J	0.192 J	0.223 J	0.32	0.32	0.31	0.38	0.38	0.38	0.39	0.36	0.384	0.335	0.304	0.302	--	0.368	0.33	0.357	0.35
pH_Field	SU	6.22	6.21	6.11	6.11	6.13	6.12	6.09	6.09	6.15	6.19	6.13	6.12	6.22	6.21	6.16	6.16	6.14	6.23	6.15	6.19	--	6.35	6.2	6.19	6.06
Sulfate	mg/L	2260	2500	2750	2770	3060	2650	2720	2650	2700	2400	2700	2700	--	2400	2600	2400	2090	2240	2690	3050	--	1810	1970	2040	1930
TDS	mg/L	3300	3870	4140	4190	4190	4400	4230	4120	3980	3880	4210	3990	--	3740	4080	3920	3280	3130	4000	4060	--	2820	3310	3190	3000
Appendix IV																									
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0008	0.00097 J	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	0.000125 J	0.000116 J
Barium	mg/L	0.0114	0.0103	0.0119	0.0118	0.0119	0.0104	0.0106	0.0101	0.0103	0.0107	0.0104	--	0.0111	0.0107	0.0108	0.0107	0.0107	0.00949 J	0.0116	0.0125	--	0.0115	0.0122	0.0111	0.0108
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	8.96e-005 J	8.19e-005 J
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.000203	0.000302 J
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<6.8e-005	<6.8e-005
Combined Radium 226 + 228	pCi/L	0.434 U	0.287 U	0.516 U	0.266 U	0.59 U	0.164 U	0.296 U	0.0267 U	0.132 U	-0.0439 U	0.3 U	--	0.69	0.186 U	0.153 U	0.794	--	0.352 U	1.02 U	0.356 U	0.254 U	0.459 U	0.169 U	0 U	0.301 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<6.8e-005	<6.8e-005
Lithium	mg/L	0.0528	0.0554	0.0452 J	0.0488 J	0.0476 J	0.049 J	0.0477 J	0.045 J	0.0493 J	0.0494 J	0.0501	--	0.0446 J	0.0513	0.0511	0.0467	0.0504	0.0485	0.054	0.052	--	0.0519	0.0543	0.0558	0.0533
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	0.000131 J	0.000138 J
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	0.00403 J	<0.002	<0.002	0.00436 J	<0.002	0.00201 J	<0.002	<0.002	--	0.00284 J	<0.002	0.00222	0.00155
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect

Appendix A.
Historical Groundwater Analytical Data
Gorgas BALF
2016-Present

Analytes	Wells	MW-7																	
	Date	04/27/2016	06/21/2016	10/12/2017	10/13/2017	10/14/2017	10/15/2017	10/16/2017	10/17/2017	11/16/2017	02/14/2018	05/23/2018	11/20/2018	05/15/2019	10/08/2019	04/08/2020	07/14/2020	02/23/2021	07/20/2021
Appendix III																			
Boron	mg/L	0.253	0.0768 J	0.0685 J	0.0674 J	0.0756 J	0.0719 J	0.0726 J	0.0716 J	0.0644 J	--	0.0715 J	0.0772 J	0.0678 J	0.073 J	0.077 J	0.0865 J	0.0803 J	0.0721 J
Calcium	mg/L	198	327	317	302	283	294	284	294	299	--	321	306	302	294	280	261	292	254
Chloride	mg/L	1.71	2.04	31	32	33	34	34	34	35	--	28	20	15.9	16.8	10.6	9.68	7.85	6.35
Fluoride	mg/L	0.2 J	0.163 J	0.17	0.19	0.2	0.2	0.2	0.19	0.18	0.18	0.18	0.19	0.169	0.183	0.153	0.193	0.2	0.286
pH_Field	SU	--	--	--	--	--	--	--	--	--	6.67	--	--	6.61	6.52	6.64	6.52	6.7	6.58
Sulfate	mg/L	1050	1410	1400	1400	1300	1300	1300	1300	1300	--	1900	1100	1510	1570	1270	1330	1320	1170
TDS	mg/L	1640	2460	2460	2420	2320	1150	2320	2360	2460	--	2390	2090	2310	2340	2230	2210	2320	2110
Appendix IV																			
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	0.00165 J	0.00188 J	0.00181 J	0.00127 J	0.00144 J	0.00139 J	0.00138 J	--	0.00131 J	0.00155 J	0.00133 J	0.00138 J	0.00145 J	0.00136 J	0.00147 J	0.00141	0.00164
Barium	mg/L	0.0107	0.0129	0.014	0.0147	0.0123	0.0132	0.0122	0.0121	--	0.0119	0.0135	0.0116	0.0114	0.0145	0.0127	0.0148	0.014	0.0142
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000203	<0.000203
Cobalt	mg/L	<0.002	<0.002	0.00269 J	0.00341 J	0.00451 J	0.00371 J	0.00371 J	0.0035 J	--	<0.002	<0.002	0.00306 J	0.00234 J	0.00408 J	0.00394 J	0.00653	0.00294	0.00561
Combined Radium 226 + 228	pCi/L	0.374 U	0.151 U	0.182 U	0.517 U	0.43 U	0.45 U	0.55 U	0.474 U	--	0.736	0.0192 U	0.494	0.61	0.345 U	0.237 U	0.434	0.696 U	0.356 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005
Lithium	mg/L	0.163	0.171	0.134	0.127	0.112	0.129	0.122	0.122	--	0.131	0.129	0.12	0.127	0.131	0.117	0.103	0.131	0.096
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.00025	<0.00025	<0.00025	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00107	0.00086
Selenium	mg/L	0.00445 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000507	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect

Appendix A.
Historical Groundwater Analytical Data
Gorgas BALF
2016-Present

Analytes	Wells	MW-8																	
	Date	04/27/2016	06/21/2016	10/12/2017	10/13/2017	10/14/2017	10/15/2017	10/16/2017	10/17/2017	11/16/2017	02/14/2018	05/23/2018	11/20/2018	05/15/2019	10/09/2019	04/08/2020	07/15/2020	02/23/2021	07/20/2021
Appendix III																			
Boron	mg/L	0.0662 J	0.0681 J	0.0687 J	0.0831 J	0.0702 J	0.0702 J	0.0707 J	0.0695 J	0.0675 J	--	0.0693 J	0.0771 J	0.0689 J	0.0723 J	0.0683 J	0.0723 J	0.0731 J	0.0656 J
Calcium	mg/L	282	291	300	298	299	307	299	294	308	--	344	327	305	329	281	280	306	281
Chloride	mg/L	2.34	2.29	150	130	140	130	140	140	130	--	75	45	52	39.2	24.9	23.8	17.9	14.3
Fluoride	mg/L	0.212 J	0.211 J	0.22	0.23	0.22	0.22	0.22	0.21	0.22	0.21	0.21	0.21	0.192	0.189	0.192	0.196	0.208	0.262
pH_Field	SU	--	--	--	--	--	--	--	--	--	6.55	--	--	6.6	6.67	6.7	6.71	6.73	6.64
Sulfate	mg/L	1550	1470	1400	1600	1400	1400	1400	1400	1400	--	2100	1400	1640	1550	1380	1410	1420	1500
TDS	mg/L	2480	2360	2530	2740	2630	2530	2740	2650	2650	--	2750	2520	2540	2590	2450	2460	2550	2420
Appendix IV																			
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	0.00101 J	0.00197 J	0.00159 J	0.00126 J	0.00106 J	0.00106 J	0.00103 J	--	0.00185 J	0.00157 J	0.00173 J	0.00136 J	0.00142 J	0.00102 J	0.00212 J	0.00117	0.00111
Barium	mg/L	0.0108	0.0116	0.0141	0.0148	0.0134	0.0139	0.0129	0.0126	--	0.0126	0.0137	0.0123	0.0122	0.0137	0.0137	0.0143	0.014	0.0141
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000203	<0.000203
Cobalt	mg/L	0.00436 J	0.00484 J	0.005 J	0.0052 J	0.00513 J	0.00518 J	0.00453 J	0.00463 J	--	0.00441 J	0.00466 J	0.00551	0.00643	0.00864	0.00762	0.00821	0.00796	0.00714
Combined Radium 226 + 228	pCi/L	-0.207 U	0.529	0.267 U	0.873 U	1.6 U	0.327 U	0.524 U	0.0455 U	--	0.633	0.377 U	0.28 U	0.697	0.416 U	1.38 U	0.398 U	0.685 U	0.42 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<6.8e-005	9.44e-005 J
Lithium	mg/L	0.171	0.181	0.182	0.189	0.177	0.191	0.189	0.184	--	0.183	0.194	0.181	0.16	0.163	0.149	0.152	0.166	0.151
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.00025	<0.00025	<0.00025	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0129	0.000329
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000507	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect

Appendix A.
Historical Groundwater Analytical Data
Gorgas BALF
2016-Present

Analytes	Wells	MW-10																	
	Date	04/27/2016	06/23/2016	08/10/2016	10/05/2016	11/21/2016	01/17/2017	03/21/2017	05/31/2017	08/23/2017	02/15/2018	05/24/2018	11/19/2018	05/15/2019	10/09/2019	04/08/2020	07/14/2020	02/23/2021	07/20/2021
Appendix III																			
Boron	mg/L	0.371	0.251	0.216	0.187	0.182	0.2	0.178	0.149	0.181	--	0.159	0.211	0.234	0.181	0.209	0.25	0.205	0.201
Calcium	mg/L	279	256	245	225	179	168	152	130	147	--	159	160	186	146	164	208	151	149
Chloride	mg/L	1.46	1.49	1.55	1.58	1.62	1.61	1.6 J	3.2	6.1	--	5	7.8	6.93	4.51	2.64	3.09	3.63	3.64
Fluoride	mg/L	0.337	0.155 J	0.123 J	0.086 J	0.056 J	0.103 J	0.15	0.18	0.23	0.23	0.13	0.26	0.276	0.142	0.243	0.224	0.202	0.268
pH_Field	SU	--	--	--	--	--	--	--	--	--	6.26	--	--	6.37	6.5	6.36	6.42	6.45	6.46
Sulfate	mg/L	1250	1010	992	1010	834	700	660	700	700	--	560	720	780	748	658	845	747	665
TDS	mg/L	1940	1680	1660	1640	1390	1300	1170	1210	1160	--	1100	1220	1230	1120	1120	1270	1110	1080
Appendix IV																			
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0008	0.000996 J	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.00196 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	0.00162 J	<0.001	0.0013 J	0.00164 J	0.0016	0.00102
Barium	mg/L	0.0187	0.0181	0.0186	0.023	0.0219	0.0203	0.0203	0.0188	--	0.0199	0.0198	0.0187	0.0189	0.0204	0.0201	0.0245	0.0201	0.0208
Beryllium	mg/L	0.00486	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000883 J	0.00123 J	--	0.00235 J	0.001 J	0.00203 J	0.00177 J	0.00072 J	0.00114 J	0.00135 J	0.00128	0.000951 J
Cadmium	mg/L	0.000452 J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.000148 J	8.07e-005 J
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000203	0.000213 J
Cobalt	mg/L	0.0543	0.0106	0.00438 J	0.00663 J	0.0109	0.0146	0.013	0.0086 J	--	0.0199	0.00905 J	0.0147	0.0226	0.00969	0.0176	0.0232	0.0167	0.0131
Combined Radium 226 + 228	pCi/L	0.316 U	0.451 U	0.368 U	0.515	0.489 U	0.236 U	0.101 U	1.19	--	0.55	0.472	0.167 U	0.421 U	0.742 U	0.205 U	0.314 U	0.329 U	0.344 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<6.8e-005	7.67e-005 J
Lithium	mg/L	0.435	0.285	0.231	0.231	0.236	0.3	0.218	0.194	--	0.23	0.192	0.211	0.23	0.202	0.23	0.255	0.223	0.196
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.00025	<0.00025	<0.00025	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<6.8e-005	7.69e-005 J
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	0.00272 J	<0.002	<0.002	0.00289 J	<0.002	<0.002	0.00273 J	0.00217	0.000982 J
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect

Appendix A.
Historical Groundwater Analytical Data
Gorgas BALF
2016-Present

Analytes	Wells	MW-11																	
	Date	04/26/2016	06/22/2016	08/09/2016	10/04/2016	11/21/2016	01/17/2017	03/21/2017	05/30/2017	08/23/2017	02/14/2018	05/22/2018	11/20/2018	05/15/2019	10/10/2019	04/06/2020	07/13/2020	02/24/2021	07/21/2021
Appendix III																			
Boron	mg/L	0.094 J	0.0959 J	0.0964 J	0.0916 J	0.0929 J	0.0963 J	0.0947 J	0.0926 J	0.0968 J	--	0.102	0.106	0.101 J	0.109	0.109	0.111	0.108	0.104
Calcium	mg/L	400	398	399	389	386	344	396	370	374	--	375	370	380	373	333	350	325	322
Chloride	mg/L	2.16	2.16	2.19	2.21	2.24	2.23	2.5	3.2	2.8	--	24	59	75.4	84.6	100	79.6	113	73.8
Fluoride	mg/L	0.084 J	0.106 J	0.092 J	0.049 J	<0.01	0.044 J	0.08 J	0.096 J	0.11	0.1	0.1	0.1	0.1	0.0915 J	0.118	0.108	0.107	0.16
pH_Field	SU	--	--	--	--	--	--	--	--	--	6.6	--	--	6.62	6.69	6.72	6.71	6.67	6.74
Sulfate	mg/L	1750	1720	1740	1750	1690	1670	1900	1700	1700	--	2200	1400	1510	719	1400	1300	1330	1420
TDS	mg/L	2800	2550	2860	2800	2920	2750	2750	2890	2760	--	2610	2480	2560	2460	2430	2400	2370	2210
Appendix IV																			
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.00189 J	0.00213 J	0.0021 J	0.00206 J	0.00182 J	0.00201 J	0.00183 J	0.00214 J	--	0.00171 J	0.00168 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.000834	0.000901
Barium	mg/L	0.011	0.0122	0.012	0.0142	0.0114	0.0119	0.012	0.012	--	0.0139	0.0148	0.0127	0.0132	0.0154	0.0147	0.0149	0.015	0.0159
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000203	<0.000203
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00026	0.000254
Combined Radium 226 + 228	pCi/L	0.57	0.724	0.579	0.372 U	1.19	-0.187 U	0.403 U	0.998	--	1.74	0.276 U	1.04	1.18	0.902	0.678	0.665	0.869 U	0.951 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	0.00145 J	<0.001	<0.001	<6.8e-005	<6.8e-005
Lithium	mg/L	0.212	0.232	0.204	0.198	0.206	0.295	0.234	0.23	--	0.233	0.24	0.248	0.251	0.275	0.282	0.277	0.3	0.271
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.00025	<0.00025	<0.00025	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00148	0.0013
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000507	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect

Appendix A.
Historical Groundwater Analytical Data
Gorgas BALF
2016-Present

Analytes	Wells	MW-12																		MW-12V				
	Date	04/27/2016	04/28/2016	06/22/2016	08/10/2016	10/05/2016	11/22/2016	01/18/2017	03/21/2017	05/31/2017	08/23/2017	02/15/2018	05/24/2018	11/19/2018	05/15/2019	10/09/2019	04/06/2020	07/13/2020	02/24/2021	07/20/2021	10/10/2019	04/06/2020	07/13/2020	02/24/2021	07/20/2021
Appendix III																								
Boron	mg/L	--	0.19	0.118	0.197	0.179	0.197	0.186	0.183	0.193	0.185	--	0.197	0.252	0.239	0.315	0.229	0.266	0.193	0.227	0.15	0.149	0.15	0.16	0.149
Calcium	mg/L	--	349	374	348	344	342	359	352	313	349	--	349	348	411	359	354	392	346	330	319	301	305	293	283
Chloride	mg/L	--	4.12	3.44	4.15	4.12	3.98	3.6	3.6	3.9	4.2	--	7.1	6.1	8.51	8.73	8.58	8.35	11.2	9.85	79.3	79.4	70.1	101	59.2
Fluoride	mg/L	--	0.153 J	0.146 J	0.127 J	0.09 J	0.012 J	0.071 J	0.09 J	0.11	0.13	0.12	0.15	0.16	0.185	0.215	0.254	0.161	0.172	0.219	0.163	0.188	0.166	0.17	0.224
pH_Field	SU	--	--	--	--	--	--	--	--	--	--	5.98	--	--	5.82	5.85	5.81	5.62	5.83	5.53	6.77	6.79	6.61	6.83	6.84
Sulfate	mg/L	--	2360	1960	2300	2330	2220	1950	2400	2200	2100	--	2300	2100	2800	2550	2580	2610	2280	2500	1490	1360	1280	1220	1220
TDS	mg/L	--	3730	2760	3710	3580	3400	3360	3320	3440	3250	--	3300	3400	3890	4090	4060	4460	3810	3680	2360	2310	2240	2240	2190
Appendix IV																									
Antimony	mg/L	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0008	0.000977 J	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	--	0.0444	0.00953	0.0416	0.0431	0.0487	0.0428	0.0418	0.0466	--	0.0346	0.0478	0.0405	0.0511	0.0507	0.0597	0.0613	0.0516	0.0668	0.00827	0.00731	0.0071	0.00584	0.00573
Barium	mg/L	--	0.0109	0.0155	0.0125	0.0143	0.0118	0.0112	0.0108	0.0107	--	0.0113	0.0122	0.0108	0.0113	0.0126	0.0128	0.0124	0.0123	0.012	0.0236	0.019	0.019	0.0185	0.0186
Beryllium	mg/L	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000203	0.000276 J	<0.002	<0.002	<0.002	<0.000203	<0.000203
Cobalt	mg/L	--	0.0531	0.0388	0.0565	0.0479	0.0453	0.0431	0.0414	0.0379	--	0.0333	0.0399	0.0485	0.0603	0.0512	0.0537	0.0515	0.0442	0.046	<0.002	<0.002	<0.002	0.000378	0.000181 J
Combined Radium 226 + 228	pCi/L	0.259 U	0.608	0.45 U	1.03	0.494 U	0.578	0.216 U	0.101 U	1.4	--	0.925	0.756	0.648	1	1.18	1.22	0.787	1.24	1.15 U	0.446 U	0.116 U	0.794	0.865 U	0.763 U
Lead	mg/L	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.000178 J	0.000231	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005
Lithium	mg/L	--	0.0735	0.118	0.0805	0.0757	0.0828	0.125	0.093	0.0787	--	0.104	0.0819	0.0816	0.0736	0.0838	0.0786	0.0784	0.0949	0.0769	0.297	0.298	0.294	0.345	0.33
Mercury	mg/L	--	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.00025	<0.00025	<0.00025	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	8.8e-005 J	0.000169 J	<0.002	<0.002	<0.002	0.00174	0.00188
Selenium	mg/L	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.002	<0.002	<0.002	<0.000507	<0.000508
Thallium	mg/L	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect

Appendix B

Appendix B.
Historical Groundwater Elevations Summary

Well Name	Top of Casing Elevation (ft. AMSL)	Groundwater Elevation (ft. AMSL)														
		4/25/2016	6/20/2016	8/8/2016	10/3/2016	11/21/2016	1/17/2017	3/20/2017	4/10/2017	5/30/2017	8/23/20107	10/12/2017	10/13/2017	10/14/2017	10/15/2017	10/16/2017
MW-1	502.25	411.22	410.70	410.49	410.31	410.10	410.07	410.67	410.89	410.80	411.06	410.70	410.72	410.68	410.73	410.68
MW-2	502.12	417.36	416.76	416.60	416.21	415.98	416.62	417.24	417.66	416.94	417.02	416.50	416.54	416.49	416.53	416.50
MW-3	525.90	416.41	415.45	415.00	414.82	414.43	415.27	416.07	418.23	415.53	415.73	415.10	415.14	415.15	415.17	415.13
MW-4	518.63	402.31	401.79	400.61	400.09	399.53	400.51	402.02	402.50	401.68	401.77	400.79	400.76	400.67	400.67	400.59
MW-7	394.59	336.39	334.07	333.91	333.86	333.71	333.81	334.10	336.18	334.24	335.75	334.36	334.53	334.45	334.45	334.42
MW-8	416.10	351.49	351.75	351.95	352.15	352.16	353.56	352.92	353.12	353.12	353.29	353.39	353.32	353.31	353.40	353.34
MW-10	395.10	310.15	309.72	309.51	309.27	308.95	309.08	309.71	310.10	309.77	310.00	309.79	309.78	309.75	309.75	309.74
MW-11	406.96	303.90	302.76	303.71	303.50	302.82	303.39	304.10	306.13	305.04	306.62	307.31	307.23	307.18	307.22	307.29
MW-12	474.24	321.11	319.94	318.35	319.22	319.15	319.20	319.32	319.71	319.35	319.26	319.32	319.32	319.25	319.25	319.26
MW-12V	481.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
1. ft. AMSL - feet above mean sea level
2. -- Not Measured

Appendix B.
Historical Groundwater Elevations Summary

Well Name	Top of Casing Elevation (ft. AMSL)	Groundwater Elevation (ft. AMSL)													
		10/17/2017	11/15/2017	2/12/2018	4/9/2018	5/21/2018	10/29/2018	11/19/2018	3/13/2019	5/13/2019	10/7/2019	4/6/2020	7/13/2020	2/22/2021	7/12/2021
MW-1	502.25	410.65	410.66	410.89	411.35	411.47	410.62	410.80	412.11	411.77	410.79	412.16	411.22	411.59	411.54
MW-2	502.12	416.51	416.74	419.29	417.32	417.33	416.30	417.67	417.70	417.64	416.63	417.81	416.93	418.50	417.75
MW-3	525.90	415.12	415.41	418.49	416.25	416.28	414.85	416.31	418.31	416.40	415.17	417.64	415.34	419.94	421.54
MW-4	518.63	400.62	400.60	402.67	402.22	402.24	400.18	402.08	402.68	402.43	400.33	402.59	401.42	402.82	402.30
MW-7	394.59	334.41	334.14	336.82	335.68	336.60	334.01	337.61	339.54	338.44	334.13	338.34	335.86	338.01	336.47
MW-8	416.10	353.31	353.30	353.44	353.50	353.55	353.08	353.37	353.47	353.32	352.22	353.52	353.04	352.81	352.61
MW-10	395.10	309.72	309.73	310.54	310.12	310.25	309.62	310.39	311.24	310.79	309.60	310.96	309.95	310.72	310.21
MW-11	406.96	307.20	308.71	310.49	311.06	310.75	308.52	310.79	311.11	309.87	306.74	308.79	306.56	307.39	305.03
MW-12	474.24	319.26	319.28	319.49	319.56	320.02	318.96	319.45	321.63	320.45	318.90	320.45	319.34	319.66	319.41
MW-12V	481.32	--	--	--	--	--	--	--	327.31	--	326.23	328.00	326.53	326.61	325.92

Notes:
1. ft. AMSL - feet above mean sea level
2. -- Not Measured

Appendix C

1st
Semi-Annual
Monitoring Event

Alabama Power General Test Laboratory
744 County Road 87, GSC#8
Calera, AL 35040
(205) 664-6032 or 6171
FAX (205) 257-1654

Field Case Narrative

Plant Gorgas Pooled Upgradient Wells

2021 Compliance Event 1

All samples were collected using methods defined in Alabama Power's Water Field Group Low-Flow Groundwater Sampling Procedure and the associated site-specific Sampling and Analysis Plan (SAP).

Field quality control procedures were performed as follows:

- Blanks and Sample Duplicates were collected as described in the SAP.
- Calibration verifications for all required field parameters were performed daily, before and after sample collection.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
205-664-6001

Analytical Report

Alabama Power

Sample Group : WMWGORPU_1308

Project/Site : Gorgas Pooled Upgradient
Parrish, AL 35580

For : Southern Company Services
3535 Colonnade Parkway
Birmingham, AL 35243

Attention : Dustin Brooks & Greg Dyer

Released By : Laura Midkiff
lbmidkif@southernco.com
(205) 664-6197

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
(205) 664-6001

March 24, 2021

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory on February 23, 2021.
All results reported herein conform to the laboratory's most current Quality Assurance Manual. Results marked with an asterisk conform to the most current applicable TNI/NELAC requirements. Exceptions will be noted in the body of the report.

Laboratory certification ID: E571114
Issued By: State of Florida, Department of Health
Expiration: June 30, 2021

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

Sincerely,

Quality Control: Laura Midkiff

Digitally signed by Laura Midkiff
DN: cn=Laura Midkiff, o=Alabama Power Company, ou=Environmental Affairs, email=lbmidkif@southernco.com, c=US
Date: 2021.03.24 13:11:22 -05'00'

Supervision: T. Durant Maske

Digitally signed by T. Durant Maske
DN: cn=T. Durant Maske, o=Alabama Power Company, ou=Environmental Affairs, email=tdmaske@southernco.com, c=US
Date: 2021.03.25 14:30:30 -05'00'

REPORT OF LABORATORY ANALYSIS

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Total Metals ICP

Gorgas Pooled Upgradient

WMWGORPU_1308

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB03928	693672	WMWGORPU_1308
BB03929	693672	WMWGORPU_1308
BB03930	693672	WMWGORPU_1308
BB03931	693672	WMWGORPU_1308
BB03932	693672	WMWGORPU_1308
BB03933	693672	WMWGORPU_1308
BB03934	693672	WMWGORPU_1308

4. All of the above samples were analyzed by EPA 200.7 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.

- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution factor
BB03928	Calcium, Magnesium	20.3
BB03929	Calcium, Magnesium	20.3
BB03930	Calcium, Magnesium	20.3
BB03931	Calcium, Magnesium, Sodium	50.75
BB03933	Calcium, Magnesium	20.3

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Dissolved Metals ICP

Gorgas Pooled Upgradient

WMWGORPU_1308

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB03928	693642	WMWGORPU_1308
BB03929	693642	WMWGORPU_1308
BB03930	693642	WMWGORPU_1308
BB03931	693642	WMWGORPU_1308
BB03933	693642	WMWGORPU_1308

4. All of the above samples were analyzed and prepared by EPA 200.7 for dissolved analysis.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- Due to no filtered method blank (MB) or laboratory control sample (LCS) submitted with the sample set, an unfiltered MB and LCS were analyzed with the samples in each batch.
- All laboratory control sample criteria were met.
- The method blank associated with each batch passed all acceptance criteria for all requested analytes.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for precision were met.

7. All samples were analyzed without a dilution factor.
8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Total Metals ICPMS

Gorgas Pooled Upgradient

WMWGORPU_1308

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB03928	693232	WMWGORPU_1308
BB03929	693232	WMWGORPU_1308
BB03930	693232	WMWGORPU_1308
BB03931	693232	WMWGORPU_1308
BB03932	693232	WMWGORPU_1308
BB03933	693232	WMWGORPU_1308
BB03934	693232	WMWGORPU_1308

4. All of the above samples were analyzed by EPA 200.8 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution factor
BB03928	Manganese	10.15
BB03929	Manganese	10.15
BB03930	Manganese	5.075
BB03931	Manganese	5.075

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Dissolved Metals ICPMS

Gorgas Pooled Upgradient

WMWGORPU_1308

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB03928	693188	WMWGORPU_1308
BB03929	693188	WMWGORPU_1308
BB03930	693188	WMWGORPU_1308
BB03931	693188	WMWGORPU_1308
BB03933	693188	WMWGORPU_1308

4. All of the above samples were analyzed and prepared by EPA 200.8 for dissolved analysis.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- Due to no filtered method blank (MB) or laboratory control sample (LCS) submitted with the sample set, an unfiltered MB and LCS were analyzed with the samples in each batch.
- All laboratory control sample criteria were met.
- The method blank associated with each preparation batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample	Analyte	Dilution
BB03928	Manganese	10.15
BB03929	Manganese	10.15
BB03930	Manganese	5.075
BB03931	Manganese	5.075

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Mercury

Gorgas Pooled Upgradient

WMWGORPU_1308

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB03928	693427	WMWGORPU_1308
BB03929	693427	WMWGORPU_1308
BB03930	693427	WMWGORPU_1308
BB03931	693427	WMWGORPU_1308
BB03932	693427	WMWGORPU_1308
BB03933	693427	WMWGORPU_1308
BB03934	693427	WMWGORPU_1308

4. All of the above samples were analyzed and prepared by EPA 245.1.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the method detection limit for the requested analyte.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analyte.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analyte.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch was below the limit of quantitation for the requested analyte.
- All calibration met criteria for the requested analyte.
- All response signals were satisfactory.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.

7. All samples were analyzed without a dilution.
8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

TDS

Gorgas Pooled Upgradient

WMWGORPU_1308

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB03928	692991	WMWGORPU_1308
BB03929	692991	WMWGORPU_1308
BB03930	692991	WMWGORPU_1308
BB03931	692991	WMWGORPU_1308
BB03932	692991	WMWGORPU_1308
BB03933	692991	WMWGORPU_1308
BB03934	692991	WMWGORPU_1308

4. All of the above samples were analyzed by Standard Method 2540C.
5. All samples were analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- A Method Blank was analyzed with each batch. All criteria were met.
- All final weights of samples, standards, and blanks agreed within 0.5mg of the previous weight.
- A sample duplicate was analyzed with each batch. RPD/2 was less than 5%.
- A laboratory control sample was analyzed with each batch. All criteria were met.
- Samples were between 2.5mg and 200mg residue.
- All samples with residue <2.5mg had the maximum volume of 150mL filtered. Affected samples are as follows:
    - BB03932
    - BB03934

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Anions

Gorgas Pooled Upgradient

WMWGORPU_1308

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB03928	693007, 693045, & 692856	WMWGORPU_1308
BB03929	693007, 693045, & 692856	WMWGORPU_1308
BB03930	693007, 693045, & 692856	WMWGORPU_1308
BB03931	693007, 693045, & 692856	WMWGORPU_1308
BB03932	693007, 693045, & 692856	WMWGORPU_1308
BB03933	693007, 693045, & 692856	WMWGORPU_1308
BB03934	693007, 693045, & 692856	WMWGORPU_1308

4. All of the above samples were analyzed and prepared by SM4500 Cl E, SM4500 F G, and SM4500 SO4 E.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All calibration met criteria for the requested analyte.
- Prior to sample analysis, an initial calibration verification (ICV), and all criteria were met.
- Prior to sample analysis, an initial calibration blank (ICB) was analyzed and was below half the limit of quantitation for the requested analyte.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analyte.
- All continued calibration blanks (CCB) were below half the limit of quantitation for the requested analyte.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike was analyzed with each batch. Acceptance criteria for accuracy were met.
- A sample duplicate was analyzed with each batch. Acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution factor
BB03928	Sulfate	50
BB03929	Sulfate	50
BB03930	Sulfate	40
BB03931	Sulfate	80
BB03933	Sulfate	80

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Alkalinity

Gorgas Pooled Upgradient

WMWGORPU_1308

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB03928	693348, 693349	WMWGORPU_1308
BB03929	693348, 693349	WMWGORPU_1308
BB03930	693348, 693349	WMWGORPU_1308
BB03931	693348, 693349	WMWGORPU_1308
BB03933	693348, 693349	WMWGORPU_1308

4. All of the above samples were analyzed by Standard Method 2320B.
5. All samples were analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- An initial pH check was analyzed with each batch. The acceptance criteria were met.
- A final pH check was analyzed with each batch. The acceptance criteria were met.
- An alkalinity laboratory control sample was analyzed with each batch. Range criteria of within 10% of true value was met.
- An alkalinity sample duplicate was analyzed with each batch. Precision criteria less than 10 RPD was met.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-1

Location Code: WMWGORPU
Collected: 2/22/21 10:47
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03928

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/11/21 14:53	3/12/21 14:31		1.015	0.0307	mg/L	0.030000	0.1015	J
* Calcium, Total	3/11/21 14:53	3/12/21 15:37		20.3	151	mg/L	1.4007	8.12	
* Iron, Total	3/11/21 14:53	3/12/21 14:31		1.015	0.0280	mg/L	0.008120	0.0406	J
* Lithium, Total	3/11/21 14:53	3/12/21 14:31		1.015	0.0301	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/11/21 14:53	3/12/21 15:37		20.3	279	mg/L	0.4263	8.12	
* Sodium, Total	3/11/21 14:53	3/12/21 14:31		1.015	38.5	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:03		1.015	Not Detected	mg/L	0.008120	0.0406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/23/21 13:40	2/25/21 11:05		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/23/21 13:40	2/25/21 11:05		1.015	0.000403	mg/L	0.000068	0.000203	
* Barium, Total	2/23/21 13:40	2/25/21 11:05		1.015	0.0107	mg/L	0.000101	0.000203	
* Beryllium, Total	2/23/21 13:40	2/25/21 11:05		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/23/21 13:40	2/25/21 11:05		1.015	0.00184	mg/L	0.000068	0.000203	
* Chromium, Total	2/23/21 13:40	2/25/21 11:05		1.015	0.000382	mg/L	0.000203	0.001015	J
* Cobalt, Total	2/23/21 13:40	2/25/21 11:05		1.015	0.0657	mg/L	0.000068	0.000203	
* Lead, Total	2/23/21 13:40	2/25/21 11:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/23/21 13:40	2/25/21 11:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	2/23/21 13:40	2/25/21 11:05		1.015	7.22	mg/L	0.169505	0.5075	
* Manganese, Total	2/23/21 13:40	2/26/21 15:37		10.15	9.75	mg/L	0.000680	0.00203	
* Selenium, Total	2/23/21 13:40	2/25/21 11:05		1.015	0.00241	mg/L	0.000507	0.001015	
* Thallium, Total	2/23/21 13:40	2/25/21 11:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/23/21 14:25	2/26/21 15:19		10.15	9.75	mg/L	0.000680	0.00203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 11:47		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 10:35	3/3/21 11:07		1	22.6	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	2230	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-1

Location Code: WMWGORPU
Collected: 2/22/21 10:47
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03928

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 10:35	3/3/21 11:07		1	22.6	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 10:35	3/3/21 11:07		1	0.00	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 10:30	2/25/21 10:30		1	2.16	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:08	2/25/21 15:08		1	0.0820	mg/L	0.06	0.1	J
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/23/21 15:13	2/23/21 15:13		50	1400	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/22/21 10:44	2/22/21 10:44			2369.76	uS/cm			FA
pH	2/22/21 10:44	2/22/21 10:44			5.06	SU			FA
Temperature	2/22/21 10:44	2/22/21 10:44			19.04	C			FA
Turbidity	2/22/21 10:44	2/22/21 10:44			0.4	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPU
Sample Date: 2/22/21 10:47
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient - MW-1

Laboratory ID Number: BB03928

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03933	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.197	0.200	0.205	0.170 to 0.230	98.5	70.0 to 130	1.51	20.0
BB03934	Arsenic, Total	mg/L	0.0000056	0.000147	0.10	0.105	0.104	0.105	0.0850 to 0.115	105	70.0 to 130	0.957	20.0
BB03934	Barium, Total	mg/L	0.0000266	0.000200	0.10	0.0985	0.102	0.0996	0.0850 to 0.115	98.5	70.0 to 130	3.49	20.0
BB03934	Beryllium, Total	mg/L	0.0000157	0.000880	0.10	0.0921	0.0961	0.0977	0.0850 to 0.115	92.1	70.0 to 130	4.25	20.0
BB03934	Sodium, Total	mg/L	0.00835	0.0440	5.00	5.04	4.98	5.24	4.25 to 5.75	101	70.0 to 130	1.20	20.0
BB03934	Boron, Total	mg/L	-0.00165	0.0650	1.00	1.00	1.00	1.02	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BB03934	Cadmium, Total	mg/L	0.0000032	0.000147	0.10	0.0999	0.0977	0.101	0.0850 to 0.115	99.9	70.0 to 130	2.23	20.0
BB03934	Lithium, Total	mg/L	-0.0000744	0.0154	0.20	0.202	0.200	0.210	0.170 to 0.230	101	70.0 to 130	0.995	20.0
BB03934	Manganese, Total	mg/L	0.0000409	0.000147	0.10	0.0998	0.102	0.101	0.0850 to 0.115	99.7	70.0 to 130	2.18	20.0
BB03934	Antimony, Total	mg/L	0.000234	0.00100	0.10	0.0937	0.0965	0.0942	0.0850 to 0.115	93.7	70.0 to 130	2.94	20.0
BB03933	Manganese, Dissolved	mg/L	0.0000275	0.000147	0.10	0.100	0.0992	0.102	0.0850 to 0.115	99.7	70.0 to 130	0.803	20.0
BB03934	Calcium, Total	mg/L	0.000993	0.152	5.00	5.03	5.02	4.98	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB03934	Cobalt, Total	mg/L	-0.0000680	0.000147	0.10	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB03934	Iron, Total	mg/L	0.000896	0.0176	0.2	0.202	0.202	0.201	0.170 to 0.230	101	70.0 to 130	0.00	20.0
BB03934	Potassium, Total	mg/L	-0.000271	0.367	10.0	10.1	9.95	10.1	8.50 to 11.5	101	70.0 to 130	1.50	20.0
BB03934	Thallium, Total	mg/L	-0.0000628	0.000147	0.10	0.108	0.104	0.104	0.0850 to 0.115	108	70.0 to 130	3.77	20.0
BB03934	Mercury, Total by CVAA	mg/L	0.000103	0.000500	0.004	0.00427	0.00420	0.00414	0.00340 to 0.00460	107	70.0 to 130	1.65	20.0
BB03934	Magnesium, Total	mg/L	-0.000195	0.0462	5.00	5.07	5.04	5.12	4.25 to 5.75	101	70.0 to 130	0.593	20.0
BB03934	Lead, Total	mg/L	0.0000041	0.000147	0.10	0.113	0.109	0.109	0.0850 to 0.115	113	70.0 to 130	3.60	20.0
BB03934	Selenium, Total	mg/L	0.0000614	0.00100	0.10	0.0984	0.0971	0.101	0.0850 to 0.115	98.4	70.0 to 130	1.33	20.0
BB03934	Chromium, Total	mg/L	-0.000107	0.000440	0.10	0.102	0.104	0.104	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BB03934	Molybdenum, Total	mg/L	-0.0000018	0.000147	0.10	0.0968	0.0945	0.0970	0.0850 to 0.115	96.8	70.0 to 130	2.40	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPU
Sample Date: 2/22/21 10:47
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient - MW-1

Laboratory ID Number: BB03928

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03933	Alkalinity, Total as CaCO3	mg/L					186	52.0	45.0 to 55.0			2.13	10.0
BB03934	Chloride	mg/L	-0.0953	0.500	10.0	10.5	-0.0804	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BB03933	Solids, Dissolved	mg/L	-1.00	25.0			3230	51.0	40.0 to 60.0			0.623	5.00
BB03934	Fluoride	mg/L	0.0288	0.0500	2.50	2.50	0.0282	2.60	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB03934	Sulfate	mg/L	-0.466	0.500	20.0	19.6	-0.457	19.8	18.0 to 22.0	98.0	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-1 DUP

Location Code: WMWGORPU
Collected: 2/22/21 10:47
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03929

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/11/21 14:53	3/12/21 14:34		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	3/11/21 14:53	3/12/21 15:40		20.3	152	mg/L	1.4007	8.12	
* Iron, Total	3/11/21 14:53	3/12/21 14:34		1.015	0.0357	mg/L	0.008120	0.0406	J
* Lithium, Total	3/11/21 14:53	3/12/21 14:34		1.015	0.0308	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/11/21 14:53	3/12/21 15:40		20.3	280	mg/L	0.4263	8.12	
* Sodium, Total	3/11/21 14:53	3/12/21 14:34		1.015	38.0	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:07		1.015	Not Detected	mg/L	0.008120	0.0406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/23/21 13:40	2/25/21 11:07		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/23/21 13:40	2/25/21 11:07		1.015	0.000462	mg/L	0.000068	0.000203	
* Barium, Total	2/23/21 13:40	2/25/21 11:07		1.015	0.0106	mg/L	0.000101	0.000203	
* Beryllium, Total	2/23/21 13:40	2/25/21 11:07		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/23/21 13:40	2/25/21 11:07		1.015	0.00174	mg/L	0.000068	0.000203	
* Chromium, Total	2/23/21 13:40	2/25/21 11:07		1.015	0.000321	mg/L	0.000203	0.001015	J
* Cobalt, Total	2/23/21 13:40	2/25/21 11:07		1.015	0.0636	mg/L	0.000068	0.000203	
* Lead, Total	2/23/21 13:40	2/25/21 11:07		1.015	0.0000725	mg/L	0.000068	0.000203	J
* Molybdenum, Total	2/23/21 13:40	2/25/21 11:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	2/23/21 13:40	2/25/21 11:07		1.015	7.15	mg/L	0.169505	0.5075	
* Manganese, Total	2/23/21 13:40	2/26/21 15:40		10.15	9.88	mg/L	0.000680	0.00203	
* Selenium, Total	2/23/21 13:40	2/25/21 11:07		1.015	0.00250	mg/L	0.000507	0.001015	
* Thallium, Total	2/23/21 13:40	2/25/21 11:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/23/21 14:25	2/26/21 15:22		10.15	9.81	mg/L	0.000680	0.00203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 11:50		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 10:35	3/3/21 11:07		1	28.4	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	2220	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-1 DUP

Location Code: WMWGORPU
Collected: 2/22/21 10:47
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03929

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 10:35	3/3/21 11:07		1	28.4	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 10:35	3/3/21 11:07		1	0.00	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 10:31	2/25/21 10:31		1	2.17	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:09	2/25/21 15:09		1	0.0774	mg/L	0.06	0.1	J
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/23/21 15:14	2/23/21 15:14		50	1400	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/22/21 10:44	2/22/21 10:44			2369.76	uS/cm			FA
pH	2/22/21 10:44	2/22/21 10:44			5.06	SU			FA
Temperature	2/22/21 10:44	2/22/21 10:44			19.04	C			FA
Turbidity	2/22/21 10:44	2/22/21 10:44			0.4	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPU
Sample Date: 2/22/21 10:47
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient - MW-1 DUP

Laboratory ID Number: BB03929

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03933	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.197	0.200	0.205	0.170 to 0.230	98.5	70.0 to 130	1.51	20.0
BB03934	Arsenic, Total	mg/L	0.0000056	0.000147	0.10	0.105	0.104	0.105	0.0850 to 0.115	105	70.0 to 130	0.957	20.0
BB03934	Barium, Total	mg/L	0.0000266	0.000200	0.10	0.0985	0.102	0.0996	0.0850 to 0.115	98.5	70.0 to 130	3.49	20.0
BB03934	Beryllium, Total	mg/L	0.0000157	0.000880	0.10	0.0921	0.0961	0.0977	0.0850 to 0.115	92.1	70.0 to 130	4.25	20.0
BB03934	Sodium, Total	mg/L	0.00835	0.0440	5.00	5.04	4.98	5.24	4.25 to 5.75	101	70.0 to 130	1.20	20.0
BB03934	Mercury, Total by CVAA	mg/L	0.000103	0.000500	0.004	0.00427	0.00420	0.00414	0.00340 to 0.00460	107	70.0 to 130	1.65	20.0
BB03934	Magnesium, Total	mg/L	-0.000195	0.0462	5.00	5.07	5.04	5.12	4.25 to 5.75	101	70.0 to 130	0.593	20.0
BB03934	Lead, Total	mg/L	0.0000041	0.000147	0.10	0.113	0.109	0.109	0.0850 to 0.115	113	70.0 to 130	3.60	20.0
BB03934	Selenium, Total	mg/L	0.0000614	0.00100	0.10	0.0984	0.0971	0.101	0.0850 to 0.115	98.4	70.0 to 130	1.33	20.0
BB03933	Manganese, Dissolved	mg/L	0.0000275	0.000147	0.10	0.100	0.0992	0.102	0.0850 to 0.115	99.7	70.0 to 130	0.803	20.0
BB03934	Calcium, Total	mg/L	0.000993	0.152	5.00	5.03	5.02	4.98	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB03934	Cobalt, Total	mg/L	-0.0000680	0.000147	0.10	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB03934	Iron, Total	mg/L	0.000896	0.0176	0.2	0.202	0.202	0.201	0.170 to 0.230	101	70.0 to 130	0.00	20.0
BB03934	Potassium, Total	mg/L	-0.000271	0.367	10.0	10.1	9.95	10.1	8.50 to 11.5	101	70.0 to 130	1.50	20.0
BB03934	Thallium, Total	mg/L	-0.0000628	0.000147	0.10	0.108	0.104	0.104	0.0850 to 0.115	108	70.0 to 130	3.77	20.0
BB03934	Boron, Total	mg/L	-0.00165	0.0650	1.00	1.00	1.00	1.02	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BB03934	Cadmium, Total	mg/L	0.0000032	0.000147	0.10	0.0999	0.0977	0.101	0.0850 to 0.115	99.9	70.0 to 130	2.23	20.0
BB03934	Lithium, Total	mg/L	-0.0000744	0.0154	0.20	0.202	0.200	0.210	0.170 to 0.230	101	70.0 to 130	0.995	20.0
BB03934	Manganese, Total	mg/L	0.0000409	0.000147	0.10	0.0998	0.102	0.101	0.0850 to 0.115	99.7	70.0 to 130	2.18	20.0
BB03934	Antimony, Total	mg/L	0.000234	0.00100	0.10	0.0937	0.0965	0.0942	0.0850 to 0.115	93.7	70.0 to 130	2.94	20.0
BB03934	Chromium, Total	mg/L	-0.000107	0.000440	0.10	0.102	0.104	0.104	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BB03934	Molybdenum, Total	mg/L	-0.0000018	0.000147	0.10	0.0968	0.0945	0.0970	0.0850 to 0.115	96.8	70.0 to 130	2.40	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPU
Sample Date: 2/22/21 10:47
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient - MW-1 DUP

Laboratory ID Number: BB03929

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03933	Alkalinity, Total as CaCO3	mg/L					186	52.0	45.0 to 55.0			2.13	10.0
BB03934	Chloride	mg/L	-0.0953	0.500	10.0	10.5	-0.0804	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BB03933	Solids, Dissolved	mg/L	-1.00	25.0			3230	51.0	40.0 to 60.0			0.623	5.00
BB03934	Fluoride	mg/L	0.0288	0.0500	2.50	2.50	0.0282	2.60	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB03934	Sulfate	mg/L	-0.466	0.500	20.0	19.6	-0.457	19.8	18.0 to 22.0	98.0	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-2

Location Code: WMWGORPU
Collected: 2/22/21 11:47
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03930

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/11/21 14:53	3/12/21 14:37		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	3/11/21 14:53	3/12/21 15:44		20.3	178	mg/L	1.4007	8.12	
* Iron, Total	3/11/21 14:53	3/12/21 14:37		1.015	1.20	mg/L	0.008120	0.0406	
* Lithium, Total	3/11/21 14:53	3/12/21 14:37		1.015	0.0625	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/11/21 14:53	3/12/21 15:44		20.3	193	mg/L	0.4263	8.12	
* Sodium, Total	3/11/21 14:53	3/12/21 14:37		1.015	24.0	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:10		1.015	0.924	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/23/21 13:40	2/25/21 11:10		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/23/21 13:40	2/25/21 11:10		1.015	0.000295	mg/L	0.000068	0.000203	
* Barium, Total	2/23/21 13:40	2/25/21 11:10		1.015	0.0132	mg/L	0.000101	0.000203	
* Beryllium, Total	2/23/21 13:40	2/25/21 11:10		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/23/21 13:40	2/25/21 11:10		1.015	0.0000896	mg/L	0.000068	0.000203	J
* Chromium, Total	2/23/21 13:40	2/25/21 11:10		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/23/21 13:40	2/25/21 11:10		1.015	0.0161	mg/L	0.000068	0.000203	
* Lead, Total	2/23/21 13:40	2/25/21 11:10		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/23/21 13:40	2/25/21 11:10		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	2/23/21 13:40	2/25/21 11:10		1.015	6.21	mg/L	0.169505	0.5075	
* Manganese, Total	2/23/21 13:40	2/26/21 15:44		5.075	3.54	mg/L	0.000340	0.001015	
* Selenium, Total	2/23/21 13:40	2/25/21 11:10		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/23/21 13:40	2/25/21 11:10		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/23/21 14:25	2/26/21 15:26		5.075	3.49	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 11:52		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 10:35	3/3/21 11:07		1	358	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	1620	mg/L		100	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-2

Location Code: WMWGORPU
Collected: 2/22/21 11:47
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03930

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 10:35	3/3/21 11:07		1	358	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 10:35	3/3/21 11:07		1	0.07	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 10:32	2/25/21 10:32		1	1.72	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:11	2/25/21 15:11		1	0.209	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/23/21 15:15	2/23/21 15:15		40	864	mg/L	20.00	40	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/22/21 11:44	2/22/21 11:44			1939.81	uS/cm			FA
pH	2/22/21 11:44	2/22/21 11:44			6.10	SU			FA
Temperature	2/22/21 11:44	2/22/21 11:44			18.70	C			FA
Turbidity	2/22/21 11:44	2/22/21 11:44			1.49	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPU
Sample Date: 2/22/21 11:47
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient - MW-2

Laboratory ID Number: BB03930

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03933	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.197	0.200	0.205	0.170 to 0.230	98.5	70.0 to 130	1.51	20.0
BB03934	Arsenic, Total	mg/L	0.0000056	0.000147	0.10	0.105	0.104	0.105	0.0850 to 0.115	105	70.0 to 130	0.957	20.0
BB03934	Barium, Total	mg/L	0.0000266	0.000200	0.10	0.0985	0.102	0.0996	0.0850 to 0.115	98.5	70.0 to 130	3.49	20.0
BB03934	Beryllium, Total	mg/L	0.0000157	0.000880	0.10	0.0921	0.0961	0.0977	0.0850 to 0.115	92.1	70.0 to 130	4.25	20.0
BB03934	Sodium, Total	mg/L	0.00835	0.0440	5.00	5.04	4.98	5.24	4.25 to 5.75	101	70.0 to 130	1.20	20.0
BB03934	Mercury, Total by CVAA	mg/L	0.000103	0.000500	0.004	0.00427	0.00420	0.00414	0.00340 to 0.00460	107	70.0 to 130	1.65	20.0
BB03934	Magnesium, Total	mg/L	-0.000195	0.0462	5.00	5.07	5.04	5.12	4.25 to 5.75	101	70.0 to 130	0.593	20.0
BB03934	Lead, Total	mg/L	0.0000041	0.000147	0.10	0.113	0.109	0.109	0.0850 to 0.115	113	70.0 to 130	3.60	20.0
BB03934	Selenium, Total	mg/L	0.0000614	0.00100	0.10	0.0984	0.0971	0.101	0.0850 to 0.115	98.4	70.0 to 130	1.33	20.0
BB03934	Boron, Total	mg/L	-0.00165	0.0650	1.00	1.00	1.00	1.02	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BB03934	Cadmium, Total	mg/L	0.0000032	0.000147	0.10	0.0999	0.0977	0.101	0.0850 to 0.115	99.9	70.0 to 130	2.23	20.0
BB03934	Lithium, Total	mg/L	-0.0000744	0.0154	0.20	0.202	0.200	0.210	0.170 to 0.230	101	70.0 to 130	0.995	20.0
BB03934	Manganese, Total	mg/L	0.0000409	0.000147	0.10	0.0998	0.102	0.101	0.0850 to 0.115	99.7	70.0 to 130	2.18	20.0
BB03934	Antimony, Total	mg/L	0.000234	0.00100	0.10	0.0937	0.0965	0.0942	0.0850 to 0.115	93.7	70.0 to 130	2.94	20.0
BB03933	Manganese, Dissolved	mg/L	0.0000275	0.000147	0.10	0.100	0.0992	0.102	0.0850 to 0.115	99.7	70.0 to 130	0.803	20.0
BB03934	Calcium, Total	mg/L	0.000993	0.152	5.00	5.03	5.02	4.98	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB03934	Cobalt, Total	mg/L	-0.0000680	0.000147	0.10	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB03934	Iron, Total	mg/L	0.000896	0.0176	0.2	0.202	0.202	0.201	0.170 to 0.230	101	70.0 to 130	0.00	20.0
BB03934	Potassium, Total	mg/L	-0.000271	0.367	10.0	10.1	9.95	10.1	8.50 to 11.5	101	70.0 to 130	1.50	20.0
BB03934	Thallium, Total	mg/L	-0.0000628	0.000147	0.10	0.108	0.104	0.104	0.0850 to 0.115	108	70.0 to 130	3.77	20.0
BB03934	Chromium, Total	mg/L	-0.000107	0.000440	0.10	0.102	0.104	0.104	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BB03934	Molybdenum, Total	mg/L	-0.0000018	0.000147	0.10	0.0968	0.0945	0.0970	0.0850 to 0.115	96.8	70.0 to 130	2.40	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPU
Sample Date: 2/22/21 11:47
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient - MW-2

Laboratory ID Number: BB03930

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03933	Alkalinity, Total as CaCO3	mg/L					186	52.0	45.0 to 55.0			2.13	10.0
BB03934	Chloride	mg/L	-0.0953	0.500	10.0	10.5	-0.0804	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BB03933	Solids, Dissolved	mg/L	-1.00	25.0			3230	51.0	40.0 to 60.0			0.623	5.00
BB03934	Fluoride	mg/L	0.0288	0.0500	2.50	2.50	0.0282	2.60	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB03934	Sulfate	mg/L	-0.466	0.500	20.0	19.6	-0.457	19.8	18.0 to 22.0	98.0	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-3

Location Code: WMWGORPU
Collected: 2/22/21 12:52
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03931

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/11/21 14:53	3/12/21 14:41		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	3/11/21 14:53	3/12/21 15:47		50.75	312	mg/L	3.50175	20.3	
* Iron, Total	3/11/21 14:53	3/12/21 14:41		1.015	0.224	mg/L	0.008120	0.0406	
* Lithium, Total	3/11/21 14:53	3/12/21 14:41		1.015	0.126	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/11/21 14:53	3/12/21 15:47		50.75	618	mg/L	1.06575	20.3	
* Sodium, Total	3/11/21 14:53	3/12/21 15:47		50.75	58.7	mg/L	1.0150	20.3	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:14		1.015	Not Detected	mg/L	0.008120	0.0406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/23/21 13:40	2/25/21 11:13		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/23/21 13:40	2/25/21 11:13		1.015	0.000789	mg/L	0.000068	0.000203	
* Barium, Total	2/23/21 13:40	2/25/21 11:13		1.015	0.00981	mg/L	0.000101	0.000203	
* Beryllium, Total	2/23/21 13:40	2/25/21 11:13		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/23/21 13:40	2/25/21 11:13		1.015	0.00536	mg/L	0.000068	0.000203	
* Chromium, Total	2/23/21 13:40	2/25/21 11:13		1.015	0.000350	mg/L	0.000203	0.001015	J
* Cobalt, Total	2/23/21 13:40	2/25/21 11:13		1.015	0.0515	mg/L	0.000068	0.000203	
* Lead, Total	2/23/21 13:40	2/25/21 11:13		1.015	0.0000880	mg/L	0.000068	0.000203	J
* Molybdenum, Total	2/23/21 13:40	2/25/21 11:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	2/23/21 13:40	2/25/21 11:13		1.015	8.01	mg/L	0.169505	0.5075	
* Manganese, Total	2/23/21 13:40	2/26/21 15:47		5.075	3.26	mg/L	0.000340	0.001015	
* Selenium, Total	2/23/21 13:40	2/25/21 11:13		1.015	0.0181	mg/L	0.000507	0.001015	
* Thallium, Total	2/23/21 13:40	2/25/21 11:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/23/21 14:25	2/26/21 15:29		5.075	3.09	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 11:55		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 10:35	3/3/21 11:07		1	58.7	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	4670	mg/L		250	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-3

Location Code: WMWGORPU
Collected: 2/22/21 12:52
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03931

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 10:35	3/3/21 11:07		1	58.7	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 10:35	3/3/21 11:07		1	0.00	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 10:34	2/25/21 10:34		1	2.22	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:12	2/25/21 15:12		1	0.246	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/23/21 15:16	2/23/21 15:16		80	3040	mg/L	40.00	80	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/22/21 12:49	2/22/21 12:49			4417.53	uS/cm			FA
pH	2/22/21 12:49	2/22/21 12:49			5.59	SU			FA
Temperature	2/22/21 12:49	2/22/21 12:49			19.81	C			FA
Turbidity	2/22/21 12:49	2/22/21 12:49			2.88	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPU
Sample Date: 2/22/21 12:52
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient - MW-3

Laboratory ID Number: BB03931

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03933	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.197	0.200	0.205	0.170 to 0.230	98.5	70.0 to 130	1.51	20.0
BB03934	Arsenic, Total	mg/L	0.0000056	0.000147	0.10	0.105	0.104	0.105	0.0850 to 0.115	105	70.0 to 130	0.957	20.0
BB03934	Mercury, Total by CVAA	mg/L	0.000103	0.000500	0.004	0.00427	0.00420	0.00414	0.00340 to 0.00460	107	70.0 to 130	1.65	20.0
BB03934	Magnesium, Total	mg/L	-0.000195	0.0462	5.00	5.07	5.04	5.12	4.25 to 5.75	101	70.0 to 130	0.593	20.0
BB03934	Lead, Total	mg/L	0.0000041	0.000147	0.10	0.113	0.109	0.109	0.0850 to 0.115	113	70.0 to 130	3.60	20.0
BB03934	Selenium, Total	mg/L	0.0000614	0.00100	0.10	0.0984	0.0971	0.101	0.0850 to 0.115	98.4	70.0 to 130	1.33	20.0
BB03934	Barium, Total	mg/L	0.0000266	0.000200	0.10	0.0985	0.102	0.0996	0.0850 to 0.115	98.5	70.0 to 130	3.49	20.0
BB03934	Beryllium, Total	mg/L	0.0000157	0.000880	0.10	0.0921	0.0961	0.0977	0.0850 to 0.115	92.1	70.0 to 130	4.25	20.0
BB03934	Sodium, Total	mg/L	0.00835	0.0440	5.00	5.04	4.98	5.24	4.25 to 5.75	101	70.0 to 130	1.20	20.0
BB03934	Boron, Total	mg/L	-0.00165	0.0650	1.00	1.00	1.00	1.02	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BB03934	Cadmium, Total	mg/L	0.0000032	0.000147	0.10	0.0999	0.0977	0.101	0.0850 to 0.115	99.9	70.0 to 130	2.23	20.0
BB03934	Lithium, Total	mg/L	-0.0000744	0.0154	0.20	0.202	0.200	0.210	0.170 to 0.230	101	70.0 to 130	0.995	20.0
BB03934	Manganese, Total	mg/L	0.0000409	0.000147	0.10	0.0998	0.102	0.101	0.0850 to 0.115	99.7	70.0 to 130	2.18	20.0
BB03934	Antimony, Total	mg/L	0.000234	0.00100	0.10	0.0937	0.0965	0.0942	0.0850 to 0.115	93.7	70.0 to 130	2.94	20.0
BB03933	Manganese, Dissolved	mg/L	0.0000275	0.000147	0.10	0.100	0.0992	0.102	0.0850 to 0.115	99.7	70.0 to 130	0.803	20.0
BB03934	Calcium, Total	mg/L	0.000993	0.152	5.00	5.03	5.02	4.98	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB03934	Cobalt, Total	mg/L	-0.0000680	0.000147	0.10	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB03934	Iron, Total	mg/L	0.000896	0.0176	0.2	0.202	0.202	0.201	0.170 to 0.230	101	70.0 to 130	0.00	20.0
BB03934	Potassium, Total	mg/L	-0.000271	0.367	10.0	10.1	9.95	10.1	8.50 to 11.5	101	70.0 to 130	1.50	20.0
BB03934	Thallium, Total	mg/L	-0.0000628	0.000147	0.10	0.108	0.104	0.104	0.0850 to 0.115	108	70.0 to 130	3.77	20.0
BB03934	Chromium, Total	mg/L	-0.000107	0.000440	0.10	0.102	0.104	0.104	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BB03934	Molybdenum, Total	mg/L	-0.0000018	0.000147	0.10	0.0968	0.0945	0.0970	0.0850 to 0.115	96.8	70.0 to 130	2.40	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPU
Sample Date: 2/22/21 12:52
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient - MW-3

Laboratory ID Number: BB03931

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03933	Alkalinity, Total as CaCO3	mg/L					186	52.0	45.0 to 55.0			2.13	10.0
BB03934	Chloride	mg/L	-0.0953	0.500	10.0	10.5	-0.0804	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BB03933	Solids, Dissolved	mg/L	-1.00	25.0			3230	51.0	40.0 to 60.0			0.623	5.00
BB03934	Fluoride	mg/L	0.0288	0.0500	2.50	2.50	0.0282	2.60	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB03934	Sulfate	mg/L	-0.466	0.500	20.0	19.6	-0.457	19.8	18.0 to 22.0	98.0	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient Field Blank-1

Location Code: WMWGORPUFB
Collected: 2/22/21 13:20
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03932

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/11/21 14:53	3/12/21 14:44		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	3/11/21 14:53	3/12/21 14:44		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	3/11/21 14:53	3/12/21 14:44		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	3/11/21 14:53	3/12/21 14:44		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	3/11/21 14:53	3/12/21 14:44		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	3/11/21 14:53	3/12/21 14:44		1.015	Not Detected	mg/L	0.02030	0.406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000101	0.000203	U
* Beryllium, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	2/23/21 13:40	2/25/21 11:15		1.015	0.0000796	mg/L	0.000068	0.000203	J
* Potassium, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/23/21 13:40	2/25/21 11:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 11:57		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 10:35	2/25/21 10:35		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:13	2/25/21 15:13		1	Not Detected	mg/L	0.06	0.1	U
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/23/21 15:17	2/23/21 15:17		1	Not Detected	mg/L	0.50	1	U

MDL's and RL's are adjusted for sample dilution, as applicable

Comments:

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPUFB
Sample Date: 2/22/21 13:20
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient Field Blank-1

Laboratory ID Number: BB03932

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03934	Arsenic, Total	mg/L	0.0000056	0.000147	0.10	0.105	0.104	0.105	0.0850 to 0.115	105	70.0 to 130	0.957	20.0
BB03934	Barium, Total	mg/L	0.0000266	0.000200	0.10	0.0985	0.102	0.0996	0.0850 to 0.115	98.5	70.0 to 130	3.49	20.0
BB03934	Beryllium, Total	mg/L	0.0000157	0.000880	0.10	0.0921	0.0961	0.0977	0.0850 to 0.115	92.1	70.0 to 130	4.25	20.0
BB03934	Sodium, Total	mg/L	0.00835	0.0440	5.00	5.04	4.98	5.24	4.25 to 5.75	101	70.0 to 130	1.20	20.0
BB03934	Mercury, Total by CVAA	mg/L	0.000103	0.000500	0.004	0.00427	0.00420	0.00414	0.00340 to 0.00460	107	70.0 to 130	1.65	20.0
BB03934	Magnesium, Total	mg/L	-0.000195	0.0462	5.00	5.07	5.04	5.12	4.25 to 5.75	101	70.0 to 130	0.593	20.0
BB03934	Lead, Total	mg/L	0.0000041	0.000147	0.10	0.113	0.109	0.109	0.0850 to 0.115	113	70.0 to 130	3.60	20.0
BB03934	Selenium, Total	mg/L	0.0000614	0.00100	0.10	0.0984	0.0971	0.101	0.0850 to 0.115	98.4	70.0 to 130	1.33	20.0
BB03934	Calcium, Total	mg/L	0.000993	0.152	5.00	5.03	5.02	4.98	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB03934	Cobalt, Total	mg/L	-0.0000680	0.000147	0.10	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB03934	Iron, Total	mg/L	0.000896	0.0176	0.2	0.202	0.202	0.201	0.170 to 0.230	101	70.0 to 130	0.00	20.0
BB03934	Potassium, Total	mg/L	-0.000271	0.367	10.0	10.1	9.95	10.1	8.50 to 11.5	101	70.0 to 130	1.50	20.0
BB03934	Thallium, Total	mg/L	-0.0000628	0.000147	0.10	0.108	0.104	0.104	0.0850 to 0.115	108	70.0 to 130	3.77	20.0
BB03934	Boron, Total	mg/L	-0.00165	0.0650	1.00	1.00	1.00	1.02	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BB03934	Cadmium, Total	mg/L	0.0000032	0.000147	0.10	0.0999	0.0977	0.101	0.0850 to 0.115	99.9	70.0 to 130	2.23	20.0
BB03934	Lithium, Total	mg/L	-0.0000744	0.0154	0.20	0.202	0.200	0.210	0.170 to 0.230	101	70.0 to 130	0.995	20.0
BB03934	Manganese, Total	mg/L	0.0000409	0.000147	0.10	0.0998	0.102	0.101	0.0850 to 0.115	99.7	70.0 to 130	2.18	20.0
BB03934	Antimony, Total	mg/L	0.000234	0.00100	0.10	0.0937	0.0965	0.0942	0.0850 to 0.115	93.7	70.0 to 130	2.94	20.0
BB03934	Chromium, Total	mg/L	-0.000107	0.000440	0.10	0.102	0.104	0.104	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BB03934	Molybdenum, Total	mg/L	-0.0000018	0.000147	0.10	0.0968	0.0945	0.0970	0.0850 to 0.115	96.8	70.0 to 130	2.40	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPUFB
Sample Date: 2/22/21 13:20
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient Field Blank-1

Laboratory ID Number: BB03932

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03934	Chloride	mg/L	-0.0953	0.500	10.0	10.5	-0.0804	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BB03933	Solids, Dissolved	mg/L	-1.00	25.0			3230	51.0	40.0 to 60.0			0.623	5.00
BB03934	Fluoride	mg/L	0.0288	0.0500	2.50	2.50	0.0282	2.60	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB03934	Sulfate	mg/L	-0.466	0.500	20.0	19.6	-0.457	19.8	18.0 to 22.0	98.0	80.0 to 120	0.00	20.0

Comments:

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-4

Location Code: WMWGORPU
Collected: 2/22/21 14:07
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03933

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/11/21 14:53	3/12/21 14:47		1.015	0.0397	mg/L	0.030000	0.1015	J
* Calcium, Total	3/11/21 14:53	3/12/21 15:50		20.3	271	mg/L	1.4007	8.12	
* Iron, Total	3/11/21 14:53	3/12/21 14:47		1.015	0.0362	mg/L	0.008120	0.0406	J
* Lithium, Total	3/11/21 14:53	3/12/21 14:47		1.015	0.0558	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/11/21 14:53	3/12/21 15:50		20.3	436	mg/L	0.4263	8.12	
* Sodium, Total	3/11/21 14:53	3/12/21 14:47		1.015	39.8	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:17		1.015	Not Detected	mg/L	0.008120	0.0406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/23/21 13:40	2/25/21 11:18		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/23/21 13:40	2/25/21 11:18		1.015	0.000125	mg/L	0.000068	0.000203	J
* Barium, Total	2/23/21 13:40	2/25/21 11:18		1.015	0.0111	mg/L	0.000101	0.000203	
* Beryllium, Total	2/23/21 13:40	2/25/21 11:18		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/23/21 13:40	2/25/21 11:18		1.015	0.0000896	mg/L	0.000068	0.000203	J
* Chromium, Total	2/23/21 13:40	2/25/21 11:18		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/23/21 13:40	2/25/21 11:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	2/23/21 13:40	2/25/21 11:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/23/21 13:40	2/25/21 11:18		1.015	0.000131	mg/L	0.000068	0.000203	J
* Potassium, Total	2/23/21 13:40	2/25/21 11:18		1.015	7.90	mg/L	0.169505	0.5075	
* Manganese, Total	2/23/21 13:40	2/25/21 11:18		1.015	0.000987	mg/L	0.000068	0.000203	
* Selenium, Total	2/23/21 13:40	2/25/21 11:18		1.015	0.00222	mg/L	0.000507	0.001015	
* Thallium, Total	2/23/21 13:40	2/25/21 11:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/23/21 14:25	2/25/21 10:44		1.015	0.000282	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 11:59		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 10:35	3/3/21 11:07		1	190	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	3190	mg/L		166.7	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-4

Location Code: WMWGORPU
Collected: 2/22/21 14:07
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03933

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 10:35	3/3/21 11:07		1	190	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 10:35	3/3/21 11:07		1	0.05	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 10:36	2/25/21 10:36		1	1.52	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:14	2/25/21 15:14		1	0.357	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/23/21 15:18	2/23/21 15:18		80	2040	mg/L	40.00	80	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/22/21 14:04	2/22/21 14:04			3340.97	uS/cm			FA
pH	2/22/21 14:04	2/22/21 14:04			6.19	SU			FA
Temperature	2/22/21 14:04	2/22/21 14:04			19.93	C			FA
Turbidity	2/22/21 14:04	2/22/21 14:04			0.75	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPU
Sample Date: 2/22/21 14:07
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient - MW-4

Laboratory ID Number: BB03933

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03934	Arsenic, Total	mg/L	0.0000056	0.000147	0.10	0.105	0.104	0.105	0.0850 to 0.115	105	70.0 to 130	0.957	20.0
BB03933	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.197	0.200	0.205	0.170 to 0.230	98.5	70.0 to 130	1.51	20.0
BB03934	Barium, Total	mg/L	0.0000266	0.000200	0.10	0.0985	0.102	0.0996	0.0850 to 0.115	98.5	70.0 to 130	3.49	20.0
BB03934	Beryllium, Total	mg/L	0.0000157	0.000880	0.10	0.0921	0.0961	0.0977	0.0850 to 0.115	92.1	70.0 to 130	4.25	20.0
BB03934	Sodium, Total	mg/L	0.00835	0.0440	5.00	5.04	4.98	5.24	4.25 to 5.75	101	70.0 to 130	1.20	20.0
BB03934	Mercury, Total by CVAA	mg/L	0.000103	0.000500	0.004	0.00427	0.00420	0.00414	0.00340 to 0.00460	107	70.0 to 130	1.65	20.0
BB03934	Magnesium, Total	mg/L	-0.000195	0.0462	5.00	5.07	5.04	5.12	4.25 to 5.75	101	70.0 to 130	0.593	20.0
BB03934	Lead, Total	mg/L	0.0000041	0.000147	0.10	0.113	0.109	0.109	0.0850 to 0.115	113	70.0 to 130	3.60	20.0
BB03934	Selenium, Total	mg/L	0.0000614	0.00100	0.10	0.0984	0.0971	0.101	0.0850 to 0.115	98.4	70.0 to 130	1.33	20.0
BB03933	Manganese, Dissolved	mg/L	0.0000275	0.000147	0.10	0.100	0.0992	0.102	0.0850 to 0.115	99.7	70.0 to 130	0.803	20.0
BB03934	Calcium, Total	mg/L	0.000993	0.152	5.00	5.03	5.02	4.98	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB03934	Cobalt, Total	mg/L	-0.0000680	0.000147	0.10	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB03934	Iron, Total	mg/L	0.000896	0.0176	0.2	0.202	0.202	0.201	0.170 to 0.230	101	70.0 to 130	0.00	20.0
BB03934	Potassium, Total	mg/L	-0.000271	0.367	10.0	10.1	9.95	10.1	8.50 to 11.5	101	70.0 to 130	1.50	20.0
BB03934	Thallium, Total	mg/L	-0.0000628	0.000147	0.10	0.108	0.104	0.104	0.0850 to 0.115	108	70.0 to 130	3.77	20.0
BB03934	Boron, Total	mg/L	-0.00165	0.0650	1.00	1.00	1.00	1.02	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BB03934	Cadmium, Total	mg/L	0.0000032	0.000147	0.10	0.0999	0.0977	0.101	0.0850 to 0.115	99.9	70.0 to 130	2.23	20.0
BB03934	Lithium, Total	mg/L	-0.0000744	0.0154	0.20	0.202	0.200	0.210	0.170 to 0.230	101	70.0 to 130	0.995	20.0
BB03934	Manganese, Total	mg/L	0.0000409	0.000147	0.10	0.0998	0.102	0.101	0.0850 to 0.115	99.7	70.0 to 130	2.18	20.0
BB03934	Antimony, Total	mg/L	0.000234	0.00100	0.10	0.0937	0.0965	0.0942	0.0850 to 0.115	93.7	70.0 to 130	2.94	20.0
BB03934	Chromium, Total	mg/L	-0.000107	0.000440	0.10	0.102	0.104	0.104	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BB03934	Molybdenum, Total	mg/L	-0.0000018	0.000147	0.10	0.0968	0.0945	0.0970	0.0850 to 0.115	96.8	70.0 to 130	2.40	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPU
Sample Date: 2/22/21 14:07
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient - MW-4

Laboratory ID Number: BB03933

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03934	Chloride	mg/L	-0.0953	0.500	10.0	10.5	-0.0804	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BB03933	Alkalinity, Total as CaCO3	mg/L					186	52.0	45.0 to 55.0			2.13	10.0
BB03933	Solids, Dissolved	mg/L	-1.00	25.0			3230	51.0	40.0 to 60.0			0.623	5.00
BB03934	Fluoride	mg/L	0.0288	0.0500	2.50	2.50	0.0282	2.60	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB03934	Sulfate	mg/L	-0.466	0.500	20.0	19.6	-0.457	19.8	18.0 to 22.0	98.0	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/23/21

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient Equipment Blank-1

Location Code: WMWGORPUEB
Collected: 2/22/21 14:30
Customer ID:
Submittal Date: 2/23/21 09:37

Laboratory ID Number: BB03934

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/11/21 14:53	3/12/21 14:51		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	3/11/21 14:53	3/12/21 14:51		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	3/11/21 14:53	3/12/21 14:51		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	3/11/21 14:53	3/12/21 14:51		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	3/11/21 14:53	3/12/21 14:51		1.015	0.0263	mg/L	0.021315	0.406	J
* Sodium, Total	3/11/21 14:53	3/12/21 14:51		1.015	Not Detected	mg/L	0.02030	0.406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000101	0.000203	U
* Beryllium, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	2/23/21 13:40	2/25/21 11:21		1.015	0.0000749	mg/L	0.000068	0.000203	J
* Potassium, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/23/21 13:40	2/25/21 11:21		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:02		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 10:37	2/25/21 10:37		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:15	2/25/21 15:15		1	Not Detected	mg/L	0.06	0.1	U
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/23/21 15:20	2/23/21 15:20		1	Not Detected	mg/L	0.50	1	U

MDL's and RL's are adjusted for sample dilution, as applicable

Comments:

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPUEB
Sample Date: 2/22/21 14:30
Customer ID:
Delivery Date: 2/23/21 09:37

Description:Gorgas Pooled Upgradient Equipment Blank-1

Laboratory ID Number: BB03934

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03934	Chromium, Total	mg/L	-0.000107	0.000440	0.10	0.102	0.104	0.104	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BB03934	Molybdenum, Total	mg/L	-0.0000018	0.000147	0.10	0.0968	0.0945	0.0970	0.0850 to 0.115	96.8	70.0 to 130	2.40	20.0
BB03934	Calcium, Total	mg/L	0.000993	0.152	5.00	5.03	5.02	4.98	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB03934	Cobalt, Total	mg/L	-0.0000680	0.000147	0.10	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB03934	Iron, Total	mg/L	0.000896	0.0176	0.2	0.202	0.202	0.201	0.170 to 0.230	101	70.0 to 130	0.00	20.0
BB03934	Potassium, Total	mg/L	-0.000271	0.367	10.0	10.1	9.95	10.1	8.50 to 11.5	101	70.0 to 130	1.50	20.0
BB03934	Thallium, Total	mg/L	-0.0000628	0.000147	0.10	0.108	0.104	0.104	0.0850 to 0.115	108	70.0 to 130	3.77	20.0
BB03934	Boron, Total	mg/L	-0.00165	0.0650	1.00	1.00	1.00	1.02	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BB03934	Cadmium, Total	mg/L	0.0000032	0.000147	0.10	0.0999	0.0977	0.101	0.0850 to 0.115	99.9	70.0 to 130	2.23	20.0
BB03934	Lithium, Total	mg/L	-0.0000744	0.0154	0.20	0.202	0.200	0.210	0.170 to 0.230	101	70.0 to 130	0.995	20.0
BB03934	Manganese, Total	mg/L	0.0000409	0.000147	0.10	0.0998	0.102	0.101	0.0850 to 0.115	99.7	70.0 to 130	2.18	20.0
BB03934	Antimony, Total	mg/L	0.000234	0.00100	0.10	0.0937	0.0965	0.0942	0.0850 to 0.115	93.7	70.0 to 130	2.94	20.0
BB03934	Mercury, Total by CVAA	mg/L	0.000103	0.000500	0.004	0.00427	0.00420	0.00414	0.00340 to 0.00460	107	70.0 to 130	1.65	20.0
BB03934	Magnesium, Total	mg/L	-0.000195	0.0462	5.00	5.07	5.04	5.12	4.25 to 5.75	101	70.0 to 130	0.593	20.0
BB03934	Lead, Total	mg/L	0.0000041	0.000147	0.10	0.113	0.109	0.109	0.0850 to 0.115	113	70.0 to 130	3.60	20.0
BB03934	Selenium, Total	mg/L	0.0000614	0.00100	0.10	0.0984	0.0971	0.101	0.0850 to 0.115	98.4	70.0 to 130	1.33	20.0
BB03934	Barium, Total	mg/L	0.0000266	0.000200	0.10	0.0985	0.102	0.0996	0.0850 to 0.115	98.5	70.0 to 130	3.49	20.0
BB03934	Beryllium, Total	mg/L	0.0000157	0.000880	0.10	0.0921	0.0961	0.0977	0.0850 to 0.115	92.1	70.0 to 130	4.25	20.0
BB03934	Sodium, Total	mg/L	0.00835	0.0440	5.00	5.04	4.98	5.24	4.25 to 5.75	101	70.0 to 130	1.20	20.0
BB03934	Arsenic, Total	mg/L	0.0000056	0.000147	0.10	0.105	0.104	0.105	0.0850 to 0.115	105	70.0 to 130	0.957	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPUEB
Sample Date: 2/22/21 14:30
Customer ID:
Delivery Date: 2/23/21 09:37

Description: Gorgas Pooled Upgradient Equipment Blank-1

Laboratory ID Number: BB03934

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB03934	Chloride	mg/L	-0.0953	0.500	10.0	10.5	-0.0804	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BB03933	Solids, Dissolved	mg/L	-1.00	25.0			3230	51.0	40.0 to 60.0			0.623	5.00
BB03934	Fluoride	mg/L	0.0288	0.0500	2.50	2.50	0.0282	2.60	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB03934	Sulfate	mg/L	-0.466	0.500	20.0	19.6	-0.457	19.8	18.0 to 22.0	98.0	80.0 to 120	0.00	20.0

Comments:

Reported: 3/24/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
(205) 664-6001

Definitions

Alabama Power

Abbreviation	Description
DF	Dilution Factor
LCS	Lab Control Sample
LFM	Lab Fortified Matrix
MB	Method Blank
MDL	Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Prec	Precision (% RPD)
Q	Qualifier; comment used to note deviations or additional information associated with analytical results.
QC	Quality Control
Rec	Recovery of Matrix Spike
RL	Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.
Vio Spec	Violation Specification; regulatory limit which has been exceeded by the sample analyzed.

Qualifier	Description
FA	Field results were reviewed by the Water Field Group.
J	Reported value is an estimate because concentration is less than reporting limit.
U	Compound was analyzed, but not detected.

Chain of Custody Groundwater

APC General Testing Laboratory

☑ Field Complete ☐ Outside Lab

☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Pooled Upgradient

Bottles

1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
2	Diss Metals	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments: Resigned COC due to upload error. LBM 2/23/21

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	02/22/2021	10:47	6	Groundwater		BB03928
MW-1 DUP	02/22/2021	10:47	6	Sample Duplicate		BB03929
MW-2	02/22/2021	11:47	6	Groundwater		BB03930
MW-3	02/22/2021	12:52	6	Groundwater		BB03931
FB-1	02/22/2021	13:20	4	Field Blank		BB03932
MW-4	02/22/2021	14:07	6	Groundwater		BB03933
EB-1	02/22/2021	14:30	4	Equipment Blank		BB03934

Relinquished By	Received By	Date/Time
	Laura Midkiff Digitally signed by Laura Midkiff DN: cn=Laura Midkiff, o=Alabama Power Company, ou=Environmental Affairs, email=lbmidkif@southernco.com, c=US Date: 2021.02.23 12:16:49 -06'00'	02/23/2021 08:33

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20009-2-1	Cooler Temp	0.1 degrees C
Sample Event	1308	Thermometer ID	5408-27568-2-2
		pH Strip ID	8206-45803-10-7

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

✔ Field Complete ✔ Outside Lab
✔ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Pooled Upgradient

Bottles																
	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	N/A	N/A	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments: Rad MS/MSD collected @ MW-2
Resigned COC due to upload error. LBM 2/23/21

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	02/22/2021	10:47	1	Groundwater		BB03935
MW-1 DUP	02/22/2021	10:47	1	Sample Duplicate		BB03936
MW-2	02/22/2021	11:47	3	Groundwater		BB03937
MW-3	02/22/2021	12:52	1	Groundwater		BB03938
FB-1	02/22/2021	13:20	1	Field Blank		BB03939
MW-4	02/22/2021	14:07	1	Groundwater		BB03940
EB-1	02/22/2021	14:30	1	Equipment Blank		BB03941

Relinquished By	Received By	Date/Time
	Laura Midkiff Digitally signed by Laura Midkiff DN: cn=Laura Midkiff, o=Alabama Power Company, ou=Environmental Affairs, email=lbmidkif@southernco.com, c=US Date: 2021.02.23 12:20:33 -06'00'	02/23/2021 08:33

SmarTroll ID	7586-41443-5-2
Turbidity ID	3901-20009-2-1
Sample Event	1308

All metals and radiological bottles have pH < 2 ✔

Cooler Temp	N/A
Thermometer ID	N/A
pH Strip ID	8206-45803-10-7

Bottles/Pre-Preserved Bottles are provided by the GTL

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

April 09, 2021

Laura Midkiff
Alabama Power
744 Highway 87
GSC #8
Calera, AL 35040

RE: Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on March 11, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Brooke Caton, Alabama Power
Renee Jernigan, Alabama Power

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527335001	**BB03935 MW-1**	Water	02/22/21 10:47	03/11/21 10:00
92527335002	**BB03936 MW-1 DUP**	Water	02/22/21 10:47	03/11/21 10:00
92527335003	**BB03937 MW-2**	Water	02/22/21 11:47	03/11/21 10:00
92527335004	**BB03937 MW-2 MS**	Water	02/22/21 11:47	03/11/21 10:00
92527335005	**BB03937 MW-2 MSD**	Water	02/22/21 11:47	03/11/21 10:00
92527335006	**BB03938 MW-3**	Water	02/22/21 12:52	03/11/21 10:00
92527335007	**BB03939 FB-1**	Water	02/22/21 13:20	03/11/21 10:00
92527335008	**BB03940 MW-4**	Water	02/22/21 14:07	03/11/21 10:00
92527335009	**BB03941 EB-1**	Water	02/22/21 14:30	03/11/21 10:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527335001	**BB03935 MW-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527335002	**BB03936 MW-1 DUP**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527335003	**BB03937 MW-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527335004	**BB03937 MW-2 MS**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527335005	**BB03937 MW-2 MSD**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527335006	**BB03938 MW-3**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527335007	**BB03939 FB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527335008	**BB03940 MW-4**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527335009	**BB03941 EB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Method: **EPA 9315**
Description: 9315 Total Radium
Client: Alabama Power
Date: April 09, 2021

General Information:
9 samples were analyzed for EPA 9315 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Method: **EPA 9320**
Description: 9320 Radium 228
Client: Alabama Power
Date: April 09, 2021

General Information:
9 samples were analyzed for EPA 9320 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Alabama Power
Date: April 09, 2021

General Information:
7 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Sample: BB03935 MW-1 **Lab ID: 92527335001** Collected: 02/22/21 10:47 Received: 03/11/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0302U ± 0.206 (0.521) C:98% T:NA**	pCi/L	04/09/21 08:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.647U ± 0.418 (0.790) C:67% T:90%**	pCi/L	04/06/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.677U ± 0.624 (1.31)**	pCi/L	04/09/21 12:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Sample: BB03936 MW-1 DUP **Lab ID: 92527335002** Collected: 02/22/21 10:47 Received: 03/11/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.164U ± 0.185 (0.367) C:99% T:NA**	pCi/L	04/09/21 08:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.644U ± 0.430 (0.825) C:68% T:91%**	pCi/L	04/06/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.808U ± 0.615 (1.19)**	pCi/L	04/09/21 12:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Sample: BB03937 MW-2 **Lab ID: 92527335003** Collected: 02/22/21 11:47 Received: 03/11/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.112U ± 0.169 (0.366) C:96% T:NA**	pCi/L	04/09/21 08:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.322U ± 0.424 (0.906) C:68% T:87%**	pCi/L	04/06/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.434U ± 0.593 (1.27)**	pCi/L	04/09/21 12:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Sample: BB03937 MW-2 MS **Lab ID: 92527335004** Collected: 02/22/21 11:47 Received: 03/11/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**105.53 %REC ± NA (NA) C:NA T:NA**	pCi/L	04/09/21 08:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**84.24 %REC ± NA (NA) C:NA T:NA**	pCi/L	04/06/21 14:35	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Sample: BB03937 MW-2 MSD **Lab ID: 92527335005** Collected: 02/22/21 11:47 Received: 03/11/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**97.28 %REC 8.14RPD ± NA (NA) C:NA T:NA**	pCi/L	04/09/21 08:22	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**68.87 %REC 20.08 RPD ± NA (NA) C:NA T:NA**	pCi/L	04/06/21 14:35	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Sample: BB03938 MW-3 **Lab ID: 92527335006** Collected: 02/22/21 12:52 Received: 03/11/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.265U ± 0.268 (0.542) C:97% T:NA**	pCi/L	04/09/21 09:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.207U ± 0.313 (0.675) C:67% T:96%**	pCi/L	04/06/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.472U ± 0.581 (1.22)**	pCi/L	04/09/21 12:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Sample: BB03939 FB-1 **Lab ID: 92527335007** Collected: 02/22/21 13:20 Received: 03/11/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.237U ± 0.227 (0.439) C:95% T:NA**	pCi/L	04/09/21 09:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.463U ± 0.348 (0.674) C:72% T:85%**	pCi/L	04/06/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.700U ± 0.575 (1.11)**	pCi/L	04/09/21 12:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Sample: BB03940 MW-4 **Lab ID: 92527335008** Collected: 02/22/21 14:07 Received: 03/11/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.0669U ± 0.194 (0.548) C:100% T:NA**	pCi/L	04/09/21 09:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.133U ± 0.283 (0.693) C:68% T:100%**	pCi/L	04/06/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000U ± 0.477 (1.24)**	pCi/L	04/09/21 12:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Sample: BB03941 EB-1 **Lab ID: 92527335009** Collected: 02/22/21 14:30 Received: 03/11/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.157U ± 0.204 (0.629) C:95% T:NA**	pCi/L	04/09/21 09:14	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.00426U ± 0.328 (0.765) C:68% T:95%**	pCi/L	04/06/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000U ± 0.532 (1.39)**	pCi/L	04/09/21 12:17	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

QC Batch: 439280 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527335001, 92527335002, 92527335003, 92527335004, 92527335005, 92527335006, 92527335007, 92527335008, 92527335009

METHOD BLANK: 2120834 Matrix: Water
Associated Lab Samples: 92527335001, 92527335002, 92527335003, 92527335004, 92527335005, 92527335006, 92527335007, 92527335008, 92527335009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00882 ± 0.213 (0.547) C:95% T:NA	pCi/L	04/09/21 07:43	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

QC Batch: 439308
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527335001, 92527335002, 92527335003, 92527335004, 92527335005, 92527335006, 92527335007, 92527335008, 92527335009

METHOD BLANK: 2120884 Matrix: Water
Associated Lab Samples: 92527335001, 92527335002, 92527335003, 92527335004, 92527335005, 92527335006, 92527335007, 92527335008, 92527335009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.606 ± 0.355 (0.651) C:71% T:99%	pCi/L	04/06/21 14:41	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS POOLED UPGRADIENT 1308
Pace Project No.: 92527335

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527335001	**BB03935 MW-1**	EPA 9315	439280		
92527335002	**BB03936 MW-1 DUP**	EPA 9315	439280		
92527335003	**BB03937 MW-2**	EPA 9315	439280		
92527335004	**BB03937 MW-2 MS**	EPA 9315	439280		
92527335005	**BB03937 MW-2 MSD**	EPA 9315	439280		
92527335006	**BB03938 MW-3**	EPA 9315	439280		
92527335007	**BB03939 FB-1**	EPA 9315	439280		
92527335008	**BB03940 MW-4**	EPA 9315	439280		
92527335009	**BB03941 EB-1**	EPA 9315	439280		
92527335001	**BB03935 MW-1**	EPA 9320	439308		
92527335002	**BB03936 MW-1 DUP**	EPA 9320	439308		
92527335003	**BB03937 MW-2**	EPA 9320	439308		
92527335004	**BB03937 MW-2 MS**	EPA 9320	439308		
92527335005	**BB03937 MW-2 MSD**	EPA 9320	439308		
92527335006	**BB03938 MW-3**	EPA 9320	439308		
92527335007	**BB03939 FB-1**	EPA 9320	439308		
92527335008	**BB03940 MW-4**	EPA 9320	439308		
92527335009	**BB03941 EB-1**	EPA 9320	439308		
92527335001	**BB03935 MW-1**	Total Radium Calculation	442656		
92527335002	**BB03936 MW-1 DUP**	Total Radium Calculation	442656		
92527335003	**BB03937 MW-2**	Total Radium Calculation	442656		
92527335006	**BB03938 MW-3**	Total Radium Calculation	442656		
92527335007	**BB03939 FB-1**	Total Radium Calculation	442656		
92527335008	**BB03940 MW-4**	Total Radium Calculation	442656		
92527335009	**BB03941 EB-1**	Total Radium Calculation	442656		

WO# : 92527335

CHAIN-OF-CUSTODY / Analytical R

The Chain-of-Custody is a LEGAL DOCUMENT. All rele

92527335

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Alabama Power Company	Report To:	Laura Midkiff	Attention:	Laura Midkiff
Address:	744 Highway 87 GSC Bldg #8 Calera, AL 35040	Copy To:	Brooke Caton & Renee Jernigan	Company Name:	Alabama Power Co.
				Address:	744 Highway 87 GSC Bldg #8
Email To:	lbmidkif@southernco.com	Purchase Order #:	APC57570-0001	Pace Quote:	CCR
Phone:	205-664-6197 Fax:	Project Name:	Gorgas Pooled Upgradient	Pace Project Manager:	Kevin Herring
Requested Due Date:	28 days	Project Number:	WMWGORPU_1308	Pace Profile #:	

Regulatory Agency

State / Location: AL

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike Du	Residual Chlorine (Y/N)
1	BB03935	MW-1	GW	G			2/22/2021	10:47		1			X						X	X	X		
2	BB03936	MW-1 DUP	GW	G			2/22/2021	10:47		1			X						X	X	X		
3	BB03937	MW-2	GW	G			2/22/2021	11:47		3			X						X	X	X	X	
4	BB03938	MW-3	GW	G			2/22/2021	12:52		1			X						X	X	X		
5	BB03939	FB-1	GW	G			2/22/2021	13:20		1			X						X	X	X		
6	BB03940	MW-4	GW	G			2/22/2021	14:07		1			X						X	X	X		
7	BB03941	EB-1	GW	G			2/22/2021	14:30		1			X						X	X	X		
8																								
9																								
10																								
11																								
12																								

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

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Laura Midkiff/ APC GTL	2/23/2021	11:38		3/11/21	1000	NA	N	Y	Y

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	3/19/2021
Worklist:	59390
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2120834
MB concentration:	0.009
M/B Counting Uncertainty:	0.213
MB MDC:	0.547
MB Numerical Performance Indicator:	0.08
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS59390	LCSD59390
Count Date:	4/9/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.039	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.217	
Target Conc. (pCi/L, g, F):	11.065	
Uncertainty (Calculated):	0.133	
Result (pCi/L, g, F):	10.275	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.121	
Numerical Performance Indicator:	-1.37	
Percent Recovery:	92.86%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	2/22/2021	3/8/2021
Sample I.D.	92527335003	92527915001
Sample MS I.D.	92527335004	92527915002
Sample MSD I.D.	92527335005	92527915003
Spike I.D.:	19-033	19-033
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.040	24.040
Spike Volume Used in MS (mL):	0.20	0.20
Spike Volume Used in MSD (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.206	0.210
MS Target Conc.(pCi/L, g, F):	23.367	22.844
MSD Aliquot (L, g, F):	0.212	0.213
MSD Target Conc. (pCi/L, g, F):	22.686	22.568
MS Spike Uncertainty (calculated):	0.280	0.274
MSD Spike Uncertainty (calculated):	0.272	0.271
Sample Result:	0.112	0.120
Sample Result Counting Uncertainty (pCi/L, g, F):	0.168	0.189
Sample Matrix Spike Result:	24.772	21.941
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.663	1.563
Sample Matrix Spike Duplicate Result:	22.181	24.134
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.513	1.655
MS Numerical Performance Indicator:	1.495	-1.255
MSD Numerical Performance Indicator:	-0.782	1.679
MS Percent Recovery:	105.53%	95.52%
MSD Percent Recovery:	97.28%	106.41%
MS Status vs Numerical Indicator:	N/A	N/A
MSD Status vs Numerical Indicator:	N/A	N/A
MS Status vs Recovery:	Pass	Pass
MSD Status vs Recovery:	Pass	Pass
MS/MSD Upper % Recovery Limits:	125%	125%
MS/MSD Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment		
Sample I.D.:		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Result Counting Uncertainty (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	92527335003	92527915001
Sample MS I.D.	92527335004	92527915002
Sample MSD I.D.	92527335005	92527915003
Sample Matrix Spike Result:	24.772	21.941
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.663	1.563
Sample Matrix Spike Duplicate Result:	22.181	24.134
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.513	1.655
Duplicate Numerical Performance Indicator:	2.259	-1.888
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	8.14%	10.78%
MS/ MSD Duplicate Status vs Numerical Indicator:	N/A	N/A
MS/ MSD Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	25%	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

JLL 4/9/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: VAL
Date: 3/31/2021
Worklist: 59403
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2120884
MB concentration:	0.606
M/B 2 Sigma CSU:	0.355
MB MDC:	0.651
MB Numerical Performance Indicator:	3.34
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS59403	LCSD59403
Count Date:	4/6/2021	
Spike I.D.:	21-003	
Decay Corrected Spike Concentration (pCi/mL):	38.178	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.809	
Target Conc. (pCi/L, g, F):	4.716	
Uncertainty (Calculated):	0.231	
Result (pCi/L, g, F):	3.649	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.903	
Numerical Performance Indicator:	-2.24	
Percent Recovery:	77.38%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	2/22/2021	3/8/2021
Sample I.D.	92527335002	92527915001
Sample MS I.D.	92527335004	92527915002
Sample MSD I.D.	92527335005	92527915003
Spike I.D.:	21-003	21-003
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	38.726	38.726
Spike Volume Used in MS (mL):	0.20	0.20
Spike Volume Used in MSD (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.818	0.802
MS Target Conc.(pCi/L, g, F):	9.473	9.653
MSD Aliquot (L, g, F):	0.815	0.811
MSD Target Conc. (pCi/L, g, F):	9.503	9.546
MS Spike Uncertainty (calculated):	0.464	0.473
MSD Spike Uncertainty (calculated):	0.466	0.468
Sample Result:	0.644	0.448
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.430	0.386
Sample Matrix Spike Result:	8.624	8.096
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.758	1.655
Sample Matrix Spike Duplicate Result:	7.188	8.441
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.484	1.697
MS Numerical Performance Indicator:	-1.567	-2.228
MSD Numerical Performance Indicator:	-3.593	-1.689
MS Percent Recovery:	84.24%	79.23%
MSD Percent Recovery:	68.87%	83.73%
MS Status vs Numerical Indicator:	Pass	Warning
MSD Status vs Numerical Indicator:	Fail*****	Pass
MS Status vs Recovery:	Pass	Pass
MSD Status vs Recovery:	Pass	Pass
MS/MSD Upper % Recovery Limits:	135%	135%
MS/MSD Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment		
Sample I.D.:		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	92527335002	92527915001
Sample MS I.D.	92527335004	92527915002
Sample MSD I.D.	92527335005	92527915003
Sample Matrix Spike Result:	8.624	8.096
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.758	1.655
Sample Matrix Spike Duplicate Result:	7.188	8.441
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.484	1.697
Duplicate Numerical Performance Indicator:	1.223	-0.285
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	20.08%	5.52%
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	Pass
MS/ MSD Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	36%	36%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

~~*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.~~

MB activity < MDC - Pass

QA 4/7/21

Alabama Power General Test Laboratory
744 County Road 87, GSC#8
Calera, AL 35040
(205) 664-6032 or 6171
FAX (205) 257-1654

Field Case Narrative

Plant Gorgas Landfill

2021 Compliance Event 1

All samples were collected using methods defined in Alabama Power's Water Field Group Low-Flow Groundwater Sampling Procedure and the associated site-specific Sampling and Analysis Plan (SAP).

Suspected iron bacteria appeared to be present during initial pumping of wells MW-12 and MW-19.

Heavy truck traffic was present when pumping and sampling wells MW-12V, MW-10 and MW-13.

Field quality control procedures were performed as follows:

- Blanks and Sample Duplicates were collected as described in the SAP.
- Calibration verifications for all required field parameters were performed daily, before and after sample collection.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
205-664-6001

Analytical Report

Alabama Power

Sample Group : WMWGORLF_1309

Project/Site : Gorgas Landfill
Parrish, AL 35580

For : Southern Company Services
3535 Colonnade Parkway
Birmingham, AL 35243

Attention : Dustin Brooks & Greg Dyer

Released By : Laura Midkiff
lbmidkif@southernco.com
(205) 664-6197

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
(205) 664-6001

March 31, 2021

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory between February 24, 2021 and February 25, 2021. All results reported herein conform to the laboratory's most current Quality Assurance Manual. Results marked with an asterisk conform to the most current applicable TNI/NELAC requirements. Exceptions will be noted in the body of the report.

Laboratory certification ID: E571114
Issued By: State of Florida, Department of Health
Expiration: June 30, 2021

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

Sincerely,

Quality Control: Laura Midkiff
Digitally signed by Laura Midkiff
DN: cn=Laura Midkiff, o=Alabama Power Company, ou=Environmental Affairs, email=lbmidkif@southernco.com, c=US
Date: 2021.04.01 11:18:31 -05'00'

Supervision: T. Durant Maske
Digitally signed by T. Durant Maske
DN: cn=T. Durant Maske, o=Alabama Power Company, ou=Environmental Affairs, email=tdmaske@southernco.com, c=US
Date: 2021.04.01 12:57:31 -05'00'

REPORT OF LABORATORY ANALYSIS

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Total Metals ICP

Gorgas Landfill

WMWGORLF_1309

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB04032	693930	WMWGORLF_1309
BB04033	693930	WMWGORLF_1309
BB04034	693930	WMWGORLF_1309
BB04064	693930	WMWGORLF_1309
BB04065	693930	WMWGORLF_1309
BB04066	693930	WMWGORLF_1309
BB04067	693930	WMWGORLF_1309
BB04068	693930	WMWGORLF_1309
BB04069	693930	WMWGORLF_1309
BB04070	693930	WMWGORLF_1309
BB04071	693931	WMWGORLF_1309
BB04072	693931	WMWGORLF_1309
BB04073	693931	WMWGORLF_1309
BB04150	693931	WMWGORLF_1309
BB04151	693931	WMWGORLF_1309
BB04152	693931	WMWGORLF_1309
BB04153	693931	WMWGORLF_1309
BB04154	693931	WMWGORLF_1309
BB04155	693931	WMWGORLF_1309
BB04156	693931	WMWGORLF_1309
BB04157	693932	WMWGORLF_1309

4. All of the above samples were analyzed by EPA 200.7 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met except for the following:
    - BB04070 Calcium and Magnesium MS/MSD spike levels are less than 30% of sample nominal concentrations.
    - BB04156 Magnesium MS/MSD spike level was less than 30% of the sample nominal concentration.
    - BB04070 and BB04156 Lithium MS/MSD recoveries failed. Post digestion spikes and serial dilutions were performed. Matrix issues are suspected.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution factor
BB04032	Calcium, Iron, Magnesium, Sodium	50.75
BB04033	Calcium, Magnesium, Sodium	20.3
BB04034	Calcium, Magnesium, Sodium	20.3
BB04064	Calcium, Magnesium	20.3
BB04065	Calcium, Magnesium	20.3
BB04066	Calcium, Iron, Magnesium	20.3
BB04067	Calcium, Magnesium	20.3
BB04068	Calcium, Magnesium	20.3
BB04069	Calcium, Iron, Magnesium, Sodium	20.3
BB04070	Calcium, Magnesium	20.3
BB04071	Calcium, Magnesium, Sodium	20.3
BB04072	Calcium, Iron, Magnesium, Sodium	50.75
BB04150	Calcium, Magnesium, Sodium	20.3
BB04151	Calcium, Iron, Magnesium, Sodium	20.3
BB04152	Calcium, Iron, Magnesium, Sodium	20.3
BB04154	Calcium, Iron, Magnesium, Sodium	20.3
BB04155	Calcium, Magnesium	20.3
BB04156	Calcium, Magnesium, Sodium	20.3

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Dissolved Metals ICP

Gorgas Landfill

WMWGORLF_1309

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB04032	693643	WMWGORLF_1309
BB04033	693643	WMWGORLF_1309
BB04034	693643	WMWGORLF_1309
BB04064	693643	WMWGORLF_1309
BB04065	693643	WMWGORLF_1309
BB04066	693643	WMWGORLF_1309
BB04067	693643	WMWGORLF_1309
BB04068	693643	WMWGORLF_1309
BB04069	693643	WMWGORLF_1309
BB04070	693643	WMWGORLF_1309
BB04071	693644	WMWGORLF_1309
BB04072	693644	WMWGORLF_1309
BB04150	693644	WMWGORLF_1309
BB04151	693644	WMWGORLF_1309
BB04152	693644	WMWGORLF_1309
BB04154	693644	WMWGORLF_1309
BB04155	693644	WMWGORLF_1309
BB04156	693644	WMWGORLF_1309

4. All of the above samples were analyzed and prepared by EPA 200.7 for dissolved analysis.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- Due to no filtered method blank (MB) or laboratory control sample (LCS) submitted with the sample set, an unfiltered MB and LCS were analyzed with the samples in each batch.
- All laboratory control sample criteria were met.
- The method blank associated with each batch passed all acceptance criteria for all requested analytes.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution factor
BB04032	Iron	101.5
BB04066	Iron	10.15
BB04069	Iron	10.15
BB04072	Iron	101.5
BB04151	Iron	10.15
BB04152	Iron	10.15
BB04154	Iron	10.15

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Total Metals ICPMS

Gorgas Landfill

WMWGORLF_1309

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB04032	693122	WMWGORLF_1309
BB04033	693122	WMWGORLF_1309
BB04034	693122	WMWGORLF_1309
BB04064	693122	WMWGORLF_1309
BB04065	693122	WMWGORLF_1309
BB04066	693122	WMWGORLF_1309
BB04067	693122	WMWGORLF_1309
BB04068	693122	WMWGORLF_1309
BB04069	693122	WMWGORLF_1309
BB04070	693122	WMWGORLF_1309
BB04071	693123	WMWGORLF_1309
BB04072	693123	WMWGORLF_1309
BB04073	693123	WMWGORLF_1309
BB04150	693123	WMWGORLF_1309
BB04151	693123	WMWGORLF_1309
BB04152	693123	WMWGORLF_1309
BB04153	693123	WMWGORLF_1309
BB04154	693123	WMWGORLF_1309
BB04155	693123	WMWGORLF_1309
BB04156	693123	WMWGORLF_1309
BB04157	693124	WMWGORLF_1309

4. All of the above samples were analyzed by EPA 200.8 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.

- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
    - BB04156 Manganese MS/MSD spike level was less than 30% of the sample nominal concentration.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution factor
BB04032	Mn	10.15
BB04033	Mn	5.075
BB04064	Mn	5.075
BB04065	Mn	5.075
BB04066	Mn	92.365
BB04067	Mn	5.075
BB04068	Mn	5.075
BB04069	Mn	92.365
BB04072	Mn	92.365
BB04151	Mn	5.075
BB04155	Mn	5.075
BB04156	Mn	5.075

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Dissolved Metals ICPMS

Gorgas Landfill

WMWGORLF_1309

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB04032	693077	WMWGORLF_1309
BB04033	693077	WMWGORLF_1309
BB04034	693077	WMWGORLF_1309
BB04064	693077	WMWGORLF_1309
BB04065	693077	WMWGORLF_1309
BB04066	693077	WMWGORLF_1309
BB04067	693077	WMWGORLF_1309
BB04068	693077	WMWGORLF_1309
BB04069	693077	WMWGORLF_1309
BB04070	693077	WMWGORLF_1309
BB04071	693078	WMWGORLF_1309
BB04072	693078	WMWGORLF_1309
BB04150	693078	WMWGORLF_1309
BB04151	693078	WMWGORLF_1309
BB04152	693078	WMWGORLF_1309
BB04154	693078	WMWGORLF_1309
BB04155	693078	WMWGORLF_1309
BB04156	693078	WMWGORLF_1309

4. All of the above samples were analyzed and prepared by EPA 200.8 for dissolved analysis.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.

- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- Due to no filtered method blank (MB) or laboratory control sample (LCS) submitted with the sample set, an unfiltered MB and LCS were analyzed with the samples in each batch.
- All laboratory control sample criteria were met.
- The method blank associated with each preparation batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
    - BB04156 Manganese MS/MSD spike level was less than 30% of the sample nominal concentration.
- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for precision were met

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution factor
BB04032	Mn	10.15
BB04033	Mn	5.075
BB04064	Mn	5.075
BB04065	Mn	5.075
BB04066	Mn	92.365
BB04067	Mn	5.075
BB04068	Mn	5.075
BB04069	Mn	92.365
BB04072	Mn	92.365
BB04151	Mn	5.075
BB04155	Mn	5.075
BB04156	Mn	5.075

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Mercury

Gorgas Landfill

WMWGORLF_1309

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB04032	693428	WMWGORLF_1309
BB04033	693428	WMWGORLF_1309
BB04034	693428	WMWGORLF_1309
BB04064	693428	WMWGORLF_1309
BB04065	693428	WMWGORLF_1309
BB04066	693428	WMWGORLF_1309
BB04067	693428	WMWGORLF_1309
BB04068	693428	WMWGORLF_1309
BB04069	693428	WMWGORLF_1309
BB04070	693428	WMWGORLF_1309
BB04071	693429	WMWGORLF_1309
BB04072	693429	WMWGORLF_1309
BB04073	693429	WMWGORLF_1309
BB04150	693429	WMWGORLF_1309
BB04151	693429	WMWGORLF_1309
BB04152	693429	WMWGORLF_1309
BB04153	693429	WMWGORLF_1309
BB04154	693429	WMWGORLF_1309
BB04155	693429	WMWGORLF_1309
BB04156	693429	WMWGORLF_1309
BB04157	693430	WMWGORLF_1309

4. All of the above samples were analyzed and prepared by EPA 245.1.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the method detection limit for the requested analyte.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analyte.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analyte.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch was below the limit of quantitation for the requested analyte.
- All calibration met criteria for the requested analyte.
- All response signals were satisfactory.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.

7. All samples were analyzed without a dilution.
8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

TDS

Gorgas Landfill

WMWGORLF_1309

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB04032	692992	WMWGORLF_1309
BB04033	692992	WMWGORLF_1309
BB04034	692992	WMWGORLF_1309
BB04064	692992	WMWGORLF_1309
BB04065	692992	WMWGORLF_1309
BB04066	692992	WMWGORLF_1309
BB04067	692992	WMWGORLF_1309
BB04068	692992	WMWGORLF_1309
BB04069	692992	WMWGORLF_1309
BB04070	692992	WMWGORLF_1309
BB04071	693257	WMWGORLF_1309
BB04072	693257	WMWGORLF_1309
BB04073	693257	WMWGORLF_1309
BB04150	693257	WMWGORLF_1309
BB04151	693257	WMWGORLF_1309
BB04152	693257	WMWGORLF_1309
BB04153	693257	WMWGORLF_1309
BB04154	693257	WMWGORLF_1309
BB04155	693257	WMWGORLF_1309
BB04156	693258	WMWGORLF_1309
BB04157	693257	WMWGORLF_1309

4. All of the above samples were analyzed by Standard Methods 2540C.
5. All samples were analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- A Method Blank was analyzed with each batch. All criteria were met.
- All final weights of samples, standards, and blanks agreed within 0.5mg of the previous weight.
- A sample duplicate was analyzed with each batch. RPD/2 was less than 5%.
- A laboratory control sample was analyzed with each batch. All criteria were met.
- Samples were between 2.5mg and 200mg residue.
- All samples with residue <2.5mg had the maximum volume of 150mL filtered. Affected samples are as follows:
    - BB04073
    - BB04153
    - BB04157

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Anions

Gorgas Landfill

WMWGORLF_1309

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB04032	693008, 693046, 693049	WMWGORLF_1309
BB04033	693008, 693046, 693049	WMWGORLF_1309
BB04034	693008, 693046, 693049	WMWGORLF_1309
BB04064	693009, 693047, 693050	WMWGORLF_1309
BB04065	693009, 693047, 693050	WMWGORLF_1309
BB04066	693009, 693047, 693050	WMWGORLF_1309
BB04067	693009, 693047, 693050	WMWGORLF_1309
BB04068	693009, 693047, 693050	WMWGORLF_1309
BB04069	693009, 693047, 693050	WMWGORLF_1309
BB04070	693009, 693047, 693050	WMWGORLF_1309
BB04071	693009, 693047, 693050	WMWGORLF_1309
BB04072	693009, 693047, 693050	WMWGORLF_1309
BB04073	693009, 693047, 693050	WMWGORLF_1309
BB04150	693010, 693048, 693051	WMWGORLF_1309
BB04151	693010, 693048, 693051	WMWGORLF_1309
BB04152	693010, 693048, 693051	WMWGORLF_1309
BB04153	693010, 693048, 693051	WMWGORLF_1309
BB04154	693010, 693048, 693051	WMWGORLF_1309
BB04155	693010, 693048, 693051	WMWGORLF_1309
BB04156	693010, 693048, 693051	WMWGORLF_1309
BB04157	693010, 693048, 693051	WMWGORLF_1309

4. All of the above samples were analyzed and prepared by SM4500 Cl E, SM4500 F G, and SM4500 SO4 E.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All calibration met criteria for the requested analyte.
- Prior to sample analysis, an initial calibration verification (ICV), and all criteria were met.
- Prior to sample analysis, an initial calibration blank (ICB) was analyzed and was below half the limit of quantitation for the requested analyte.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analyte.
- All continued calibration blanks (CCB) were below half the limit of quantitation for the requested analyte.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike was analyzed with each batch. Acceptance criteria for accuracy were met, except for the following:
    - BB04073 MS Chloride recovery was outside of the specification limit.
- A sample duplicate was analyzed with each batch. Acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution factor
BB04032	Sulfate	80
BB04033	Sulfate	50
BB04034	Sulfate	100
BB04064	Sulfate	50
BB04065	Sulfate	80
BB04066	Sulfate	80
BB04067	Sulfate	50
BB04068	Sulfate	50
BB04069	Sulfate	100
BB04070	Sulfate	50
BB04071	Chloride & Sulfate	8 & 50

BB04072	Sulfate	100
BB04150	Sulfate	100
BB04151	Sulfate	40
BB04152	Chloride & Sulfate	10 & 50
BB04154	Chloride & Sulfate	10 & 50
BB04155	Sulfate	100
BB04156	Sulfate	100

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alkalinity

Gorgas Landfill

WMWGORLF_1309

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB04032	693351 & 693352	WMWGORLF_1309
BB04033	693351 & 693352	WMWGORLF_1309
BB04034	693351 & 693352	WMWGORLF_1309
BB04064	693351 & 693352	WMWGORLF_1309
BB04065	693351 & 693352	WMWGORLF_1309
BB04066	693351 & 693352	WMWGORLF_1309
BB04067	693351 & 693352	WMWGORLF_1309
BB04068	693351 & 693352	WMWGORLF_1309
BB04069	693351 & 693352	WMWGORLF_1309
BB04070	693351 & 693352	WMWGORLF_1309
BB04071	693351 & 693352	WMWGORLF_1309
BB04072	693351 & 693352	WMWGORLF_1309
BB04150	693351 & 693352	WMWGORLF_1309
BB04151	693351 & 693352	WMWGORLF_1309
BB04152	693351 & 693352	WMWGORLF_1309
BB04154	693351 & 693352	WMWGORLF_1309
BB04155	693351 & 693352	WMWGORLF_1309
BB04156	693351 & 693352	WMWGORLF_1309

4. All of the above samples were analyzed by Standard Method 2320B.
5. All samples were analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- An initial pH check was analyzed with each batch. The acceptance criteria were met.
- A final pH check was analyzed with each batch. The acceptance criteria were met.
- An alkalinity laboratory control sample was analyzed with each batch. Range criteria of within 10% of true value was met.
- An alkalinity sample duplicate was analyzed with each batch. Precision criteria less than 10 RPD was met.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-6

Location Code: WMWGORLF
Collected: 2/23/21 10:45
Customer ID:
Submittal Date: 2/24/21 09:29

Laboratory ID Number: BB04032

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 09:42		1.015	0.0866	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 10:20		50.75	428	mg/L	3.50175	20.3	
* Iron, Total	3/16/21 09:07	3/19/21 10:20		50.75	35.0	mg/L	0.40600	2.03	
* Lithium, Total	3/16/21 09:07	3/17/21 09:42		1.015	0.253	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 10:20		50.75	299	mg/L	1.06575	20.3	
* Sodium, Total	3/16/21 09:07	3/19/21 10:20		50.75	63.1	mg/L	1.0150	20.3	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 13:12		101.5	32.5	mg/L	0.8120	4.06	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 11:57		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 11:57		1.015	0.00494	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 11:57		1.015	0.0143	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 11:57		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 11:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 11:57		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 11:57		1.015	0.0771	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 11:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 11:57		1.015	0.000285	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 11:57		1.015	6.37	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 17:38		10.15	10.4	mg/L	0.000680	0.00203	
* Selenium, Total	2/26/21 06:45	2/26/21 11:57		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 11:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 16:38		10.15	12.3	mg/L	0.000680	0.00203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:24		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	180	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	3230	mg/L		166.7	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-6

Location Code: WMWGORLF
Collected: 2/23/21 10:45
Customer ID:
Submittal Date: 2/24/21 09:29

Laboratory ID Number: BB04032

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	180	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.02	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 10:55	2/25/21 10:55		1	3.47	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:29	2/25/21 15:29		1	0.139	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:02	2/26/21 11:02		80	2010	mg/L	40.00	80	
Analytical Method: Field Measurements	***Analyst: AWG***								
Conductivity	2/23/21 10:42	2/23/21 10:42			3176.73	uS/cm			FA
pH	2/23/21 10:42	2/23/21 10:42			6.13	SU			FA
Temperature	2/23/21 10:42	2/23/21 10:42			19.94	C			FA
Turbidity	2/23/21 10:42	2/23/21 10:42			2.5	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 10:45
Customer ID:
Delivery Date: 2/24/21 09:29

Description: Gorgas Landfill - MW-6

Laboratory ID Number: BB04032

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04070	Calcium, Total	mg/L	0.00281	0.152	5.00	278	288	5.12	4.25 to 5.75	-120	70.0 to 130	3.53	20.0
BB04070	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.334	0.333	0.207	0.170 to 0.230	136	70.0 to 130	0.300	20.0
BB04070	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.101	0.0993	0.102	0.0850 to 0.115	101	70.0 to 130	1.70	20.0
BB04070	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0911	0.0912	0.0942	0.0850 to 0.115	91.1	70.0 to 130	0.110	20.0
BB04070	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0998	0.0985	0.0985	0.0850 to 0.115	99.8	70.0 to 130	1.31	20.0
BB04070	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0955	0.0960	0.0981	0.0850 to 0.115	95.5	70.0 to 130	0.522	20.0
BB04070	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0936	0.0950	0.0951	0.0850 to 0.115	93.6	70.0 to 130	1.48	20.0
BB04070	Boron, Total	mg/L	0.0138	0.0650	1.00	1.06	1.06	1.03	0.850 to 1.15	103	70.0 to 130	0.00	20.0
BB04070	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.199	0.197	0.205	0.170 to 0.230	99.5	70.0 to 130	1.01	20.0
BB04070	Iron, Total	mg/L	0.00121	0.0176	0.2	0.205	0.203	0.209	0.170 to 0.230	98.4	70.0 to 130	0.980	20.0
BB04070	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0948	0.0973	0.0942	0.0850 to 0.115	94.8	70.0 to 130	2.60	20.0
BB04070	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.104	0.105	0.102	0.0850 to 0.115	101	70.0 to 130	0.957	20.0
BB04070	Potassium, Total	mg/L	-0.00457	0.367	10.0	17.3	16.7	10.3	8.50 to 11.5	106	70.0 to 130	3.53	20.0
BB04070	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	0.0987	0.0975	0.0997	0.0850 to 0.115	98.5	70.0 to 130	1.22	20.0
BB04070	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0975	0.0974	0.0984	0.0850 to 0.115	97.5	70.0 to 130	0.103	20.0
BB04070	Mercury, Total by CVAA	mg/L	0.0000921	0.000500	0.004	0.00419	0.00426	0.00412	0.00340 to 0.00460	105	70.0 to 130	1.66	20.0
BB04070	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.101	0.0990	0.0987	0.0850 to 0.115	101	70.0 to 130	2.00	20.0
BB04070	Sodium, Total	mg/L	0.00298	0.0660	5.00	39.8	39.8	5.15	4.25 to 5.75	82.0	70.0 to 130	0.00	20.0
BB04070	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.105	0.103	0.104	0.0850 to 0.115	105	70.0 to 130	1.92	20.0
BB04070	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.111	0.112	0.0999	0.0850 to 0.115	101	70.0 to 130	0.897	20.0
BB04070	Magnesium, Total	mg/L	0.00253	0.0462	5.00	283	294	5.15	4.25 to 5.75	-80.0	70.0 to 130	3.81	20.0
BB04070	Manganese, Total	mg/L	0.000015	0.000147	0.10	0.100	0.0976	0.0992	0.0850 to 0.115	99.8	70.0 to 130	2.43	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 10:45
Customer ID:
Delivery Date: 2/24/21 09:29

Description: Gorgas Landfill - MW-6

Laboratory ID Number: BB04032

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04034	Fluoride	mg/L	0.0232	0.0500	2.50	2.82	0.214	2.63	2.25 to 2.75	104	80.0 to 120	2.84	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04034	Sulfate	mg/L	-0.295	0.500	2000	3620	1420	19.2	18.0 to 22.0	110	80.0 to 120	0.00	20.0
BB04070	Solids, Dissolved	mg/L	-1.00	25.0			2580	51.0	40.0 to 60.0			0.194	5.00
BB04034	Chloride	mg/L	-0.073	0.500	10.0	27.3	17.9	10.2	9.00 to 11.0	94.0	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-7

Location Code: WMWGORLF
Collected: 2/23/21 11:35
Customer ID:
Submittal Date: 2/24/21 09:29

Laboratory ID Number: BB04033

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 09:46		1.015	0.0803	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 10:23		20.3	292	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/17/21 09:46		1.015	2.26	mg/L	0.008120	0.0406	
* Lithium, Total	3/16/21 09:07	3/17/21 09:46		1.015	0.131	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 10:23		20.3	253	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/19/21 10:23		20.3	40.5	mg/L	0.406	8.12	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:37		1.015	2.15	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:01		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:01		1.015	0.00141	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 12:01		1.015	0.0140	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:01		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:01		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 12:01		1.015	0.00294	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 12:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:01		1.015	0.00107	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 12:01		1.015	6.40	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 17:42		5.075	1.58	mg/L	0.000340	0.001015	
* Selenium, Total	2/26/21 06:45	2/26/21 12:01		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 12:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 16:41		5.075	1.91	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:26		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	334	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	2320	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-7

Location Code: WMWGORLF
Collected: 2/23/21 11:35
Customer ID:
Submittal Date: 2/24/21 09:29

Laboratory ID Number: BB04033

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	334	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.18	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 10:56	2/25/21 10:56		1	7.85	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:30	2/25/21 15:30		1	0.200	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:03	2/26/21 11:03		50	1320	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: AWG***								
Conductivity	2/23/21 11:32	2/23/21 11:32			2508.19	uS/cm			FA
pH	2/23/21 11:32	2/23/21 11:32			6.70	SU			FA
Temperature	2/23/21 11:32	2/23/21 11:32			18.98	C			FA
Turbidity	2/23/21 11:32	2/23/21 11:32			0.46	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 11:35
Customer ID:
Delivery Date: 2/24/21 09:29

Description: Gorgas Landfill - MW-7

Laboratory ID Number: BB04033

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04070	Calcium, Total	mg/L	0.00281	0.152	5.00	278	288	5.12	4.25 to 5.75	-120	70.0 to 130	3.53	20.0
BB04070	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.334	0.333	0.207	0.170 to 0.230	136	70.0 to 130	0.300	20.0
BB04070	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.101	0.0993	0.102	0.0850 to 0.115	101	70.0 to 130	1.70	20.0
BB04070	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.105	0.103	0.104	0.0850 to 0.115	105	70.0 to 130	1.92	20.0
BB04070	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.111	0.112	0.0999	0.0850 to 0.115	101	70.0 to 130	0.897	20.0
BB04070	Magnesium, Total	mg/L	0.00253	0.0462	5.00	283	294	5.15	4.25 to 5.75	-80.0	70.0 to 130	3.81	20.0
BB04070	Manganese, Total	mg/L	0.000015	0.000147	0.10	0.100	0.0976	0.0992	0.0850 to 0.115	99.8	70.0 to 130	2.43	20.0
BB04070	Potassium, Total	mg/L	-0.00457	0.367	10.0	17.3	16.7	10.3	8.50 to 11.5	106	70.0 to 130	3.53	20.0
BB04070	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	0.0987	0.0975	0.0997	0.0850 to 0.115	98.5	70.0 to 130	1.22	20.0
BB04070	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0911	0.0912	0.0942	0.0850 to 0.115	91.1	70.0 to 130	0.110	20.0
BB04070	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0998	0.0985	0.0985	0.0850 to 0.115	99.8	70.0 to 130	1.31	20.0
BB04070	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0955	0.0960	0.0981	0.0850 to 0.115	95.5	70.0 to 130	0.522	20.0
BB04070	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0936	0.0950	0.0951	0.0850 to 0.115	93.6	70.0 to 130	1.48	20.0
BB04070	Boron, Total	mg/L	0.0138	0.0650	1.00	1.06	1.06	1.03	0.850 to 1.15	103	70.0 to 130	0.00	20.0
BB04070	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.199	0.197	0.205	0.170 to 0.230	99.5	70.0 to 130	1.01	20.0
BB04070	Iron, Total	mg/L	0.00121	0.0176	0.2	0.205	0.203	0.209	0.170 to 0.230	98.4	70.0 to 130	0.980	20.0
BB04070	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0948	0.0973	0.0942	0.0850 to 0.115	94.8	70.0 to 130	2.60	20.0
BB04070	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.104	0.105	0.102	0.0850 to 0.115	101	70.0 to 130	0.957	20.0
BB04070	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0975	0.0974	0.0984	0.0850 to 0.115	97.5	70.0 to 130	0.103	20.0
BB04070	Mercury, Total by CVAA	mg/L	0.0000921	0.000500	0.004	0.00419	0.00426	0.00412	0.00340 to 0.00460	105	70.0 to 130	1.66	20.0
BB04070	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.101	0.0990	0.0987	0.0850 to 0.115	101	70.0 to 130	2.00	20.0
BB04070	Sodium, Total	mg/L	0.00298	0.0660	5.00	39.8	39.8	5.15	4.25 to 5.75	82.0	70.0 to 130	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 11:35
Customer ID:
Delivery Date: 2/24/21 09:29

Description: Gorgas Landfill - MW-7

Laboratory ID Number: BB04033

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04034	Fluoride	mg/L	0.0232	0.0500	2.50	2.82	0.214	2.63	2.25 to 2.75	104	80.0 to 120	2.84	20.0
BB04034	Chloride	mg/L	-0.073	0.500	10.0	27.3	17.9	10.2	9.00 to 11.0	94.0	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04070	Solids, Dissolved	mg/L	-1.00	25.0			2580	51.0	40.0 to 60.0			0.194	5.00
BB04034	Sulfate	mg/L	-0.295	0.500	2000	3620	1420	19.2	18.0 to 22.0	110	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-8

Location Code: WMWGORLF
Collected: 2/23/21 12:35
Customer ID:
Submittal Date: 2/24/21 09:29

Laboratory ID Number: BB04034

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 09:49		1.015	0.0731	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 10:27		20.3	306	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/17/21 09:49		1.015	2.31	mg/L	0.008120	0.0406	
* Lithium, Total	3/16/21 09:07	3/17/21 09:49		1.015	0.166	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 10:27		20.3	296	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/19/21 10:27		20.3	40.2	mg/L	0.406	8.12	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:41		1.015	1.72	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:04		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:04		1.015	0.00117	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 12:04		1.015	0.0140	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:04		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:04		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 12:04		1.015	0.00796	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 12:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:04		1.015	0.0129	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 12:04		1.015	8.24	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 12:04		1.015	1.02	mg/L	0.000068	0.000203	
* Selenium, Total	2/26/21 06:45	2/26/21 12:04		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 12:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 10:16		1.015	1.04	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:28		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	403	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	2550	mg/L		166.7	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-8

Location Code: WMWGORLF
Collected: 2/23/21 12:35
Customer ID:
Submittal Date: 2/24/21 09:29

Laboratory ID Number: BB04034

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	403	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.25	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 10:57	2/25/21 10:57		1	17.9	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:32	2/25/21 15:32		1	0.208	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:04	2/26/21 11:04		100	1420	mg/L	50.00	100	
Analytical Method: Field Measurements	***Analyst: AWG***								
Conductivity	2/23/21 12:31	2/23/21 12:31			2732.18	uS/cm			FA
pH	2/23/21 12:31	2/23/21 12:31			6.73	SU			FA
Temperature	2/23/21 12:31	2/23/21 12:31			20.88	C			FA
Turbidity	2/23/21 12:31	2/23/21 12:31			3.03	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 12:35
Customer ID:
Delivery Date: 2/24/21 09:29

Description: Gorgas Landfill - MW-8

Laboratory ID Number: BB04034

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04070	Calcium, Total	mg/L	0.00281	0.152	5.00	278	288	5.12	4.25 to 5.75	-120	70.0 to 130	3.53	20.0
BB04070	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.101	0.0993	0.102	0.0850 to 0.115	101	70.0 to 130	1.70	20.0
BB04070	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.334	0.333	0.207	0.170 to 0.230	136	70.0 to 130	0.300	20.0
BB04070	Potassium, Total	mg/L	-0.00457	0.367	10.0	17.3	16.7	10.3	8.50 to 11.5	106	70.0 to 130	3.53	20.0
BB04070	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	0.0987	0.0975	0.0997	0.0850 to 0.115	98.5	70.0 to 130	1.22	20.0
BB04070	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.105	0.103	0.104	0.0850 to 0.115	105	70.0 to 130	1.92	20.0
BB04070	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.111	0.112	0.0999	0.0850 to 0.115	101	70.0 to 130	0.897	20.0
BB04070	Magnesium, Total	mg/L	0.00253	0.0462	5.00	283	294	5.15	4.25 to 5.75	-80.0	70.0 to 130	3.81	20.0
BB04070	Manganese, Total	mg/L	0.000015	0.000147	0.10	0.100	0.0976	0.0992	0.0850 to 0.115	99.8	70.0 to 130	2.43	20.0
BB04070	Boron, Total	mg/L	0.0138	0.0650	1.00	1.06	1.06	1.03	0.850 to 1.15	103	70.0 to 130	0.00	20.0
BB04070	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.199	0.197	0.205	0.170 to 0.230	99.5	70.0 to 130	1.01	20.0
BB04070	Iron, Total	mg/L	0.00121	0.0176	0.2	0.205	0.203	0.209	0.170 to 0.230	98.4	70.0 to 130	0.980	20.0
BB04070	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0948	0.0973	0.0942	0.0850 to 0.115	94.8	70.0 to 130	2.60	20.0
BB04070	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.104	0.105	0.102	0.0850 to 0.115	101	70.0 to 130	0.957	20.0
BB04070	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0975	0.0974	0.0984	0.0850 to 0.115	97.5	70.0 to 130	0.103	20.0
BB04070	Mercury, Total by CVAA	mg/L	0.0000921	0.000500	0.004	0.00419	0.00426	0.00412	0.00340 to 0.00460	105	70.0 to 130	1.66	20.0
BB04070	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.101	0.0990	0.0987	0.0850 to 0.115	101	70.0 to 130	2.00	20.0
BB04070	Sodium, Total	mg/L	0.00298	0.0660	5.00	39.8	39.8	5.15	4.25 to 5.75	82.0	70.0 to 130	0.00	20.0
BB04070	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0911	0.0912	0.0942	0.0850 to 0.115	91.1	70.0 to 130	0.110	20.0
BB04070	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0998	0.0985	0.0985	0.0850 to 0.115	99.8	70.0 to 130	1.31	20.0
BB04070	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0955	0.0960	0.0981	0.0850 to 0.115	95.5	70.0 to 130	0.522	20.0
BB04070	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0936	0.0950	0.0951	0.0850 to 0.115	93.6	70.0 to 130	1.48	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 12:35
Customer ID:
Delivery Date: 2/24/21 09:29

Description: Gorgas Landfill - MW-8

Laboratory ID Number: BB04034

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04034	Fluoride	mg/L	0.0232	0.0500	2.50	2.82	0.214	2.63	2.25 to 2.75	104	80.0 to 120	2.84	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04034	Chloride	mg/L	-0.073	0.500	10.0	27.3	17.9	10.2	9.00 to 11.0	94.0	80.0 to 120	0.00	20.0
BB04070	Solids, Dissolved	mg/L	-1.00	25.0			2580	51.0	40.0 to 60.0			0.194	5.00
BB04034	Sulfate	mg/L	-0.295	0.500	2000	3620	1420	19.2	18.0 to 22.0	110	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-13

Location Code: WMWGORLF
Collected: 2/23/21 08:33
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04064

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 09:53		1.015	0.0650	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 10:30		20.3	238	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/17/21 09:53		1.015	0.176	mg/L	0.008120	0.0406	
* Lithium, Total	3/16/21 09:07	3/17/21 09:53		1.015	0.0240	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 10:30		20.3	285	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/17/21 09:53		1.015	32.8	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:44		1.015	0.0879	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:08		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:08		1.015	0.000293	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 12:08		1.015	0.0110	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:08		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:08		1.015	0.000295	mg/L	0.000203	0.001015	J
* Cobalt, Total	2/26/21 06:45	2/26/21 12:08		1.015	0.00685	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 12:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:08		1.015	0.000495	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 12:08		1.015	7.93	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 17:45		5.075	2.56	mg/L	0.000340	0.001015	
* Selenium, Total	2/26/21 06:45	2/26/21 12:08		1.015	0.00170	mg/L	0.000507	0.001015	
* Thallium, Total	2/26/21 06:45	2/26/21 12:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 16:45		5.075	2.64	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:31		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	297	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	2370	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-13

Location Code: WMWGORLF
Collected: 2/23/21 08:33
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04064

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	297	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.13	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:15	2/25/21 11:15		1	1.60	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:50	2/25/21 15:50		1	0.224	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:50	2/26/21 11:50		50	1470	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	2/23/21 08:31	2/23/21 08:31			2250.95	uS/cm			FA
pH	2/23/21 08:31	2/23/21 08:31			6.55	SU			FA
Temperature	2/23/21 08:31	2/23/21 08:31			17.67	C			FA
Turbidity	2/23/21 08:31	2/23/21 08:31			0.21	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 08:33
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-13

Laboratory ID Number: BB04064

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04070	Calcium, Total	mg/L	0.00281	0.152	5.00	278	288	5.12	4.25 to 5.75	-120	70.0 to 130	3.53	20.0
BB04070	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.334	0.333	0.207	0.170 to 0.230	136	70.0 to 130	0.300	20.0
BB04070	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0911	0.0912	0.0942	0.0850 to 0.115	91.1	70.0 to 130	0.110	20.0
BB04070	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0998	0.0985	0.0985	0.0850 to 0.115	99.8	70.0 to 130	1.31	20.0
BB04070	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0955	0.0960	0.0981	0.0850 to 0.115	95.5	70.0 to 130	0.522	20.0
BB04070	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0936	0.0950	0.0951	0.0850 to 0.115	93.6	70.0 to 130	1.48	20.0
BB04070	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.101	0.0993	0.102	0.0850 to 0.115	101	70.0 to 130	1.70	20.0
BB04070	Potassium, Total	mg/L	-0.00457	0.367	10.0	17.3	16.7	10.3	8.50 to 11.5	106	70.0 to 130	3.53	20.0
BB04070	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	0.0987	0.0975	0.0997	0.0850 to 0.115	98.5	70.0 to 130	1.22	20.0
BB04070	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0975	0.0974	0.0984	0.0850 to 0.115	97.5	70.0 to 130	0.103	20.0
BB04070	Mercury, Total by CVAA	mg/L	0.0000921	0.000500	0.004	0.00419	0.00426	0.00412	0.00340 to 0.00460	105	70.0 to 130	1.66	20.0
BB04070	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.101	0.0990	0.0987	0.0850 to 0.115	101	70.0 to 130	2.00	20.0
BB04070	Sodium, Total	mg/L	0.00298	0.0660	5.00	39.8	39.8	5.15	4.25 to 5.75	82.0	70.0 to 130	0.00	20.0
BB04070	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.105	0.103	0.104	0.0850 to 0.115	105	70.0 to 130	1.92	20.0
BB04070	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.111	0.112	0.0999	0.0850 to 0.115	101	70.0 to 130	0.897	20.0
BB04070	Magnesium, Total	mg/L	0.00253	0.0462	5.00	283	294	5.15	4.25 to 5.75	-80.0	70.0 to 130	3.81	20.0
BB04070	Manganese, Total	mg/L	0.000015	0.000147	0.10	0.100	0.0976	0.0992	0.0850 to 0.115	99.8	70.0 to 130	2.43	20.0
BB04070	Boron, Total	mg/L	0.0138	0.0650	1.00	1.06	1.06	1.03	0.850 to 1.15	103	70.0 to 130	0.00	20.0
BB04070	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.199	0.197	0.205	0.170 to 0.230	99.5	70.0 to 130	1.01	20.0
BB04070	Iron, Total	mg/L	0.00121	0.0176	0.2	0.205	0.203	0.209	0.170 to 0.230	98.4	70.0 to 130	0.980	20.0
BB04070	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0948	0.0973	0.0942	0.0850 to 0.115	94.8	70.0 to 130	2.60	20.0
BB04070	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.104	0.105	0.102	0.0850 to 0.115	101	70.0 to 130	0.957	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 08:33
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-13

Laboratory ID Number: BB04064

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04073	Chloride	mg/L	-0.0751	0.500	10.0	12.1	0.137	10.8	9.00 to 11.0	121	80.0 to 120	0.00	20.0
BB04073	Sulfate	mg/L	-0.310	0.500	20.0	18.7	-0.318	18.9	18.0 to 22.0	93.5	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04073	Fluoride	mg/L	0.0184	0.0500	2.50	2.53	0.0137	2.63	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB04070	Solids, Dissolved	mg/L	-1.00	25.0			2580	51.0	40.0 to 60.0			0.194	5.00

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-14

Location Code: WMWGORLF
Collected: 2/23/21 09:45
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04065

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 09:56		1.015	0.0516	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 10:33		20.3	312	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/17/21 09:56		1.015	1.49	mg/L	0.008120	0.0406	
* Lithium, Total	3/16/21 09:07	3/17/21 09:56		1.015	0.0398	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 10:33		20.3	358	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/17/21 09:56		1.015	34.8	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:47		1.015	1.40	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:11		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:11		1.015	0.000893	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 12:11		1.015	0.0133	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:11		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:11		1.015	0.000122	mg/L	0.000068	0.000203	J
* Chromium, Total	2/26/21 06:45	2/26/21 12:11		1.015	0.000253	mg/L	0.000203	0.001015	J
* Cobalt, Total	2/26/21 06:45	2/26/21 12:11		1.015	0.00918	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 12:11		1.015	0.000108	mg/L	0.000068	0.000203	J
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:11		1.015	0.000933	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 12:11		1.015	8.76	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 17:49		5.075	2.57	mg/L	0.000340	0.001015	
* Selenium, Total	2/26/21 06:45	2/26/21 12:11		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 12:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 16:48		5.075	2.48	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:33		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	288	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	3020	mg/L		166.7	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-14

Location Code: WMWGORLF
Collected: 2/23/21 09:45
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04065

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	288	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.10	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:17	2/25/21 11:17		1	1.53	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:51	2/25/21 15:51		1	0.220	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:51	2/26/21 11:51		80	1850	mg/L	40.00	80	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	2/23/21 09:42	2/23/21 09:42			2931.33	uS/cm			FA
pH	2/23/21 09:42	2/23/21 09:42			6.38	SU			FA
Temperature	2/23/21 09:42	2/23/21 09:42			18.54	C			FA
Turbidity	2/23/21 09:42	2/23/21 09:42			3.95	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 09:45
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-14

Laboratory ID Number: BB04065

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04070	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.334	0.333	0.207	0.170 to 0.230	136	70.0 to 130	0.300	20.0
BB04070	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.101	0.0993	0.102	0.0850 to 0.115	101	70.0 to 130	1.70	20.0
BB04070	Calcium, Total	mg/L	0.00281	0.152	5.00	278	288	5.12	4.25 to 5.75	-120	70.0 to 130	3.53	20.0
BB04070	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0911	0.0912	0.0942	0.0850 to 0.115	91.1	70.0 to 130	0.110	20.0
BB04070	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0998	0.0985	0.0985	0.0850 to 0.115	99.8	70.0 to 130	1.31	20.0
BB04070	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0955	0.0960	0.0981	0.0850 to 0.115	95.5	70.0 to 130	0.522	20.0
BB04070	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0936	0.0950	0.0951	0.0850 to 0.115	93.6	70.0 to 130	1.48	20.0
BB04070	Potassium, Total	mg/L	-0.00457	0.367	10.0	17.3	16.7	10.3	8.50 to 11.5	106	70.0 to 130	3.53	20.0
BB04070	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	0.0987	0.0975	0.0997	0.0850 to 0.115	98.5	70.0 to 130	1.22	20.0
BB04070	Boron, Total	mg/L	0.0138	0.0650	1.00	1.06	1.06	1.03	0.850 to 1.15	103	70.0 to 130	0.00	20.0
BB04070	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.199	0.197	0.205	0.170 to 0.230	99.5	70.0 to 130	1.01	20.0
BB04070	Iron, Total	mg/L	0.00121	0.0176	0.2	0.205	0.203	0.209	0.170 to 0.230	98.4	70.0 to 130	0.980	20.0
BB04070	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0948	0.0973	0.0942	0.0850 to 0.115	94.8	70.0 to 130	2.60	20.0
BB04070	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.104	0.105	0.102	0.0850 to 0.115	101	70.0 to 130	0.957	20.0
BB04070	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0975	0.0974	0.0984	0.0850 to 0.115	97.5	70.0 to 130	0.103	20.0
BB04070	Mercury, Total by CVAA	mg/L	0.0000921	0.000500	0.004	0.00419	0.00426	0.00412	0.00340 to 0.00460	105	70.0 to 130	1.66	20.0
BB04070	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.101	0.0990	0.0987	0.0850 to 0.115	101	70.0 to 130	2.00	20.0
BB04070	Sodium, Total	mg/L	0.00298	0.0660	5.00	39.8	39.8	5.15	4.25 to 5.75	82.0	70.0 to 130	0.00	20.0
BB04070	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.105	0.103	0.104	0.0850 to 0.115	105	70.0 to 130	1.92	20.0
BB04070	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.111	0.112	0.0999	0.0850 to 0.115	101	70.0 to 130	0.897	20.0
BB04070	Magnesium, Total	mg/L	0.00253	0.0462	5.00	283	294	5.15	4.25 to 5.75	-80.0	70.0 to 130	3.81	20.0
BB04070	Manganese, Total	mg/L	0.000015	0.000147	0.10	0.100	0.0976	0.0992	0.0850 to 0.115	99.8	70.0 to 130	2.43	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 09:45
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-14

Laboratory ID Number: BB04065

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04073	Chloride	mg/L	-0.0751	0.500	10.0	12.1	0.137	10.8	9.00 to 11.0	121	80.0 to 120	0.00	20.0
BB04073	Fluoride	mg/L	0.0184	0.0500	2.50	2.53	0.0137	2.63	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB04073	Sulfate	mg/L	-0.310	0.500	20.0	18.7	-0.318	18.9	18.0 to 22.0	93.5	80.0 to 120	0.00	20.0
BB04070	Solids, Dissolved	mg/L	-1.00	25.0			2580	51.0	40.0 to 60.0			0.194	5.00
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-15

Location Code: WMWGORLF
Collected: 2/23/21 10:45
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04066

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 09:59		1.015	0.0534	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 10:37		20.3	302	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/19/21 10:37		20.3	19.7	mg/L	0.1624	0.812	
* Lithium, Total	3/16/21 09:07	3/17/21 09:59		1.015	0.0741	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 10:37		20.3	316	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/17/21 09:59		1.015	32.9	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 13:15		10.15	19.6	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:15		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:15		1.015	0.000217	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 12:15		1.015	0.0130	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:15		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:15		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 12:15		1.015	0.0755	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 12:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:15		1.015	0.0000797	mg/L	0.000068	0.000203	J
* Potassium, Total	2/26/21 06:45	2/26/21 12:15		1.015	5.59	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 17:53		92.365	13.9	mg/L	0.006188	0.018473	
* Selenium, Total	2/26/21 06:45	2/26/21 12:15		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 12:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 16:52		92.365	13.5	mg/L	0.006188	0.018473	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:35		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	202	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	2890	mg/L		166.7	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-15

Location Code: WMWGORLF
Collected: 2/23/21 10:45
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04066

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	202	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.03	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:18	2/25/21 11:18		1	1.41	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:52	2/25/21 15:52		1	0.275	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:53	2/26/21 11:53		80	1740	mg/L	40.00	80	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	2/23/21 10:42	2/23/21 10:42			2816.88	uS/cm			FA
pH	2/23/21 10:42	2/23/21 10:42			6.07	SU			FA
Temperature	2/23/21 10:42	2/23/21 10:42			18.39	C			FA
Turbidity	2/23/21 10:42	2/23/21 10:42			1.68	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 10:45
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-15

Laboratory ID Number: BB04066

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04070	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.334	0.333	0.207	0.170 to 0.230	136	70.0 to 130	0.300	20.0
BB04070	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.101	0.0993	0.102	0.0850 to 0.115	101	70.0 to 130	1.70	20.0
BB04070	Calcium, Total	mg/L	0.00281	0.152	5.00	278	288	5.12	4.25 to 5.75	-120	70.0 to 130	3.53	20.0
BB04070	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0911	0.0912	0.0942	0.0850 to 0.115	91.1	70.0 to 130	0.110	20.0
BB04070	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0998	0.0985	0.0985	0.0850 to 0.115	99.8	70.0 to 130	1.31	20.0
BB04070	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0955	0.0960	0.0981	0.0850 to 0.115	95.5	70.0 to 130	0.522	20.0
BB04070	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0936	0.0950	0.0951	0.0850 to 0.115	93.6	70.0 to 130	1.48	20.0
BB04070	Boron, Total	mg/L	0.0138	0.0650	1.00	1.06	1.06	1.03	0.850 to 1.15	103	70.0 to 130	0.00	20.0
BB04070	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.199	0.197	0.205	0.170 to 0.230	99.5	70.0 to 130	1.01	20.0
BB04070	Iron, Total	mg/L	0.00121	0.0176	0.2	0.205	0.203	0.209	0.170 to 0.230	98.4	70.0 to 130	0.980	20.0
BB04070	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0948	0.0973	0.0942	0.0850 to 0.115	94.8	70.0 to 130	2.60	20.0
BB04070	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.104	0.105	0.102	0.0850 to 0.115	101	70.0 to 130	0.957	20.0
BB04070	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0975	0.0974	0.0984	0.0850 to 0.115	97.5	70.0 to 130	0.103	20.0
BB04070	Mercury, Total by CVAA	mg/L	0.0000921	0.000500	0.004	0.00419	0.00426	0.00412	0.00340 to 0.00460	105	70.0 to 130	1.66	20.0
BB04070	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.101	0.0990	0.0987	0.0850 to 0.115	101	70.0 to 130	2.00	20.0
BB04070	Sodium, Total	mg/L	0.00298	0.0660	5.00	39.8	39.8	5.15	4.25 to 5.75	82.0	70.0 to 130	0.00	20.0
BB04070	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.105	0.103	0.104	0.0850 to 0.115	105	70.0 to 130	1.92	20.0
BB04070	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.111	0.112	0.0999	0.0850 to 0.115	101	70.0 to 130	0.897	20.0
BB04070	Magnesium, Total	mg/L	0.00253	0.0462	5.00	283	294	5.15	4.25 to 5.75	-80.0	70.0 to 130	3.81	20.0
BB04070	Manganese, Total	mg/L	0.000015	0.000147	0.10	0.100	0.0976	0.0992	0.0850 to 0.115	99.8	70.0 to 130	2.43	20.0
BB04070	Potassium, Total	mg/L	-0.00457	0.367	10.0	17.3	16.7	10.3	8.50 to 11.5	106	70.0 to 130	3.53	20.0
BB04070	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	0.0987	0.0975	0.0997	0.0850 to 0.115	98.5	70.0 to 130	1.22	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 10:45
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-15

Laboratory ID Number: BB04066

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04073	Chloride	mg/L	-0.0751	0.500	10.0	12.1	0.137	10.8	9.00 to 11.0	121	80.0 to 120	0.00	20.0
BB04073	Sulfate	mg/L	-0.310	0.500	20.0	18.7	-0.318	18.9	18.0 to 22.0	93.5	80.0 to 120	0.00	20.0
BB04070	Solids, Dissolved	mg/L	-1.00	25.0			2580	51.0	40.0 to 60.0			0.194	5.00
BB04073	Fluoride	mg/L	0.0184	0.0500	2.50	2.53	0.0137	2.63	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-16

Location Code: WMWGORLF
Collected: 2/23/21 11:40
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04067

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:03		1.015	0.0487	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 10:40		20.3	317	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/17/21 10:03		1.015	2.96	mg/L	0.008120	0.0406	
* Lithium, Total	3/16/21 09:07	3/17/21 10:03		1.015	0.0200	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 10:40		20.3	262	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/17/21 10:03		1.015	35.2	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:54		1.015	2.90	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:18		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:18		1.015	0.00257	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 12:18		1.015	0.0127	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:18		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:18		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 12:18		1.015	0.0100	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 12:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:18		1.015	0.000486	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 12:18		1.015	7.98	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 17:56		5.075	3.22	mg/L	0.000340	0.001015	
* Selenium, Total	2/26/21 06:45	2/26/21 12:18		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 12:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 16:55		5.075	3.15	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:38		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/4/21 14:47	3/3/21 12:09		1	371	mg/L		0.10	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	2480	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-16

Location Code: WMWGORLF
Collected: 2/23/21 11:40
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04067

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/4/21 14:47	3/4/21 14:47		1	370	mg/L			
Carbonate Alkalinity, (calc.)	3/4/21 14:47	3/4/21 14:47		1	0.14	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:19	2/25/21 11:19		1	3.08	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:53	2/25/21 15:53		1	0.161	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:54	2/26/21 11:54		50	1330	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	2/23/21 11:37	2/23/21 11:37			2563.12	uS/cm			FA
pH	2/23/21 11:37	2/23/21 11:37			6.47	SU			FA
Temperature	2/23/21 11:37	2/23/21 11:37			19.08	C			FA
Turbidity	2/23/21 11:37	2/23/21 11:37			0.08	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 11:40
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-16

Laboratory ID Number: BB04067

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04070	Calcium, Total	mg/L	0.00281	0.152	5.00	278	288	5.12	4.25 to 5.75	-120	70.0 to 130	3.53	20.0
BB04070	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.334	0.333	0.207	0.170 to 0.230	136	70.0 to 130	0.300	20.0
BB04070	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.105	0.103	0.104	0.0850 to 0.115	105	70.0 to 130	1.92	20.0
BB04070	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.111	0.112	0.0999	0.0850 to 0.115	101	70.0 to 130	0.897	20.0
BB04070	Magnesium, Total	mg/L	0.00253	0.0462	5.00	283	294	5.15	4.25 to 5.75	-80.0	70.0 to 130	3.81	20.0
BB04070	Manganese, Total	mg/L	0.000015	0.000147	0.10	0.100	0.0976	0.0992	0.0850 to 0.115	99.8	70.0 to 130	2.43	20.0
BB04070	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.101	0.0993	0.102	0.0850 to 0.115	101	70.0 to 130	1.70	20.0
BB04070	Potassium, Total	mg/L	-0.00457	0.367	10.0	17.3	16.7	10.3	8.50 to 11.5	106	70.0 to 130	3.53	20.0
BB04070	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	0.0987	0.0975	0.0997	0.0850 to 0.115	98.5	70.0 to 130	1.22	20.0
BB04070	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0911	0.0912	0.0942	0.0850 to 0.115	91.1	70.0 to 130	0.110	20.0
BB04070	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0998	0.0985	0.0985	0.0850 to 0.115	99.8	70.0 to 130	1.31	20.0
BB04070	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0955	0.0960	0.0981	0.0850 to 0.115	95.5	70.0 to 130	0.522	20.0
BB04070	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0936	0.0950	0.0951	0.0850 to 0.115	93.6	70.0 to 130	1.48	20.0
BB04070	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0975	0.0974	0.0984	0.0850 to 0.115	97.5	70.0 to 130	0.103	20.0
BB04070	Mercury, Total by CVAA	mg/L	0.0000921	0.000500	0.004	0.00419	0.00426	0.00412	0.00340 to 0.00460	105	70.0 to 130	1.66	20.0
BB04070	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.101	0.0990	0.0987	0.0850 to 0.115	101	70.0 to 130	2.00	20.0
BB04070	Sodium, Total	mg/L	0.00298	0.0660	5.00	39.8	39.8	5.15	4.25 to 5.75	82.0	70.0 to 130	0.00	20.0
BB04070	Boron, Total	mg/L	0.0138	0.0650	1.00	1.06	1.06	1.03	0.850 to 1.15	103	70.0 to 130	0.00	20.0
BB04070	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.199	0.197	0.205	0.170 to 0.230	99.5	70.0 to 130	1.01	20.0
BB04070	Iron, Total	mg/L	0.00121	0.0176	0.2	0.205	0.203	0.209	0.170 to 0.230	98.4	70.0 to 130	0.980	20.0
BB04070	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0948	0.0973	0.0942	0.0850 to 0.115	94.8	70.0 to 130	2.60	20.0
BB04070	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.104	0.105	0.102	0.0850 to 0.115	101	70.0 to 130	0.957	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 11:40
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-16

Laboratory ID Number: BB04067

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04073	Chloride	mg/L	-0.0751	0.500	10.0	12.1	0.137	10.8	9.00 to 11.0	121	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04073	Fluoride	mg/L	0.0184	0.0500	2.50	2.53	0.0137	2.63	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB04073	Sulfate	mg/L	-0.310	0.500	20.0	18.7	-0.318	18.9	18.0 to 22.0	93.5	80.0 to 120	0.00	20.0
BB04070	Solids, Dissolved	mg/L	-1.00	25.0			2580	51.0	40.0 to 60.0			0.194	5.00

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-16 DUP

Location Code: WMWGORLF
Collected: 2/23/21 11:40
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04068

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:06		1.015	0.0475	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 10:44		20.3	319	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/17/21 10:06		1.015	2.90	mg/L	0.008120	0.0406	
* Lithium, Total	3/16/21 09:07	3/17/21 10:06		1.015	0.0197	mg/L	0.007105	0.01999956	J
* Magnesium, Total	3/16/21 09:07	3/19/21 10:44		20.3	264	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/17/21 10:06		1.015	34.7	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 11:58		1.015	2.87	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:22		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:22		1.015	0.00245	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 12:22		1.015	0.0123	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:22		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:22		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 12:22		1.015	0.0100	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 12:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:22		1.015	0.000524	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 12:22		1.015	8.12	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 18:00		5.075	3.11	mg/L	0.000340	0.001015	
* Selenium, Total	2/26/21 06:45	2/26/21 12:22		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 12:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 16:59		5.075	3.13	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:40		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	475	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	2440	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-16 DUP

Location Code: WMWGORLF
Collected: 2/23/21 11:40
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04068

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	475	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.18	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:20	2/25/21 11:20		1	3.08	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:54	2/25/21 15:54		1	0.163	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:55	2/26/21 11:55		50	1320	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	2/23/21 11:37	2/23/21 11:37			2563.12	uS/cm			FA
pH	2/23/21 11:37	2/23/21 11:37			6.47	SU			FA
Temperature	2/23/21 11:37	2/23/21 11:37			19.08	C			FA
Turbidity	2/23/21 11:37	2/23/21 11:37			0.08	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 11:40
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-16 DUP

Laboratory ID Number: BB04068

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04070	Calcium, Total	mg/L	0.00281	0.152	5.00	278	288	5.12	4.25 to 5.75	-120	70.0 to 130	3.53	20.0
BB04070	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.334	0.333	0.207	0.170 to 0.230	136	70.0 to 130	0.300	20.0
BB04070	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.105	0.103	0.104	0.0850 to 0.115	105	70.0 to 130	1.92	20.0
BB04070	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.111	0.112	0.0999	0.0850 to 0.115	101	70.0 to 130	0.897	20.0
BB04070	Magnesium, Total	mg/L	0.00253	0.0462	5.00	283	294	5.15	4.25 to 5.75	-80.0	70.0 to 130	3.81	20.0
BB04070	Manganese, Total	mg/L	0.000015	0.000147	0.10	0.100	0.0976	0.0992	0.0850 to 0.115	99.8	70.0 to 130	2.43	20.0
BB04070	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0911	0.0912	0.0942	0.0850 to 0.115	91.1	70.0 to 130	0.110	20.0
BB04070	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0998	0.0985	0.0985	0.0850 to 0.115	99.8	70.0 to 130	1.31	20.0
BB04070	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0955	0.0960	0.0981	0.0850 to 0.115	95.5	70.0 to 130	0.522	20.0
BB04070	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0936	0.0950	0.0951	0.0850 to 0.115	93.6	70.0 to 130	1.48	20.0
BB04070	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.101	0.0993	0.102	0.0850 to 0.115	101	70.0 to 130	1.70	20.0
BB04070	Boron, Total	mg/L	0.0138	0.0650	1.00	1.06	1.06	1.03	0.850 to 1.15	103	70.0 to 130	0.00	20.0
BB04070	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.199	0.197	0.205	0.170 to 0.230	99.5	70.0 to 130	1.01	20.0
BB04070	Iron, Total	mg/L	0.00121	0.0176	0.2	0.205	0.203	0.209	0.170 to 0.230	98.4	70.0 to 130	0.980	20.0
BB04070	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0948	0.0973	0.0942	0.0850 to 0.115	94.8	70.0 to 130	2.60	20.0
BB04070	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.104	0.105	0.102	0.0850 to 0.115	101	70.0 to 130	0.957	20.0
BB04070	Potassium, Total	mg/L	-0.00457	0.367	10.0	17.3	16.7	10.3	8.50 to 11.5	106	70.0 to 130	3.53	20.0
BB04070	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	0.0987	0.0975	0.0997	0.0850 to 0.115	98.5	70.0 to 130	1.22	20.0
BB04070	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0975	0.0974	0.0984	0.0850 to 0.115	97.5	70.0 to 130	0.103	20.0
BB04070	Mercury, Total by CVAA	mg/L	0.0000921	0.000500	0.004	0.00419	0.00426	0.00412	0.00340 to 0.00460	105	70.0 to 130	1.66	20.0
BB04070	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.101	0.0990	0.0987	0.0850 to 0.115	101	70.0 to 130	2.00	20.0
BB04070	Sodium, Total	mg/L	0.00298	0.0660	5.00	39.8	39.8	5.15	4.25 to 5.75	82.0	70.0 to 130	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 11:40
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-16 DUP

Laboratory ID Number: BB04068

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04073	Chloride	mg/L	-0.0751	0.500	10.0	12.1	0.137	10.8	9.00 to 11.0	121	80.0 to 120	0.00	20.0
BB04073	Sulfate	mg/L	-0.310	0.500	20.0	18.7	-0.318	18.9	18.0 to 22.0	93.5	80.0 to 120	0.00	20.0
BB04070	Solids, Dissolved	mg/L	-1.00	25.0			2580	51.0	40.0 to 60.0			0.194	5.00
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04073	Fluoride	mg/L	0.0184	0.0500	2.50	2.53	0.0137	2.63	2.25 to 2.75	101	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-17R

Location Code: WMWGORLF
Collected: 2/23/21 12:53
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04069

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:10		1.015	0.0536	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 10:47		20.3	389	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/19/21 10:47		20.3	23.4	mg/L	0.1624	0.812	
* Lithium, Total	3/16/21 09:07	3/17/21 10:10		1.015	0.0569	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 10:47		20.3	429	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/19/21 10:47		20.3	37.8	mg/L	0.406	8.12	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 13:18		10.15	21.4	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:26		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:26		1.015	0.00190	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 12:26		1.015	0.0130	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:26		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:26		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:26		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 12:26		1.015	0.385	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 12:26		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:26		1.015	0.000159	mg/L	0.000068	0.000203	J
* Potassium, Total	2/26/21 06:45	2/26/21 12:26		1.015	7.36	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 18:03		92.365	23.3	mg/L	0.006188	0.018473	
* Selenium, Total	2/26/21 06:45	2/26/21 12:26		1.015	0.000778	mg/L	0.000507	0.001015	J
* Thallium, Total	2/26/21 06:45	2/26/21 12:26		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 17:03		92.365	20.9	mg/L	0.006188	0.018473	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:43		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	212	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	3930	mg/L		250	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-17R

Location Code: WMWGORLF
Collected: 2/23/21 12:53
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04069

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	212	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.03	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:22	2/25/21 11:22		1	2.36	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:56	2/25/21 15:56		1	0.154	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:56	2/26/21 11:56		100	2380	mg/L	50.00	100	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	2/23/21 12:51	2/23/21 12:51			3239.73	uS/cm			FA
pH	2/23/21 12:51	2/23/21 12:51			5.91	SU			FA
Temperature	2/23/21 12:51	2/23/21 12:51			21.27	C			FA
Turbidity	2/23/21 12:51	2/23/21 12:51			0.47	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 12:53
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: BB04069

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04070	Calcium, Total	mg/L	0.00281	0.152	5.00	278	288	5.12	4.25 to 5.75	-120	70.0 to 130	3.53	20.0
BB04070	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.334	0.333	0.207	0.170 to 0.230	136	70.0 to 130	0.300	20.0
BB04070	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.101	0.0993	0.102	0.0850 to 0.115	101	70.0 to 130	1.70	20.0
BB04070	Potassium, Total	mg/L	-0.00457	0.367	10.0	17.3	16.7	10.3	8.50 to 11.5	106	70.0 to 130	3.53	20.0
BB04070	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	0.0987	0.0975	0.0997	0.0850 to 0.115	98.5	70.0 to 130	1.22	20.0
BB04070	Boron, Total	mg/L	0.0138	0.0650	1.00	1.06	1.06	1.03	0.850 to 1.15	103	70.0 to 130	0.00	20.0
BB04070	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.199	0.197	0.205	0.170 to 0.230	99.5	70.0 to 130	1.01	20.0
BB04070	Iron, Total	mg/L	0.00121	0.0176	0.2	0.205	0.203	0.209	0.170 to 0.230	98.4	70.0 to 130	0.980	20.0
BB04070	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0948	0.0973	0.0942	0.0850 to 0.115	94.8	70.0 to 130	2.60	20.0
BB04070	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.104	0.105	0.102	0.0850 to 0.115	101	70.0 to 130	0.957	20.0
BB04070	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0975	0.0974	0.0984	0.0850 to 0.115	97.5	70.0 to 130	0.103	20.0
BB04070	Mercury, Total by CVAA	mg/L	0.0000921	0.000500	0.004	0.00419	0.00426	0.00412	0.00340 to 0.00460	105	70.0 to 130	1.66	20.0
BB04070	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.101	0.0990	0.0987	0.0850 to 0.115	101	70.0 to 130	2.00	20.0
BB04070	Sodium, Total	mg/L	0.00298	0.0660	5.00	39.8	39.8	5.15	4.25 to 5.75	82.0	70.0 to 130	0.00	20.0
BB04070	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.105	0.103	0.104	0.0850 to 0.115	105	70.0 to 130	1.92	20.0
BB04070	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.111	0.112	0.0999	0.0850 to 0.115	101	70.0 to 130	0.897	20.0
BB04070	Magnesium, Total	mg/L	0.00253	0.0462	5.00	283	294	5.15	4.25 to 5.75	-80.0	70.0 to 130	3.81	20.0
BB04070	Manganese, Total	mg/L	0.000015	0.000147	0.10	0.100	0.0976	0.0992	0.0850 to 0.115	99.8	70.0 to 130	2.43	20.0
BB04070	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0911	0.0912	0.0942	0.0850 to 0.115	91.1	70.0 to 130	0.110	20.0
BB04070	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0998	0.0985	0.0985	0.0850 to 0.115	99.8	70.0 to 130	1.31	20.0
BB04070	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0955	0.0960	0.0981	0.0850 to 0.115	95.5	70.0 to 130	0.522	20.0
BB04070	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0936	0.0950	0.0951	0.0850 to 0.115	93.6	70.0 to 130	1.48	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 12:53
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: BB04069

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04073	Chloride	mg/L	-0.0751	0.500	10.0	12.1	0.137	10.8	9.00 to 11.0	121	80.0 to 120	0.00	20.0
BB04073	Sulfate	mg/L	-0.310	0.500	20.0	18.7	-0.318	18.9	18.0 to 22.0	93.5	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04073	Fluoride	mg/L	0.0184	0.0500	2.50	2.53	0.0137	2.63	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB04070	Solids, Dissolved	mg/L	-1.00	25.0			2580	51.0	40.0 to 60.0			0.194	5.00

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-18

Location Code: WMWGORLF
Collected: 2/23/21 14:00
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04070

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:13		1.015	0.0343	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 10:50		20.3	284	mg/L	1.4007	8.12	RA
* Iron, Total	3/16/21 09:07	3/17/21 10:13		1.015	0.00812	mg/L	0.008120	0.0406	J
* Lithium, Total	3/16/21 09:07	3/17/21 10:13		1.015	0.0627	mg/L	0.007105	0.019999	R
* Magnesium, Total	3/16/21 09:07	3/19/21 10:50		20.3	287	mg/L	0.4263	8.12	RA
* Sodium, Total	3/16/21 09:07	3/17/21 10:13		1.015	35.7	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 12:04		1.015	Not Detected	mg/L	0.008120	0.0406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:29		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	2/26/21 06:45	2/26/21 12:29		1.015	0.0103	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:29		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:29		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 12:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	2/26/21 06:45	2/26/21 12:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:29		1.015	0.000120	mg/L	0.000068	0.000203	J
* Potassium, Total	2/26/21 06:45	2/26/21 12:29		1.015	6.73	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 12:29		1.015	0.000224	mg/L	0.000068	0.000203	
* Selenium, Total	2/26/21 06:45	2/26/21 12:29		1.015	0.00310	mg/L	0.000507	0.001015	
* Thallium, Total	2/26/21 06:45	2/26/21 12:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 10:41		1.015	0.000169	mg/L	0.000068	0.000203	J
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 12:45		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	212	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	2/25/21 10:55	3/2/21 09:30		1	2570	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-18

Location Code: WMWGORLF
Collected: 2/23/21 14:00
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04070

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	212	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.12	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:23	2/25/21 11:23		1	1.34	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:57	2/25/21 15:57		1	0.290	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:57	2/26/21 11:57		50	1560	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	2/23/21 13:58	2/23/21 13:58			2615.49	uS/cm			FA
pH	2/23/21 13:58	2/23/21 13:58			6.47	SU			FA
Temperature	2/23/21 13:58	2/23/21 13:58			20.34	C			FA
Turbidity	2/23/21 13:58	2/23/21 13:58			1.01	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 14:00
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-18

Laboratory ID Number: BB04070

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04070	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.334	0.333	0.207	0.170 to 0.230	136	70.0 to 130	0.300	20.0
BB04070	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.101	0.0993	0.102	0.0850 to 0.115	101	70.0 to 130	1.70	20.0
BB04070	Calcium, Total	mg/L	0.00281	0.152	5.00	278	288	5.12	4.25 to 5.75	-120	70.0 to 130	3.53	20.0
BB04070	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.105	0.103	0.104	0.0850 to 0.115	105	70.0 to 130	1.92	20.0
BB04070	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.111	0.112	0.0999	0.0850 to 0.115	101	70.0 to 130	0.897	20.0
BB04070	Magnesium, Total	mg/L	0.00253	0.0462	5.00	283	294	5.15	4.25 to 5.75	-80.0	70.0 to 130	3.81	20.0
BB04070	Manganese, Total	mg/L	0.000015	0.000147	0.10	0.100	0.0976	0.0992	0.0850 to 0.115	99.8	70.0 to 130	2.43	20.0
BB04070	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0911	0.0912	0.0942	0.0850 to 0.115	91.1	70.0 to 130	0.110	20.0
BB04070	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0998	0.0985	0.0985	0.0850 to 0.115	99.8	70.0 to 130	1.31	20.0
BB04070	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0955	0.0960	0.0981	0.0850 to 0.115	95.5	70.0 to 130	0.522	20.0
BB04070	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0936	0.0950	0.0951	0.0850 to 0.115	93.6	70.0 to 130	1.48	20.0
BB04070	Potassium, Total	mg/L	-0.00457	0.367	10.0	17.3	16.7	10.3	8.50 to 11.5	106	70.0 to 130	3.53	20.0
BB04070	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	0.0987	0.0975	0.0997	0.0850 to 0.115	98.5	70.0 to 130	1.22	20.0
BB04070	Boron, Total	mg/L	0.0138	0.0650	1.00	1.06	1.06	1.03	0.850 to 1.15	103	70.0 to 130	0.00	20.0
BB04070	Iron, Dissolved	mg/L	-0.0000794	0.0176	0.2	0.199	0.197	0.205	0.170 to 0.230	99.5	70.0 to 130	1.01	20.0
BB04070	Iron, Total	mg/L	0.00121	0.0176	0.2	0.205	0.203	0.209	0.170 to 0.230	98.4	70.0 to 130	0.980	20.0
BB04070	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0948	0.0973	0.0942	0.0850 to 0.115	94.8	70.0 to 130	2.60	20.0
BB04070	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.104	0.105	0.102	0.0850 to 0.115	101	70.0 to 130	0.957	20.0
BB04070	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0975	0.0974	0.0984	0.0850 to 0.115	97.5	70.0 to 130	0.103	20.0
BB04070	Mercury, Total by CVAA	mg/L	0.0000921	0.000500	0.004	0.00419	0.00426	0.00412	0.00340 to 0.00460	105	70.0 to 130	1.66	20.0
BB04070	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.101	0.0990	0.0987	0.0850 to 0.115	101	70.0 to 130	2.00	20.0
BB04070	Sodium, Total	mg/L	0.00298	0.0660	5.00	39.8	39.8	5.15	4.25 to 5.75	82.0	70.0 to 130	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 14:00
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-18

Laboratory ID Number: BB04070

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04073	Chloride	mg/L	-0.0751	0.500	10.0	12.1	0.137	10.8	9.00 to 11.0	121	80.0 to 120	0.00	20.0
BB04073	Sulfate	mg/L	-0.310	0.500	20.0	18.7	-0.318	18.9	18.0 to 22.0	93.5	80.0 to 120	0.00	20.0
BB04070	Solids, Dissolved	mg/L	-1.00	25.0			2580	51.0	40.0 to 60.0			0.194	5.00
BB04073	Fluoride	mg/L	0.0184	0.0500	2.50	2.53	0.0137	2.63	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-12V

Location Code: WMWGORLF
Collected: 2/24/21 08:38
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04071

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:30		1.015	0.160	mg/L	0.030000	0.1015	
* Calcium, Total	3/16/21 09:07	3/19/21 11:07		20.3	293	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/17/21 10:30		1.015	3.84	mg/L	0.008120	0.0406	
* Lithium, Total	3/16/21 09:07	3/17/21 10:30		1.015	0.345	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 11:07		20.3	194	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/19/21 11:07		20.3	109	mg/L	0.406	8.12	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 12:28		1.015	3.87	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:51		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:51		1.015	0.00584	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 12:51		1.015	0.0185	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:51		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:51		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 12:51		1.015	0.000378	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 12:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:51		1.015	0.00174	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 12:51		1.015	7.27	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 12:51		1.015	0.523	mg/L	0.000068	0.000203	
* Selenium, Total	2/26/21 06:45	2/26/21 12:51		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 12:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 11:03		1.015	0.512	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:01		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	218	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	2240	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-12V

Location Code: WMWGORLF
Collected: 2/24/21 08:38
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04071

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	218	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.18	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:41	2/25/21 11:41		8	101	mg/L	4.00	8	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:58	2/25/21 15:58		1	0.170	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 11:59	2/26/21 11:59		50	1220	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	2/24/21 08:34	2/24/21 08:34			2603.60	uS/cm			FA
pH	2/24/21 08:34	2/24/21 08:34			6.83	SU			FA
Temperature	2/24/21 08:34	2/24/21 08:34			20.02	C			FA
Turbidity	2/24/21 08:34	2/24/21 08:34			0.11	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/24/21 08:38
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-12V

Laboratory ID Number: BB04071

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04156	Calcium, Total	mg/L	0.00281	0.152	5.00	333	332	5.12	4.25 to 5.75	107	70.0 to 130	0.401	20.0
BB04156	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0980	0.0989	0.0942	0.0850 to 0.115	98.0	70.0 to 130	0.914	20.0
BB04156	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0950	0.0964	0.0951	0.0850 to 0.115	95.0	70.0 to 130	1.46	20.0
BB04156	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.103	0.107	0.104	0.0850 to 0.115	103	70.0 to 130	3.81	20.0
BB04156	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.0996	0.101	0.0987	0.0850 to 0.115	99.4	70.0 to 130	1.40	20.0
BB04156	Manganese, Total	mg/L	0.000015	0.000147	0.10	2.16	2.19	0.0992	0.0850 to 0.115	40.0	70.0 to 130	1.38	20.0
BB04156	Sodium, Total	mg/L	0.00298	0.0660	5.00	36.7	36.2	5.15	4.25 to 5.75	109	70.0 to 130	1.24	20.0
BB04156	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0973	0.0969	0.0984	0.0850 to 0.115	97.3	70.0 to 130	0.412	20.0
BB04156	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.138	0.137	0.102	0.0850 to 0.115	100	70.0 to 130	0.727	20.0
BB04156	Iron, Dissolved	mg/L	0.000207	0.0176	0.2	1.85	1.86	0.205	0.170 to 0.230	80.0	70.0 to 130	0.539	20.0
BB04156	Iron, Total	mg/L	0.00121	0.0176	0.2	2.62	2.61	0.209	0.170 to 0.230	90.0	70.0 to 130	0.382	20.0
BB04156	Mercury, Total by CVAA	mg/L	0.0000917	0.000500	0.004	0.00422	0.00461	0.00412	0.00340 to 0.00460	106	70.0 to 130	8.83	20.0
BB04156	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	2.14	2.13	0.0997	0.0850 to 0.115	40.0	70.0 to 130	0.468	20.0
BB04156	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.112	0.113	0.0999	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB04156	Potassium, Total	mg/L	-0.00457	0.367	10.0	16.4	16.5	10.3	8.50 to 11.5	103	70.0 to 130	0.608	20.0
BB04156	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0970	0.0974	0.0981	0.0850 to 0.115	97.0	70.0 to 130	0.412	20.0
BB04156	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0955	0.0941	0.0942	0.0850 to 0.115	95.5	70.0 to 130	1.48	20.0
BB04156	Boron, Total	mg/L	0.0138	0.0650	1.00	1.09	1.09	1.03	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BB04156	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0994	0.0988	0.0985	0.0850 to 0.115	99.4	70.0 to 130	0.605	20.0
BB04156	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.366	0.362	0.207	0.170 to 0.230	145	70.0 to 130	1.10	20.0
BB04156	Magnesium, Total	mg/L	0.00253	0.0462	5.00	351	349	5.15	4.25 to 5.75	145	70.0 to 130	0.640	20.0
BB04156	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/24/21 08:38
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-12V

Laboratory ID Number: BB04071

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04073	Chloride	mg/L	-0.0751	0.500	10.0	12.1	0.137	10.8	9.00 to 11.0	121	80.0 to 120	0.00	20.0
BB04073	Sulfate	mg/L	-0.310	0.500	20.0	18.7	-0.318	18.9	18.0 to 22.0	93.5	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04073	Fluoride	mg/L	0.0184	0.0500	2.50	2.53	0.0137	2.63	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB04155	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.808	5.00

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-12

Location Code: WMWGORLF
Collected: 2/24/21 09:48
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04072

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:33		1.015	0.193	mg/L	0.030000	0.1015	
* Calcium, Total	3/16/21 09:07	3/19/21 11:11		50.75	346	mg/L	3.50175	20.3	
* Iron, Total	3/16/21 09:07	3/19/21 11:11		50.75	165	mg/L	0.40600	2.03	
* Lithium, Total	3/16/21 09:07	3/17/21 10:33		1.015	0.0949	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 11:11		50.75	370	mg/L	1.06575	20.3	
* Sodium, Total	3/16/21 09:07	3/19/21 11:11		50.75	46.2	mg/L	1.0150	20.3	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 13:22		101.5	155	mg/L	0.8120	4.06	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:54		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:54		1.015	0.0516	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 12:54		1.015	0.0123	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 12:54		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:54		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 12:54		1.015	0.0442	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 12:54		1.015	0.000178	mg/L	0.000068	0.000203	J
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:54		1.015	0.000088	mg/L	0.000068	0.000203	J
* Potassium, Total	2/26/21 06:45	2/26/21 12:54		1.015	22.2	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 18:18		92.365	19.6	mg/L	0.006188	0.018473	
* Selenium, Total	2/26/21 06:45	2/26/21 12:54		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 12:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 17:06		92.365	19.3	mg/L	0.006188	0.018473	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:04		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	281	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	3810	mg/L		166.7	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-12

Location Code: WMWGORLF
Collected: 2/24/21 09:48
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04072

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	281	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.02	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:25	2/25/21 11:25		1	11.2	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 15:59	2/25/21 15:59		1	0.172	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 12:00	2/26/21 12:00		100	2280	mg/L	50.00	100	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	2/24/21 09:45	2/24/21 09:45			3570.82	uS/cm			FA
pH	2/24/21 09:45	2/24/21 09:45			5.83	SU			FA
Temperature	2/24/21 09:45	2/24/21 09:45			20.29	C			FA
Turbidity	2/24/21 09:45	2/24/21 09:45			3.19	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/24/21 09:48
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-12

Laboratory ID Number: BB04072

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04156	Calcium, Total	mg/L	0.00281	0.152	5.00	333	332	5.12	4.25 to 5.75	107	70.0 to 130	0.401	20.0
BB04156	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0980	0.0989	0.0942	0.0850 to 0.115	98.0	70.0 to 130	0.914	20.0
BB04156	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0950	0.0964	0.0951	0.0850 to 0.115	95.0	70.0 to 130	1.46	20.0
BB04156	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.112	0.113	0.0999	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB04156	Potassium, Total	mg/L	-0.00457	0.367	10.0	16.4	16.5	10.3	8.50 to 11.5	103	70.0 to 130	0.608	20.0
BB04156	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0970	0.0974	0.0981	0.0850 to 0.115	97.0	70.0 to 130	0.412	20.0
BB04156	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0973	0.0969	0.0984	0.0850 to 0.115	97.3	70.0 to 130	0.412	20.0
BB04156	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.138	0.137	0.102	0.0850 to 0.115	100	70.0 to 130	0.727	20.0
BB04156	Iron, Dissolved	mg/L	0.000207	0.0176	0.2	1.85	1.86	0.205	0.170 to 0.230	80.0	70.0 to 130	0.539	20.0
BB04156	Iron, Total	mg/L	0.00121	0.0176	0.2	2.62	2.61	0.209	0.170 to 0.230	90.0	70.0 to 130	0.382	20.0
BB04156	Mercury, Total by CVAA	mg/L	0.0000917	0.000500	0.004	0.00422	0.00461	0.00412	0.00340 to 0.00460	106	70.0 to 130	8.83	20.0
BB04156	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	2.14	2.13	0.0997	0.0850 to 0.115	40.0	70.0 to 130	0.468	20.0
BB04156	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0955	0.0941	0.0942	0.0850 to 0.115	95.5	70.0 to 130	1.48	20.0
BB04156	Boron, Total	mg/L	0.0138	0.0650	1.00	1.09	1.09	1.03	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BB04156	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0994	0.0988	0.0985	0.0850 to 0.115	99.4	70.0 to 130	0.605	20.0
BB04156	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.366	0.362	0.207	0.170 to 0.230	145	70.0 to 130	1.10	20.0
BB04156	Magnesium, Total	mg/L	0.00253	0.0462	5.00	351	349	5.15	4.25 to 5.75	145	70.0 to 130	0.640	20.0
BB04156	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BB04156	Manganese, Total	mg/L	0.000015	0.000147	0.10	2.16	2.19	0.0992	0.0850 to 0.115	40.0	70.0 to 130	1.38	20.0
BB04156	Sodium, Total	mg/L	0.00298	0.0660	5.00	36.7	36.2	5.15	4.25 to 5.75	109	70.0 to 130	1.24	20.0
BB04156	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.103	0.107	0.104	0.0850 to 0.115	103	70.0 to 130	3.81	20.0
BB04156	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.0996	0.101	0.0987	0.0850 to 0.115	99.4	70.0 to 130	1.40	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/24/21 09:48
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill - MW-12

Laboratory ID Number: BB04072

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04073	Chloride	mg/L	-0.0751	0.500	10.0	12.1	0.137	10.8	9.00 to 11.0	121	80.0 to 120	0.00	20.0
BB04073	Sulfate	mg/L	-0.310	0.500	20.0	18.7	-0.318	18.9	18.0 to 22.0	93.5	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04155	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.808	5.00
BB04073	Fluoride	mg/L	0.0184	0.0500	2.50	2.53	0.0137	2.63	2.25 to 2.75	101	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill Field Blank-1

Location Code: WMWGORLFFB
Collected: 2/24/21 10:20
Customer ID:
Submittal Date: 2/24/21 13:49

Laboratory ID Number: BB04073

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:37		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	3/16/21 09:07	3/17/21 10:37		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	3/16/21 09:07	3/17/21 10:37		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	3/16/21 09:07	3/17/21 10:37		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	3/16/21 09:07	3/17/21 10:37		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	3/16/21 09:07	3/17/21 10:37		1.015	Not Detected	mg/L	0.02030	0.406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000101	0.000203	U
* Beryllium, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	2/26/21 06:45	2/26/21 12:58		1.015	0.000110	mg/L	0.000068	0.000203	J
* Potassium, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 12:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:06		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:26	2/25/21 11:26		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 16:00	2/25/21 16:00		1	Not Detected	mg/L	0.06	0.1	U
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 12:01	2/26/21 12:01		1	Not Detected	mg/L	0.50	1	U

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: Matrix spike recovery for Chloride is outside of the specification limit. LBM 3/1/2021

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLFFB
Sample Date: 2/24/21 10:20
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill Field Blank-1

Laboratory ID Number: BB04073

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04156	Calcium, Total	mg/L	0.00281	0.152	5.00	333	332	5.12	4.25 to 5.75	107	70.0 to 130	0.401	20.0
BB04156	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0980	0.0989	0.0942	0.0850 to 0.115	98.0	70.0 to 130	0.914	20.0
BB04156	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0950	0.0964	0.0951	0.0850 to 0.115	95.0	70.0 to 130	1.46	20.0
BB04156	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.112	0.113	0.0999	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB04156	Potassium, Total	mg/L	-0.00457	0.367	10.0	16.4	16.5	10.3	8.50 to 11.5	103	70.0 to 130	0.608	20.0
BB04156	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0970	0.0974	0.0981	0.0850 to 0.115	97.0	70.0 to 130	0.412	20.0
BB04156	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0973	0.0969	0.0984	0.0850 to 0.115	97.3	70.0 to 130	0.412	20.0
BB04156	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.138	0.137	0.102	0.0850 to 0.115	100	70.0 to 130	0.727	20.0
BB04156	Iron, Total	mg/L	0.00121	0.0176	0.2	2.62	2.61	0.209	0.170 to 0.230	90.0	70.0 to 130	0.382	20.0
BB04156	Mercury, Total by CVAA	mg/L	0.0000917	0.000500	0.004	0.00422	0.00461	0.00412	0.00340 to 0.00460	106	70.0 to 130	8.83	20.0
BB04156	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0955	0.0941	0.0942	0.0850 to 0.115	95.5	70.0 to 130	1.48	20.0
BB04156	Boron, Total	mg/L	0.0138	0.0650	1.00	1.09	1.09	1.03	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BB04156	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0994	0.0988	0.0985	0.0850 to 0.115	99.4	70.0 to 130	0.605	20.0
BB04156	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.366	0.362	0.207	0.170 to 0.230	145	70.0 to 130	1.10	20.0
BB04156	Magnesium, Total	mg/L	0.00253	0.0462	5.00	351	349	5.15	4.25 to 5.75	145	70.0 to 130	0.640	20.0
BB04156	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BB04156	Manganese, Total	mg/L	0.000015	0.000147	0.10	2.16	2.19	0.0992	0.0850 to 0.115	40.0	70.0 to 130	1.38	20.0
BB04156	Sodium, Total	mg/L	0.00298	0.0660	5.00	36.7	36.2	5.15	4.25 to 5.75	109	70.0 to 130	1.24	20.0
BB04156	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.103	0.107	0.104	0.0850 to 0.115	103	70.0 to 130	3.81	20.0
BB04156	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.0996	0.101	0.0987	0.0850 to 0.115	99.4	70.0 to 130	1.40	20.0

Comments: Matrix spike recovery for Chloride is outside of the specification limit. LBM 3/1/2021

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLFFB
Sample Date: 2/24/21 10:20
Customer ID:
Delivery Date: 2/24/21 13:49

Description: Gorgas Landfill Field Blank-1

Laboratory ID Number: BB04073

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04073	Sulfate	mg/L	-0.310	0.500	20.0	18.7	-0.318	18.9	18.0 to 22.0	93.5	80.0 to 120	0.00	20.0
BB04073	Chloride	mg/L	-0.0751	0.500	10.0	12.1	0.137	10.8	9.00 to 11.0	121	80.0 to 120	0.00	20.0
BB04073	Fluoride	mg/L	0.0184	0.0500	2.50	2.53	0.0137	2.63	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB04155	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.808	5.00

Comments: Matrix spike recovery for Chloride is outside of the specification limit. LBM 3/1/2021

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-5

Location Code: WMWGORLF
Collected: 2/23/21 11:58
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04150

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:40		1.015	0.0369	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 11:14		20.3	394	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/17/21 10:40		1.015	2.30	mg/L	0.008120	0.0406	
* Lithium, Total	3/16/21 09:07	3/17/21 10:40		1.015	0.133	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 11:14		20.3	413	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/19/21 11:14		20.3	56.4	mg/L	0.406	8.12	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 12:35		1.015	2.09	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 13:01		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 13:01		1.015	0.000309	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 13:01		1.015	0.0116	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 13:01		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 13:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 13:01		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 13:01		1.015	0.00102	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 13:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 13:01		1.015	0.00140	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 13:01		1.015	6.74	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 13:01		1.015	0.384	mg/L	0.000068	0.000203	
* Selenium, Total	2/26/21 06:45	2/26/21 13:01		1.015	0.00233	mg/L	0.000507	0.001015	
* Thallium, Total	2/26/21 06:45	2/26/21 13:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 11:11		1.015	0.386	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:09		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	288	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	3740	mg/L		166.7	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-5

Location Code: WMWGORLF
Collected: 2/23/21 11:58
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04150

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	288	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.12	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:42	2/25/21 11:42		1	6.19	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 16:14	2/25/21 16:14		1	0.287	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 12:40	2/26/21 12:40		100	2210	mg/L	50.00	100	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/23/21 11:54	2/23/21 11:54			3701.43	uS/cm			FA
pH	2/23/21 11:54	2/23/21 11:54			6.47	SU			FA
Temperature	2/23/21 11:54	2/23/21 11:54			19.94	C			FA
Turbidity	2/23/21 11:54	2/23/21 11:54			2.58	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 11:58
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-5

Laboratory ID Number: BB04150

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04156	Calcium, Total	mg/L	0.00281	0.152	5.00	333	332	5.12	4.25 to 5.75	107	70.0 to 130	0.401	20.0
BB04156	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.103	0.107	0.104	0.0850 to 0.115	103	70.0 to 130	3.81	20.0
BB04156	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.0996	0.101	0.0987	0.0850 to 0.115	99.4	70.0 to 130	1.40	20.0
BB04156	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0980	0.0989	0.0942	0.0850 to 0.115	98.0	70.0 to 130	0.914	20.0
BB04156	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0950	0.0964	0.0951	0.0850 to 0.115	95.0	70.0 to 130	1.46	20.0
BB04156	Manganese, Total	mg/L	0.000015	0.000147	0.10	2.16	2.19	0.0992	0.0850 to 0.115	40.0	70.0 to 130	1.38	20.0
BB04156	Sodium, Total	mg/L	0.00298	0.0660	5.00	36.7	36.2	5.15	4.25 to 5.75	109	70.0 to 130	1.24	20.0
BB04156	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0973	0.0969	0.0984	0.0850 to 0.115	97.3	70.0 to 130	0.412	20.0
BB04156	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.138	0.137	0.102	0.0850 to 0.115	100	70.0 to 130	0.727	20.0
BB04156	Iron, Dissolved	mg/L	0.000207	0.0176	0.2	1.85	1.86	0.205	0.170 to 0.230	80.0	70.0 to 130	0.539	20.0
BB04156	Iron, Total	mg/L	0.00121	0.0176	0.2	2.62	2.61	0.209	0.170 to 0.230	90.0	70.0 to 130	0.382	20.0
BB04156	Mercury, Total by CVAA	mg/L	0.0000917	0.000500	0.004	0.00422	0.00461	0.00412	0.00340 to 0.00460	106	70.0 to 130	8.83	20.0
BB04156	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	2.14	2.13	0.0997	0.0850 to 0.115	40.0	70.0 to 130	0.468	20.0
BB04156	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0955	0.0941	0.0942	0.0850 to 0.115	95.5	70.0 to 130	1.48	20.0
BB04156	Boron, Total	mg/L	0.0138	0.0650	1.00	1.09	1.09	1.03	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BB04156	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0994	0.0988	0.0985	0.0850 to 0.115	99.4	70.0 to 130	0.605	20.0
BB04156	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.366	0.362	0.207	0.170 to 0.230	145	70.0 to 130	1.10	20.0
BB04156	Magnesium, Total	mg/L	0.00253	0.0462	5.00	351	349	5.15	4.25 to 5.75	145	70.0 to 130	0.640	20.0
BB04156	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BB04156	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.112	0.113	0.0999	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB04156	Potassium, Total	mg/L	-0.00457	0.367	10.0	16.4	16.5	10.3	8.50 to 11.5	103	70.0 to 130	0.608	20.0
BB04156	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0970	0.0974	0.0981	0.0850 to 0.115	97.0	70.0 to 130	0.412	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 11:58
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-5

Laboratory ID Number: BB04150

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04157	Sulfate	mg/L	-0.276	0.500	20.0	19.1	-0.324	19.0	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB04155	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.808	5.00
BB04157	Chloride	mg/L	-0.0488	0.500	10.0	10.3	0.135	10.1	9.00 to 11.0	103	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04157	Fluoride	mg/L	0.0213	0.0500	2.50	2.51	0.0138	2.63	2.25 to 2.75	100	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-10

Location Code: WMWGORLF
Collected: 2/23/21 13:40
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04151

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:44		1.015	0.205	mg/L	0.030000	0.1015	
* Calcium, Total	3/16/21 09:07	3/19/21 11:17		20.3	151	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/19/21 11:17		20.3	11.3	mg/L	0.1624	0.812	
* Lithium, Total	3/16/21 09:07	3/17/21 10:44		1.015	0.223	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 11:17		20.3	74.0	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/19/21 11:17		20.3	66.5	mg/L	0.406	8.12	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 13:25		10.15	14.5	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 13:05		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 13:05		1.015	0.00160	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 13:05		1.015	0.0201	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 13:05		1.015	0.00128	mg/L	0.000406	0.001015	
* Cadmium, Total	2/26/21 06:45	2/26/21 13:05		1.015	0.000148	mg/L	0.000068	0.000203	J
* Chromium, Total	2/26/21 06:45	2/26/21 13:05		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 13:05		1.015	0.0167	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 13:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 13:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	2/26/21 06:45	2/26/21 13:05		1.015	5.92	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 18:21		5.075	1.47	mg/L	0.000340	0.001015	
* Selenium, Total	2/26/21 06:45	2/26/21 13:05		1.015	0.00217	mg/L	0.000507	0.001015	
* Thallium, Total	2/26/21 06:45	2/26/21 13:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 17:10		5.075	1.81	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:11		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	134	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	1110	mg/L		83.3	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-10

Location Code: WMWGORLF
Collected: 2/23/21 13:40
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04151

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	134	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.03	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:43	2/25/21 11:43		1	3.63	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 16:15	2/25/21 16:15		1	0.202	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 12:41	2/26/21 12:41		40	747	mg/L	20.00	40	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/23/21 13:37	2/23/21 13:37			1434.52	uS/cm			FA
pH	2/23/21 13:37	2/23/21 13:37			6.45	SU			FA
Temperature	2/23/21 13:37	2/23/21 13:37			19.52	C			FA
Turbidity	2/23/21 13:37	2/23/21 13:37			6.45	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 13:40
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-10

Laboratory ID Number: BB04151

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04156	Calcium, Total	mg/L	0.00281	0.152	5.00	333	332	5.12	4.25 to 5.75	107	70.0 to 130	0.401	20.0
BB04156	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0980	0.0989	0.0942	0.0850 to 0.115	98.0	70.0 to 130	0.914	20.0
BB04156	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0950	0.0964	0.0951	0.0850 to 0.115	95.0	70.0 to 130	1.46	20.0
BB04156	Manganese, Total	mg/L	0.000015	0.000147	0.10	2.16	2.19	0.0992	0.0850 to 0.115	40.0	70.0 to 130	1.38	20.0
BB04156	Sodium, Total	mg/L	0.00298	0.0660	5.00	36.7	36.2	5.15	4.25 to 5.75	109	70.0 to 130	1.24	20.0
BB04156	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.103	0.107	0.104	0.0850 to 0.115	103	70.0 to 130	3.81	20.0
BB04156	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.0996	0.101	0.0987	0.0850 to 0.115	99.4	70.0 to 130	1.40	20.0
BB04156	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0973	0.0969	0.0984	0.0850 to 0.115	97.3	70.0 to 130	0.412	20.0
BB04156	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.138	0.137	0.102	0.0850 to 0.115	100	70.0 to 130	0.727	20.0
BB04156	Iron, Dissolved	mg/L	0.000207	0.0176	0.2	1.85	1.86	0.205	0.170 to 0.230	80.0	70.0 to 130	0.539	20.0
BB04156	Iron, Total	mg/L	0.00121	0.0176	0.2	2.62	2.61	0.209	0.170 to 0.230	90.0	70.0 to 130	0.382	20.0
BB04156	Mercury, Total by CVAA	mg/L	0.0000917	0.000500	0.004	0.00422	0.00461	0.00412	0.00340 to 0.00460	106	70.0 to 130	8.83	20.0
BB04156	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	2.14	2.13	0.0997	0.0850 to 0.115	40.0	70.0 to 130	0.468	20.0
BB04156	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.112	0.113	0.0999	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB04156	Potassium, Total	mg/L	-0.00457	0.367	10.0	16.4	16.5	10.3	8.50 to 11.5	103	70.0 to 130	0.608	20.0
BB04156	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0970	0.0974	0.0981	0.0850 to 0.115	97.0	70.0 to 130	0.412	20.0
BB04156	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0955	0.0941	0.0942	0.0850 to 0.115	95.5	70.0 to 130	1.48	20.0
BB04156	Boron, Total	mg/L	0.0138	0.0650	1.00	1.09	1.09	1.03	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BB04156	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0994	0.0988	0.0985	0.0850 to 0.115	99.4	70.0 to 130	0.605	20.0
BB04156	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.366	0.362	0.207	0.170 to 0.230	145	70.0 to 130	1.10	20.0
BB04156	Magnesium, Total	mg/L	0.00253	0.0462	5.00	351	349	5.15	4.25 to 5.75	145	70.0 to 130	0.640	20.0
BB04156	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 13:40
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-10

Laboratory ID Number: BB04151

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04157	Sulfate	mg/L	-0.276	0.500	20.0	19.1	-0.324	19.0	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04157	Fluoride	mg/L	0.0213	0.0500	2.50	2.51	0.0138	2.63	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB04155	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.808	5.00
BB04157	Chloride	mg/L	-0.0488	0.500	10.0	10.3	0.135	10.1	9.00 to 11.0	103	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-20

Location Code: WMWGORLF
Collected: 2/23/21 14:50
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04152

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:47		1.015	0.110	mg/L	0.030000	0.1015	
* Calcium, Total	3/16/21 09:07	3/19/21 11:21		20.3	343	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/19/21 11:21		20.3	6.76	mg/L	0.1624	0.812	
* Lithium, Total	3/16/21 09:07	3/17/21 10:47		1.015	0.270	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 11:21		20.3	183	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/19/21 11:21		20.3	137	mg/L	0.406	8.12	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 13:29		10.15	6.75	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 13:08		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 13:08		1.015	0.000849	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 13:08		1.015	0.0167	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 13:08		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 13:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 13:08		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 13:08		1.015	0.000234	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 13:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 13:08		1.015	0.00108	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 13:08		1.015	6.09	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 13:08		1.015	1.12	mg/L	0.000068	0.000203	
* Selenium, Total	2/26/21 06:45	2/26/21 13:08		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 13:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 11:18		1.015	1.12	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:13		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	343	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	2460	mg/L		166.7	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-20

Location Code: WMWGORLF
Collected: 2/23/21 14:50
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04152

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	343	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.24	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:50	2/25/21 11:50		10	129	mg/L	5.00	10	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 16:16	2/25/21 16:16		1	0.117	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 12:42	2/26/21 12:42		50	1420	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/23/21 14:46	2/23/21 14:46			2908.99	uS/cm			FA
pH	2/23/21 14:46	2/23/21 14:46			6.75	SU			FA
Temperature	2/23/21 14:46	2/23/21 14:46			19.18	C			FA
Turbidity	2/23/21 14:46	2/23/21 14:46			0.7	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/23/21 14:50
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-20

Laboratory ID Number: BB04152

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04156	Calcium, Total	mg/L	0.00281	0.152	5.00	333	332	5.12	4.25 to 5.75	107	70.0 to 130	0.401	20.0
BB04156	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.103	0.107	0.104	0.0850 to 0.115	103	70.0 to 130	3.81	20.0
BB04156	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.0996	0.101	0.0987	0.0850 to 0.115	99.4	70.0 to 130	1.40	20.0
BB04156	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.112	0.113	0.0999	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB04156	Potassium, Total	mg/L	-0.00457	0.367	10.0	16.4	16.5	10.3	8.50 to 11.5	103	70.0 to 130	0.608	20.0
BB04156	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0970	0.0974	0.0981	0.0850 to 0.115	97.0	70.0 to 130	0.412	20.0
BB04156	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0973	0.0969	0.0984	0.0850 to 0.115	97.3	70.0 to 130	0.412	20.0
BB04156	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.138	0.137	0.102	0.0850 to 0.115	100	70.0 to 130	0.727	20.0
BB04156	Iron, Dissolved	mg/L	0.000207	0.0176	0.2	1.85	1.86	0.205	0.170 to 0.230	80.0	70.0 to 130	0.539	20.0
BB04156	Iron, Total	mg/L	0.00121	0.0176	0.2	2.62	2.61	0.209	0.170 to 0.230	90.0	70.0 to 130	0.382	20.0
BB04156	Mercury, Total by CVAA	mg/L	0.0000917	0.000500	0.004	0.00422	0.00461	0.00412	0.00340 to 0.00460	106	70.0 to 130	8.83	20.0
BB04156	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	2.14	2.13	0.0997	0.0850 to 0.115	40.0	70.0 to 130	0.468	20.0
BB04156	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0980	0.0989	0.0942	0.0850 to 0.115	98.0	70.0 to 130	0.914	20.0
BB04156	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0950	0.0964	0.0951	0.0850 to 0.115	95.0	70.0 to 130	1.46	20.0
BB04156	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0955	0.0941	0.0942	0.0850 to 0.115	95.5	70.0 to 130	1.48	20.0
BB04156	Boron, Total	mg/L	0.0138	0.0650	1.00	1.09	1.09	1.03	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BB04156	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0994	0.0988	0.0985	0.0850 to 0.115	99.4	70.0 to 130	0.605	20.0
BB04156	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.366	0.362	0.207	0.170 to 0.230	145	70.0 to 130	1.10	20.0
BB04156	Magnesium, Total	mg/L	0.00253	0.0462	5.00	351	349	5.15	4.25 to 5.75	145	70.0 to 130	0.640	20.0
BB04156	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BB04156	Manganese, Total	mg/L	0.000015	0.000147	0.10	2.16	2.19	0.0992	0.0850 to 0.115	40.0	70.0 to 130	1.38	20.0
BB04156	Sodium, Total	mg/L	0.00298	0.0660	5.00	36.7	36.2	5.15	4.25 to 5.75	109	70.0 to 130	1.24	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/23/21 14:50
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-20

Laboratory ID Number: BB04152

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04157	Sulfate	mg/L	-0.276	0.500	20.0	19.1	-0.324	19.0	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04157	Fluoride	mg/L	0.0213	0.0500	2.50	2.51	0.0138	2.63	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB04155	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.808	5.00
BB04157	Chloride	mg/L	-0.0488	0.500	10.0	10.3	0.135	10.1	9.00 to 11.0	103	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill Field Blank-2

Location Code: WMWGORLFFB
Collected: 2/23/21 15:10
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04153

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:50		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	3/16/21 09:07	3/17/21 10:50		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	3/16/21 09:07	3/17/21 10:50		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	3/16/21 09:07	3/17/21 10:50		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	3/16/21 09:07	3/17/21 10:50		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	3/16/21 09:07	3/17/21 10:50		1.015	Not Detected	mg/L	0.02030	0.406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000101	0.000203	U
* Beryllium, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 13:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:16		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:45	2/25/21 11:45		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 16:18	2/25/21 16:18		1	Not Detected	mg/L	0.06	0.1	U
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 12:43	2/26/21 12:43		1	Not Detected	mg/L	0.50	1	U

MDL's and RL's are adjusted for sample dilution, as applicable

Comments:

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLFFB
Sample Date: 2/23/21 15:10
Customer ID:
Delivery Date: 2/25/21 09:38

Description:Gorgas Landfill Field Blank-2

Laboratory ID Number: BB04153

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04156	Calcium, Total	mg/L	0.00281	0.152	5.00	333	332	5.12	4.25 to 5.75	107	70.0 to 130	0.401	20.0
BB04156	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0980	0.0989	0.0942	0.0850 to 0.115	98.0	70.0 to 130	0.914	20.0
BB04156	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0950	0.0964	0.0951	0.0850 to 0.115	95.0	70.0 to 130	1.46	20.0
BB04156	Manganese, Total	mg/L	0.000015	0.000147	0.10	2.16	2.19	0.0992	0.0850 to 0.115	40.0	70.0 to 130	1.38	20.0
BB04156	Sodium, Total	mg/L	0.00298	0.0660	5.00	36.7	36.2	5.15	4.25 to 5.75	109	70.0 to 130	1.24	20.0
BB04156	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0973	0.0969	0.0984	0.0850 to 0.115	97.3	70.0 to 130	0.412	20.0
BB04156	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.138	0.137	0.102	0.0850 to 0.115	100	70.0 to 130	0.727	20.0
BB04156	Iron, Total	mg/L	0.00121	0.0176	0.2	2.62	2.61	0.209	0.170 to 0.230	90.0	70.0 to 130	0.382	20.0
BB04156	Mercury, Total by CVAA	mg/L	0.0000917	0.000500	0.004	0.00422	0.00461	0.00412	0.00340 to 0.00460	106	70.0 to 130	8.83	20.0
BB04156	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.103	0.107	0.104	0.0850 to 0.115	103	70.0 to 130	3.81	20.0
BB04156	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.0996	0.101	0.0987	0.0850 to 0.115	99.4	70.0 to 130	1.40	20.0
BB04156	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.112	0.113	0.0999	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB04156	Potassium, Total	mg/L	-0.00457	0.367	10.0	16.4	16.5	10.3	8.50 to 11.5	103	70.0 to 130	0.608	20.0
BB04156	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0970	0.0974	0.0981	0.0850 to 0.115	97.0	70.0 to 130	0.412	20.0
BB04156	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0955	0.0941	0.0942	0.0850 to 0.115	95.5	70.0 to 130	1.48	20.0
BB04156	Boron, Total	mg/L	0.0138	0.0650	1.00	1.09	1.09	1.03	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BB04156	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0994	0.0988	0.0985	0.0850 to 0.115	99.4	70.0 to 130	0.605	20.0
BB04156	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.366	0.362	0.207	0.170 to 0.230	145	70.0 to 130	1.10	20.0
BB04156	Magnesium, Total	mg/L	0.00253	0.0462	5.00	351	349	5.15	4.25 to 5.75	145	70.0 to 130	0.640	20.0
BB04156	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLFFB
Sample Date: 2/23/21 15:10
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill Field Blank-2

Laboratory ID Number: BB04153

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04157	Sulfate	mg/L	-0.276	0.500	20.0	19.1	-0.324	19.0	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB04157	Fluoride	mg/L	0.0213	0.0500	2.50	2.51	0.0138	2.63	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB04155	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.808	5.00
BB04157	Chloride	mg/L	-0.0488	0.500	10.0	10.3	0.135	10.1	9.00 to 11.0	103	80.0 to 120	0.00	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-11

Location Code: WMWGORLF
Collected: 2/24/21 10:13
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04154

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:54		1.015	0.108	mg/L	0.030000	0.1015	
* Calcium, Total	3/16/21 09:07	3/19/21 11:24		20.3	325	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/19/21 11:24		20.3	4.42	mg/L	0.1624	0.812	
* Lithium, Total	3/16/21 09:07	3/17/21 10:54		1.015	0.300	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 11:24		20.3	169	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/19/21 11:24		20.3	139	mg/L	0.406	8.12	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 13:32		10.15	4.39	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 13:16		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 13:16		1.015	0.000834	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 13:16		1.015	0.0150	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 13:16		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 13:16		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 13:16		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 13:16		1.015	0.000260	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 13:16		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 13:16		1.015	0.00148	mg/L	0.000068	0.000203	
* Potassium, Total	2/26/21 06:45	2/26/21 13:16		1.015	6.40	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 13:16		1.015	1.23	mg/L	0.000068	0.000203	
* Selenium, Total	2/26/21 06:45	2/26/21 13:16		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 13:16		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 11:21		1.015	1.22	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:18		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	299	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	2370	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-11

Location Code: WMWGORLF
Collected: 2/24/21 10:13
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04154

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	299	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.20	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:51	2/25/21 11:51		10	113	mg/L	5.00	10	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 16:19	2/25/21 16:19		1	0.107	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 12:45	2/26/21 12:45		50	1330	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/24/21 10:10	2/24/21 10:10			2839.08	uS/cm			FA
pH	2/24/21 10:10	2/24/21 10:10			6.67	SU			FA
Temperature	2/24/21 10:10	2/24/21 10:10			18.25	C			FA
Turbidity	2/24/21 10:10	2/24/21 10:10			0.59	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/24/21 10:13
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-11

Laboratory ID Number: BB04154

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04156	Calcium, Total	mg/L	0.00281	0.152	5.00	333	332	5.12	4.25 to 5.75	107	70.0 to 130	0.401	20.0
BB04156	Manganese, Total	mg/L	0.000015	0.000147	0.10	2.16	2.19	0.0992	0.0850 to 0.115	40.0	70.0 to 130	1.38	20.0
BB04156	Sodium, Total	mg/L	0.00298	0.0660	5.00	36.7	36.2	5.15	4.25 to 5.75	109	70.0 to 130	1.24	20.0
BB04156	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.103	0.107	0.104	0.0850 to 0.115	103	70.0 to 130	3.81	20.0
BB04156	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.0996	0.101	0.0987	0.0850 to 0.115	99.4	70.0 to 130	1.40	20.0
BB04156	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0980	0.0989	0.0942	0.0850 to 0.115	98.0	70.0 to 130	0.914	20.0
BB04156	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0950	0.0964	0.0951	0.0850 to 0.115	95.0	70.0 to 130	1.46	20.0
BB04156	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0973	0.0969	0.0984	0.0850 to 0.115	97.3	70.0 to 130	0.412	20.0
BB04156	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.138	0.137	0.102	0.0850 to 0.115	100	70.0 to 130	0.727	20.0
BB04156	Iron, Dissolved	mg/L	0.000207	0.0176	0.2	1.85	1.86	0.205	0.170 to 0.230	80.0	70.0 to 130	0.539	20.0
BB04156	Iron, Total	mg/L	0.00121	0.0176	0.2	2.62	2.61	0.209	0.170 to 0.230	90.0	70.0 to 130	0.382	20.0
BB04156	Mercury, Total by CVAA	mg/L	0.0000917	0.000500	0.004	0.00422	0.00461	0.00412	0.00340 to 0.00460	106	70.0 to 130	8.83	20.0
BB04156	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	2.14	2.13	0.0997	0.0850 to 0.115	40.0	70.0 to 130	0.468	20.0
BB04156	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.112	0.113	0.0999	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB04156	Potassium, Total	mg/L	-0.00457	0.367	10.0	16.4	16.5	10.3	8.50 to 11.5	103	70.0 to 130	0.608	20.0
BB04156	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0970	0.0974	0.0981	0.0850 to 0.115	97.0	70.0 to 130	0.412	20.0
BB04156	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0955	0.0941	0.0942	0.0850 to 0.115	95.5	70.0 to 130	1.48	20.0
BB04156	Boron, Total	mg/L	0.0138	0.0650	1.00	1.09	1.09	1.03	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BB04156	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0994	0.0988	0.0985	0.0850 to 0.115	99.4	70.0 to 130	0.605	20.0
BB04156	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.366	0.362	0.207	0.170 to 0.230	145	70.0 to 130	1.10	20.0
BB04156	Magnesium, Total	mg/L	0.00253	0.0462	5.00	351	349	5.15	4.25 to 5.75	145	70.0 to 130	0.640	20.0
BB04156	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/24/21 10:13
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-11

Laboratory ID Number: BB04154

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04157	Sulfate	mg/L	-0.276	0.500	20.0	19.1	-0.324	19.0	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04157	Fluoride	mg/L	0.0213	0.0500	2.50	2.51	0.0138	2.63	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB04155	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.808	5.00
BB04157	Chloride	mg/L	-0.0488	0.500	10.0	10.3	0.135	10.1	9.00 to 11.0	103	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-19

Location Code: WMWGORLF
Collected: 2/24/21 12:40
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04155

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 10:57		1.015	0.0393	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 11:28		20.3	332	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/17/21 10:57		1.015	2.40	mg/L	0.008120	0.0406	
* Lithium, Total	3/16/21 09:07	3/17/21 10:57		1.015	0.0739	mg/L	0.007105	0.01999956	
* Magnesium, Total	3/16/21 09:07	3/19/21 11:28		20.3	349	mg/L	0.4263	8.12	
* Sodium, Total	3/16/21 09:07	3/17/21 10:57		1.015	40.5	mg/L	0.02030	0.406	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 12:48		1.015	1.68	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 13:19		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 13:19		1.015	0.000212	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 13:19		1.015	0.00981	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 13:19		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 13:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 13:19		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 13:19		1.015	0.0382	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 13:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 13:19		1.015	0.000197	mg/L	0.000068	0.000203	J
* Potassium, Total	2/26/21 06:45	2/26/21 13:19		1.015	6.08	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 18:25		5.075	2.07	mg/L	0.000340	0.001015	
* Selenium, Total	2/26/21 06:45	2/26/21 13:19		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 13:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 17:24		5.075	2.06	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:20		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	223	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	3070	mg/L		166.7	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-19

Location Code: WMWGORLF
Collected: 2/24/21 12:40
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04155

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	223	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.05	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:48	2/25/21 11:48		1	2.02	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 16:20	2/25/21 16:20		1	0.343	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 12:46	2/26/21 12:46		100	1970	mg/L	50.00	100	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/24/21 12:36	2/24/21 12:36			3183.22	uS/cm			FA
pH	2/24/21 12:36	2/24/21 12:36			6.26	SU			FA
Temperature	2/24/21 12:36	2/24/21 12:36			20.14	C			FA
Turbidity	2/24/21 12:36	2/24/21 12:36			5.12	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/24/21 12:40
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-19

Laboratory ID Number: BB04155

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04156	Calcium, Total	mg/L	0.00281	0.152	5.00	333	332	5.12	4.25 to 5.75	107	70.0 to 130	0.401	20.0
BB04156	Manganese, Total	mg/L	0.000015	0.000147	0.10	2.16	2.19	0.0992	0.0850 to 0.115	40.0	70.0 to 130	1.38	20.0
BB04156	Sodium, Total	mg/L	0.00298	0.0660	5.00	36.7	36.2	5.15	4.25 to 5.75	109	70.0 to 130	1.24	20.0
BB04156	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0973	0.0969	0.0984	0.0850 to 0.115	97.3	70.0 to 130	0.412	20.0
BB04156	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.138	0.137	0.102	0.0850 to 0.115	100	70.0 to 130	0.727	20.0
BB04156	Iron, Dissolved	mg/L	0.000207	0.0176	0.2	1.85	1.86	0.205	0.170 to 0.230	80.0	70.0 to 130	0.539	20.0
BB04156	Iron, Total	mg/L	0.00121	0.0176	0.2	2.62	2.61	0.209	0.170 to 0.230	90.0	70.0 to 130	0.382	20.0
BB04156	Mercury, Total by CVAA	mg/L	0.0000917	0.000500	0.004	0.00422	0.00461	0.00412	0.00340 to 0.00460	106	70.0 to 130	8.83	20.0
BB04156	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	2.14	2.13	0.0997	0.0850 to 0.115	40.0	70.0 to 130	0.468	20.0
BB04156	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0955	0.0941	0.0942	0.0850 to 0.115	95.5	70.0 to 130	1.48	20.0
BB04156	Boron, Total	mg/L	0.0138	0.0650	1.00	1.09	1.09	1.03	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BB04156	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0994	0.0988	0.0985	0.0850 to 0.115	99.4	70.0 to 130	0.605	20.0
BB04156	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.366	0.362	0.207	0.170 to 0.230	145	70.0 to 130	1.10	20.0
BB04156	Magnesium, Total	mg/L	0.00253	0.0462	5.00	351	349	5.15	4.25 to 5.75	145	70.0 to 130	0.640	20.0
BB04156	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BB04156	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.112	0.113	0.0999	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB04156	Potassium, Total	mg/L	-0.00457	0.367	10.0	16.4	16.5	10.3	8.50 to 11.5	103	70.0 to 130	0.608	20.0
BB04156	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0970	0.0974	0.0981	0.0850 to 0.115	97.0	70.0 to 130	0.412	20.0
BB04156	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.103	0.107	0.104	0.0850 to 0.115	103	70.0 to 130	3.81	20.0
BB04156	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.0996	0.101	0.0987	0.0850 to 0.115	99.4	70.0 to 130	1.40	20.0
BB04156	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0980	0.0989	0.0942	0.0850 to 0.115	98.0	70.0 to 130	0.914	20.0
BB04156	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0950	0.0964	0.0951	0.0850 to 0.115	95.0	70.0 to 130	1.46	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/24/21 12:40
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-19

Laboratory ID Number: BB04155

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04157	Sulfate	mg/L	-0.276	0.500	20.0	19.1	-0.324	19.0	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB04155	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.808	5.00
BB04157	Chloride	mg/L	-0.0488	0.500	10.0	10.3	0.135	10.1	9.00 to 11.0	103	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04157	Fluoride	mg/L	0.0213	0.0500	2.50	2.51	0.0138	2.63	2.25 to 2.75	100	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-19 DUP

Location Code: WMWGORLF
Collected: 2/24/21 12:40
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04156

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 11:00		1.015	0.0391	mg/L	0.030000	0.1015	J
* Calcium, Total	3/16/21 09:07	3/19/21 11:31		20.3	328	mg/L	1.4007	8.12	
* Iron, Total	3/16/21 09:07	3/17/21 11:00		1.015	2.44	mg/L	0.008120	0.0406	
* Lithium, Total	3/16/21 09:07	3/17/21 11:00		1.015	0.0752	mg/L	0.007105	0.019999	R
* Magnesium, Total	3/16/21 09:07	3/19/21 11:31		20.3	344	mg/L	0.4263	8.12	RA
* Sodium, Total	3/16/21 09:07	3/19/21 11:31		20.3	31.2	mg/L	0.406	8.12	
Analytical Method: EPA 200.7	***Analyst: RDA***								
* Iron, Dissolved	3/11/21 11:00	3/12/21 12:52		1.015	1.69	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 13:23		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 13:23		1.015	0.000218	mg/L	0.000068	0.000203	
* Barium, Total	2/26/21 06:45	2/26/21 13:23		1.015	0.00981	mg/L	0.000101	0.000203	
* Beryllium, Total	2/26/21 06:45	2/26/21 13:23		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 13:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 13:23		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 13:23		1.015	0.0379	mg/L	0.000068	0.000203	
* Lead, Total	2/26/21 06:45	2/26/21 13:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 13:23		1.015	0.000194	mg/L	0.000068	0.000203	J
* Potassium, Total	2/26/21 06:45	2/26/21 13:23		1.015	6.13	mg/L	0.169505	0.5075	
* Manganese, Total	2/26/21 06:45	2/26/21 18:28		5.075	2.12	mg/L	0.000340	0.001015	RA
* Selenium, Total	2/26/21 06:45	2/26/21 13:23		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 13:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	2/26/21 08:46	2/26/21 17:28		5.075	2.10	mg/L	0.000340	0.001015	RA
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:23		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	3/3/21 11:10	3/3/21 12:09		1	229	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	3060	mg/L		166.7	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-19 DUP

Location Code: WMWGORLF
Collected: 2/24/21 12:40
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04156

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	229	mg/L			
Carbonate Alkalinity, (calc.)	3/3/21 11:10	3/3/21 12:09		1	0.05	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:49	2/25/21 11:49		1	1.98	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 16:21	2/25/21 16:21		1	0.337	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 12:47	2/26/21 12:47		100	1900	mg/L	50.00	100	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	2/24/21 12:36	2/24/21 12:36			3183.22	uS/cm			FA
pH	2/24/21 12:36	2/24/21 12:36			6.26	SU			FA
Temperature	2/24/21 12:36	2/24/21 12:36			20.14	C			FA
Turbidity	2/24/21 12:36	2/24/21 12:36			5.12	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 2/24/21 12:40
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-19 DUP

Laboratory ID Number: BB04156

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04156	Calcium, Total	mg/L	0.00281	0.152	5.00	333	332	5.12	4.25 to 5.75	107	70.0 to 130	0.401	20.0
BB04156	Antimony, Total	mg/L	0.000196	0.00100	0.10	0.0980	0.0989	0.0942	0.0850 to 0.115	98.0	70.0 to 130	0.914	20.0
BB04156	Thallium, Total	mg/L	-0.0000241	0.000147	0.10	0.0950	0.0964	0.0951	0.0850 to 0.115	95.0	70.0 to 130	1.46	20.0
BB04156	Arsenic, Total	mg/L	0.0000554	0.000147	0.10	0.103	0.107	0.104	0.0850 to 0.115	103	70.0 to 130	3.81	20.0
BB04156	Molybdenum, Total	mg/L	0.0000035	0.000147	0.10	0.0996	0.101	0.0987	0.0850 to 0.115	99.4	70.0 to 130	1.40	20.0
BB04156	Manganese, Total	mg/L	0.000015	0.000147	0.10	2.16	2.19	0.0992	0.0850 to 0.115	40.0	70.0 to 130	1.38	20.0
BB04156	Sodium, Total	mg/L	0.00298	0.0660	5.00	36.7	36.2	5.15	4.25 to 5.75	109	70.0 to 130	1.24	20.0
BB04156	Beryllium, Total	mg/L	-0.0000045	0.000880	0.10	0.0955	0.0941	0.0942	0.0850 to 0.115	95.5	70.0 to 130	1.48	20.0
BB04156	Boron, Total	mg/L	0.0138	0.0650	1.00	1.09	1.09	1.03	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BB04156	Chromium, Total	mg/L	-0.0000886	0.000440	0.10	0.0994	0.0988	0.0985	0.0850 to 0.115	99.4	70.0 to 130	0.605	20.0
BB04156	Lithium, Total	mg/L	-0.0000484	0.0154	0.200	0.366	0.362	0.207	0.170 to 0.230	145	70.0 to 130	1.10	20.0
BB04156	Magnesium, Total	mg/L	0.00253	0.0462	5.00	351	349	5.15	4.25 to 5.75	145	70.0 to 130	0.640	20.0
BB04156	Selenium, Total	mg/L	-0.0000277	0.00100	0.10	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BB04156	Barium, Total	mg/L	-0.0000324	0.000200	0.10	0.112	0.113	0.0999	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB04156	Potassium, Total	mg/L	-0.00457	0.367	10.0	16.4	16.5	10.3	8.50 to 11.5	103	70.0 to 130	0.608	20.0
BB04156	Lead, Total	mg/L	0.0000054	0.000147	0.10	0.0970	0.0974	0.0981	0.0850 to 0.115	97.0	70.0 to 130	0.412	20.0
BB04156	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0973	0.0969	0.0984	0.0850 to 0.115	97.3	70.0 to 130	0.412	20.0
BB04156	Cobalt, Total	mg/L	-0.0000279	0.000147	0.10	0.138	0.137	0.102	0.0850 to 0.115	100	70.0 to 130	0.727	20.0
BB04156	Iron, Dissolved	mg/L	0.000207	0.0176	0.2	1.85	1.86	0.205	0.170 to 0.230	80.0	70.0 to 130	0.539	20.0
BB04156	Iron, Total	mg/L	0.00121	0.0176	0.2	2.62	2.61	0.209	0.170 to 0.230	90.0	70.0 to 130	0.382	20.0
BB04156	Mercury, Total by CVAA	mg/L	0.0000917	0.000500	0.004	0.00422	0.00461	0.00412	0.00340 to 0.00460	106	70.0 to 130	8.83	20.0
BB04156	Manganese, Dissolved	mg/L	0.0000065	0.000147	0.10	2.14	2.13	0.0997	0.0850 to 0.115	40.0	70.0 to 130	0.468	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 2/24/21 12:40
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill - MW-19 DUP

Laboratory ID Number: BB04156

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04157	Chloride	mg/L	-0.0488	0.500	10.0	10.3	0.135	10.1	9.00 to 11.0	103	80.0 to 120	0.00	20.0
BB04156	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.971	5.00
BB04157	Sulfate	mg/L	-0.276	0.500	20.0	19.1	-0.324	19.0	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB04156	Alkalinity, Total as CaCO3	mg/L					224	52.0	45.0 to 55.0			2.21	10.0
BB04157	Fluoride	mg/L	0.0213	0.0500	2.50	2.51	0.0138	2.63	2.25 to 2.75	100	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill Equipment Blank-1

Location Code: WMWGORLFEB
Collected: 2/24/21 13:30
Customer ID:
Submittal Date: 2/25/21 09:38

Laboratory ID Number: BB04157

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: RDA***				***Preparation Method: EPA 1638***				
* Boron, Total	3/16/21 09:07	3/17/21 11:24		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	3/16/21 09:07	3/17/21 11:24		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	3/16/21 09:07	3/17/21 11:24		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	3/16/21 09:07	3/17/21 11:24		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	3/16/21 09:07	3/17/21 11:24		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	3/16/21 09:07	3/17/21 11:24		1.015	Not Detected	mg/L	0.02030	0.406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	2/26/21 06:45	2/26/21 13:51		1.015	0.000179	mg/L	0.000101	0.000203	J
* Beryllium, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	2/26/21 06:45	2/26/21 13:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	3/8/21 11:16	3/9/21 13:39		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C	***Analyst: TJW***								
* Solids, Dissolved	3/1/21 16:45	3/3/21 09:00		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	2/25/21 11:53	2/25/21 11:53		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	2/25/21 16:22	2/25/21 16:22		1	Not Detected	mg/L	0.06	0.1	U
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	2/26/21 12:48	2/26/21 12:48		1	Not Detected	mg/L	0.50	1	U

MDL's and RL's are adjusted for sample dilution, as applicable

Comments:

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLFEB
Sample Date: 2/24/21 13:30
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill Equipment Blank-1

Laboratory ID Number: BB04157

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04157	Lithium, Total	mg/L	-0.000170	0.0154	0.200	0.208	0.212	0.217	0.170 to 0.230	104	70.0 to 130	1.90	20.0
BB04157	Antimony, Total	mg/L	0.000222	0.00100	0.10	0.0920	0.0931	0.0931	0.0850 to 0.115	92.0	70.0 to 130	1.19	20.0
BB04157	Potassium, Total	mg/L	0.00276	0.367	10.0	10.4	10.3	11.0	8.50 to 11.5	104	70.0 to 130	0.966	20.0
BB04157	Selenium, Total	mg/L	0.0000388	0.00100	0.10	0.0979	0.101	0.102	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BB04157	Barium, Total	mg/L	-0.0000222	0.000200	0.10	0.0987	0.0994	0.0995	0.0850 to 0.115	98.5	70.0 to 130	0.707	20.0
BB04157	Beryllium, Total	mg/L	0.0000134	0.000880	0.10	0.0971	0.102	0.101	0.0850 to 0.115	97.1	70.0 to 130	4.92	20.0
BB04157	Calcium, Total	mg/L	0.00134	0.152	5.00	4.92	4.90	4.92	4.25 to 5.75	98.4	70.0 to 130	0.407	20.0
BB04157	Iron, Total	mg/L	0.000326	0.0176	0.2	0.202	0.203	0.201	0.170 to 0.230	101	70.0 to 130	0.494	20.0
BB04157	Arsenic, Total	mg/L	0.0000375	0.000147	0.10	0.101	0.100	0.102	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BB04157	Cadmium, Total	mg/L	0.00000	0.000147	0.10	0.0959	0.0977	0.0988	0.0850 to 0.115	95.9	70.0 to 130	1.86	20.0
BB04157	Manganese, Total	mg/L	0.0000216	0.000147	0.10	0.103	0.0981	0.101	0.0850 to 0.115	103	70.0 to 130	4.87	20.0
BB04157	Lead, Total	mg/L	0.000005	0.000147	0.10	0.0982	0.0994	0.0986	0.0850 to 0.115	98.2	70.0 to 130	1.21	20.0
BB04157	Boron, Total	mg/L	0.0101	0.0650	1.00	1.02	1.03	1.03	0.850 to 1.15	102	70.0 to 130	0.976	20.0
BB04157	Cobalt, Total	mg/L	-0.0000274	0.000147	0.10	0.1000	0.100	0.106	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB04157	Chromium, Total	mg/L	-0.000120	0.000440	0.10	0.0983	0.0973	0.102	0.0850 to 0.115	98.3	70.0 to 130	1.02	20.0
BB04157	Magnesium, Total	mg/L	0.00289	0.0462	5.00	5.05	5.06	5.10	4.25 to 5.75	101	70.0 to 130	0.198	20.0
BB04157	Mercury, Total by CVAA	mg/L	0.000108	0.000500	0.004	0.00416	0.00424	0.00422	0.00340 to 0.00460	104	70.0 to 130	1.90	20.0
BB04157	Molybdenum, Total	mg/L	-0.0000037	0.000147	0.10	0.0951	0.0978	0.0971	0.0850 to 0.115	95.1	70.0 to 130	2.80	20.0
BB04157	Sodium, Total	mg/L	0.000966	0.0660	5.00	5.20	5.23	5.34	4.25 to 5.75	104	70.0 to 130	0.575	20.0
BB04157	Thallium, Total	mg/L	-0.000025	0.000147	0.10	0.0961	0.0965	0.0966	0.0850 to 0.115	96.1	70.0 to 130	0.415	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLFEB
Sample Date: 2/24/21 13:30
Customer ID:
Delivery Date: 2/25/21 09:38

Description: Gorgas Landfill Equipment Blank-1

Laboratory ID Number: BB04157

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB04157	Fluoride	mg/L	0.0213	0.0500	2.50	2.51	0.0138	2.63	2.25 to 2.75	100	80.0 to 120	0.00	20.0
BB04157	Sulfate	mg/L	-0.276	0.500	20.0	19.1	-0.324	19.0	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB04155	Solids, Dissolved	mg/L	2.00	25.0			3120	50.0	40.0 to 60.0			0.808	5.00
BB04157	Chloride	mg/L	-0.0488	0.500	10.0	10.3	0.135	10.1	9.00 to 11.0	103	80.0 to 120	0.00	20.0

Comments:

Reported: 3/31/2021
Version: 3.2
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
(205) 664-6001

Definitions

Alabama Power

Abbreviation	Description
DF	Dilution Factor
LCS	Lab Control Sample
LFM	Lab Fortified Matrix
MB	Method Blank
MDL	Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Prec	Precision (% RPD)
Q	Qualifier; comment used to note deviations or additional information associated with analytical results.
QC	Quality Control
Rec	Recovery of Matrix Spike
RL	Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.
Vio Spec	Violation Specification; regulatory limit which has been exceeded by the sample analyzed.

Qualifier	Description
FA	Field results were reviewed by the Water Field Group.
J	Reported value is an estimate because concentration is less than reporting limit.
R	Matrix spike recovery and/or matrix spike duplicate recovery is outside of specification limit.
RA	Matrix spike is invalid due to sample concentration.
U	Compound was analyzed, but not detected.

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☐ Outside Lab
☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	Anthony Goggins	Location	Gorgas Landfill

Bottles													
	1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
	2	Dissolved Meta	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-6	02/23/2021	10:45	6	Groundwater		BB04032
MW-7	02/23/2021	11:35	6	Groundwater		BB04033
MW-8	02/23/2021	12:35	6	Groundwater		BB04034

Relinquished By	Received By	Date/Time
		02/24/2021 08:30

SmarTroll ID	7586-41445-5-4	All metals and radiological bottles have pH < 2	☑
Turbidity ID	4677-23343-4-2	Cooler Temp	0.0 degrees C
Sample Event	1309	Thermometer ID	5408-27568-2-2
		pH Strip ID	8206-45803-10-7

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☐ Outside Lab
☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	Dallas Gentry	Location	Gorgas Landfill

Bottles

1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
2	Dissolved Meta	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	02/23/2021	08:33	6	Groundwater		BB04064
MW-14	02/23/2021	09:45	6	Groundwater		BB04065
MW-15	02/23/2021	10:45	6	Groundwater		BB04066
MW-16	02/23/2021	11:40	6	Groundwater		BB04067
MW-16 dup	02/23/2021	11:40	6	Sample Duplicate		BB04068
MW-17R	02/23/2021	12:53	6	Groundwater		BB04069
MW-18	02/23/2021	14:00	6	Groundwater		BB04070
MW-12V	02/24/2021	08:38	6	Groundwater		BB04071
MW-12	02/24/2021	09:48	6	Groundwater		BB04072
FB-1	02/24/2021	10:20	4	Field Blank		BB04073

Relinquished By	Received By	Date/Time
		02/24/2021 12:50

SmarTroll ID	7586-41442-5-1	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20010-2-2	Cooler Temp	0.6 degrees C
Sample Event	1309	Thermometer ID	5408-27568-2-2
		pH Strip ID	8206-45803-10-7

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☐ Outside Lab
☑ Lab Complete

Lab ETA: 02/25/2021 09:00

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Landfill

Bottles

1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
2	Diss Metals	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments:

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	02/23/2021	11:58	6	Groundwater		BB04150
MW-10	02/23/2021	13:40	6	Groundwater		BB04151
MW-20	02/23/2021	14:50	6	Groundwater		BB04152
FB-2	02/23/2021	15:10	4	Field Blank		BB04153
MW-11	02/24/2021	10:13	6	Groundwater		BB04154
MW-19	02/24/2021	12:40	6	Groundwater		BB04155
MW-19 Dup	02/24/2021	12:40	6	Sample Duplicate		BB04156
EB-1	02/24/2021	13:30	4	Equipment Blank		BB04157

Relinquished By	Received By	Date/Time
		02/25/2021 08:45

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20009-2-1	Cooler Temp	0.3 degrees C
Sample Event	1309	Thermometer ID	5408-27568-2-2
		pH Strip ID	8206-45803-10-7

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☑ Lab Complete ☑ Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	Anthony Goggins	Location	Gorgas Landfill

Bottles															
	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	N/A	N/A	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments: Rad MS/MSD collected at MW-6. LBM 2/24/21

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-6	02/23/2021	10:45	3	Groundwater		BB04035
MW-7	02/23/2021	11:35	1	Groundwater		BB04036
MW-8	02/23/2021	12:35	1	Groundwater		BB04037

Relinquished By	Received By	Date/Time
		02/24/2021 08:30

SmarTroll ID	7586-41445-5-4	All metals and radiological bottles have pH < 2	☑
Turbidity ID	4677-23343-4-2	Cooler Temp	N/A
Sample Event	1309	Thermometer ID	N/A
		pH Strip ID	8206-45803-10-7

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☑ Lab Complete ☑ Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	Dallas Gentry	Location	Gorgas Landfill

Bottles															
	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	N/A	N/A	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments: Radium MS/MSD collected at MW-14

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	02/23/2021	08:33	1	Groundwater		BB04074
MW-14	02/23/2021	09:45	3	Groundwater		BB04075
MW-15	02/23/2021	10:45	1	Groundwater		BB04076
MW-16	02/23/2021	11:40	1	Groundwater		BB04077
MW-16 dup	02/23/2021	11:40	1	Sample Duplicate		BB04078
MW-17R	02/23/2021	12:53	1	Groundwater		BB04079
MW-18	02/23/2021	14:00	1	Groundwater		BB04080
MW-12V	02/24/2021	08:38	1	Groundwater		BB04081
MW-12	02/24/2021	09:48	1	Groundwater		BB04082
FB-1	02/24/2021	10:20	1	Field Blank		BB04083

Relinquished By	Received By	Date/Time
		02/24/2021 12:51

SmarTroll ID	7586-41442-5-1	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20010-2-2	Cooler Temp	N/A
Sample Event	1309	Thermometer ID	N/A
		pH Strip ID	8206-45803-10-7

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

✔ Field Complete ✔ Outside Lab
✔ Lab Complete

Lab ETA 02/25/2021 09:00

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Landfill

Bottles

1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
2	N/A	N/A	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	02/23/2021	11:58	1	Groundwater		BB04158
MW-10	02/23/2021	13:40	1	Groundwater		BB04159
MW-20	02/23/2021	14:50	1	Groundwater		BB04160
FB-2	02/23/2021	15:10	1	Field Blank		BB04161
MW-11	02/24/2021	10:13	1	Groundwater		BB04162
MW-19	02/24/2021	12:40	1	Groundwater		BB04163
MW-19 Dup	02/24/2021	12:40	1	Sample Duplicate		BB04164
EB-1	02/24/2021	13:30	1	Equipment Blank		BB04165

Relinquished By	Received By	Date/Time
		02/25/2021 08:45

SmarTroll ID	7586-41443-5-2
Turbidity ID	3901-20009-2-1
Sample Event	1309

All metals and radiological bottles have pH < 2 ✔

Cooler Temp	N/A
Thermometer ID	N/A
pH Strip ID	8206-45803-10-7

Bottles/Pre-Preserved Bottles are provided by the GTL

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

April 05, 2021

Laura Midkiff
Alabama Power
744 Highway 87
GSC #8
Calera, AL 35040

RE: Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on March 08, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Brooke Caton, Alabama Power
Renee Jernigan, Alabama Power

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92526258001	BB04035 MW-6	Water	02/23/21 10:45	03/08/21 09:00
92526258002	BB04035 MW-6 MS	Water	02/23/21 10:45	03/08/21 09:00
92526258003	BB04035 MW-6 MSD	Water	02/23/21 10:45	03/08/21 09:00
92526258004	BB04036 MW-7	Water	02/23/21 11:35	03/08/21 09:00
92526258005	BB04037 MW-8	Water	02/23/21 12:35	03/08/21 09:00
92526258006	BB04074 MW-13	Water	02/23/21 08:33	03/08/21 09:00
92526258007	BB04075 MW-14	Water	02/23/21 09:45	03/08/21 09:00
92526258008	BB04075 MW-14 MS	Water	02/23/21 09:45	03/08/21 09:00
92526258009	BB04075 MW-14 MSD	Water	02/23/21 09:45	03/08/21 09:00
92526258010	BB04076 MW-15	Water	02/23/21 10:45	03/08/21 09:00
92526258011	BB04077 MW-16	Water	02/23/21 11:40	03/08/21 09:00
92526258012	BB04078 MW-16 DUP	Water	02/23/21 11:40	03/08/21 09:00
92526258013	BB04079 MW-17R	Water	02/23/21 12:53	03/08/21 09:00
92526258014	BB04080 MW-18	Water	02/23/21 14:00	03/08/21 09:00
92526258015	BB04081 MW-12V	Water	02/24/21 08:38	03/08/21 09:00
92526258016	BB04082 MW-12	Water	02/24/21 09:48	03/08/21 09:00
92526258017	BB04083 FB-1	Water	02/24/21 10:20	03/08/21 09:00
92526258018	BB04158 MW-5	Water	02/23/21 11:58	03/08/21 09:00
92526258019	BB04159 MW-10	Water	02/23/21 13:40	03/08/21 09:00
92526258020	BB04160 MW-20	Water	02/23/21 14:50	03/08/21 09:00
92526258021	BB04161 FB-2	Water	02/23/21 15:10	03/08/21 09:00
92526258022	BB04162 MW-11	Water	02/24/21 10:13	03/08/21 09:00
92526258023	BB04163 MW-19	Water	02/24/21 12:40	03/08/21 09:00
92526258024	BB04164 MW-19 DUP	Water	02/24/21 12:40	03/08/21 09:00
92526258025	BB04165 EB-1	Water	02/24/21 13:30	03/08/21 09:00

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92526258001	**BB04035 MW-6**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258002	**BB04035 MW-6 MS**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92526258003	**BB04035 MW-6 MSD**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92526258004	**BB04036 MW-7**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258005	**BB04037 MW-8**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258006	**BB04074 MW-13**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258007	**BB04075 MW-14**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258008	**BB04075 MW-14 MS**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92526258009	**BB04075 MW-14 MSD**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92526258010	**BB04076 MW-15**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258011	**BB04077 MW-16**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258012	**BB04078 MW-16 DUP**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258013	**BB04079 MW-17R**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258014	**BB04080 MW-18**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		Total Radium Calculation	CMC	1	PASI-PA
92526258015	BB04081 MW-12V	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258016	BB04082 MW-12	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258017	BB04083 FB-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258018	BB04158 MW-5	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258019	BB04159 MW-10	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258020	BB04160 MW-20	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258021	BB04161 FB-2	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258022	BB04162 MW-11	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258023	BB04163 MW-19	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258024	BB04164 MW-19 DUP	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526258025	BB04165 EB-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Method: **EPA 9315**
Description: 9315 Total Radium
Client: Alabama Power
Date: April 05, 2021

General Information:
25 samples were analyzed for EPA 9315 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Method: **EPA 9320**
Description: 9320 Radium 228
Client: Alabama Power
Date: April 05, 2021

General Information:
25 samples were analyzed for EPA 9320 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Alabama Power
Date: April 05, 2021

General Information:
21 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04035 MW-6 **Lab ID: 92526258001** Collected: 02/23/21 10:45 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.262U ± 0.269 (0.537) C:84% T:NA**	pCi/L	04/02/21 09:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.892 ± 0.404 (0.666) C:74% T:90%**	pCi/L	03/31/21 11:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.15U ± 0.673 (1.20)**	pCi/L	04/02/21 15:26	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04035 MW-6 MS **Lab ID: 92526258002** Collected: 02/23/21 10:45 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**104.79 %REC ± NA (NA) C:NA T:NA**	pCi/L	04/02/21 09:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**82.97 %REC ± NA (NA) C:NA T:NA**	pCi/L	03/31/21 11:15	15262-20-1	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04035 MW-6 MSD **Lab ID: 92526258003** Collected: 02/23/21 10:45 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**108.46 %REC 3.45RPD ± NA (NA) C:NA T:NA**	pCi/L	04/02/21 09:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**103.43 %REC 21.95 RPD ± NA (NA) C:NA T:NA**	pCi/L	03/31/21 11:15	15262-20-1	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04036 MW-7 **Lab ID: 92526258004** Collected: 02/23/21 11:35 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.206U ± 0.213 (0.386) C:72% T:NA**	pCi/L	04/02/21 09:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.490U ± 0.436 (0.887) C:74% T:84%**	pCi/L	03/31/21 11:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.696U ± 0.649 (1.27)**	pCi/L	04/02/21 15:26	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04037 MW-8 **Lab ID: 92526258005** Collected: 02/23/21 12:35 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.159U ± 0.209 (0.442) C:88% T:NA**	pCi/L	04/02/21 09:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.526U ± 0.382 (0.749) C:77% T:90%**	pCi/L	03/31/21 11:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.685U ± 0.591 (1.19)**	pCi/L	04/02/21 15:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04074 MW-13 **Lab ID: 92526258006** Collected: 02/23/21 08:33 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0305U ± 0.145 (0.380) C:92% T:NA**	pCi/L	04/02/21 09:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.422U ± 0.317 (0.621) C:78% T:96%**	pCi/L	03/31/21 11:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.453U ± 0.462 (1.00)**	pCi/L	04/02/21 15:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04075 MW-14 **Lab ID: 92526258007** Collected: 02/23/21 09:45 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.245U ± 0.218 (0.392) C:92% T:NA**	pCi/L	04/02/21 09:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.559U ± 0.361 (0.681) C:76% T:89%**	pCi/L	03/31/21 11:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.804U ± 0.579 (1.07)**	pCi/L	04/02/21 15:26	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04075 MW-14 MS **Lab ID: 92526258008** Collected: 02/23/21 09:45 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**103.27 %REC ± NA (NA) C:NA T:NA**	pCi/L	04/02/21 09:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**88.52 %REC ± NA (NA) C:NA T:NA**	pCi/L	03/31/21 11:15	15262-20-1	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04075 MW-14 MSD **Lab ID: 92526258009** Collected: 02/23/21 09:45 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**104.01 %REC 0.72RPD ± NA (NA) C:NA T:NA**	pCi/L	04/02/21 09:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**105.07 %REC 17.10 RPD ± NA (NA) C:NA T:NA**	pCi/L	03/31/21 11:15	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04076 MW-15 **Lab ID: 92526258010** Collected: 02/23/21 10:45 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.209U ± 0.222 (0.442) C:94% T:NA**	pCi/L	04/02/21 09:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.378U ± 0.313 (0.628) C:75% T:103%**	pCi/L	03/31/21 11:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.587U ± 0.535 (1.07)**	pCi/L	04/02/21 15:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04077 MW-16 **Lab ID: 92526258011** Collected: 02/23/21 11:40 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.308U ± 0.246 (0.765) C:96% T:NA**	pCi/L	04/02/21 09:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.546U ± 0.405 (0.798) C:72% T:88%**	pCi/L	03/31/21 11:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.546U ± 0.651 (1.56)**	pCi/L	04/02/21 15:26	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04078 MW-16 DUP **Lab ID: 92526258012** Collected: 02/23/21 11:40 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.348U ± 0.253 (0.435) C:95% T:NA**	pCi/L	04/02/21 09:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.261U ± 0.373 (0.801) C:74% T:88%**	pCi/L	03/31/21 11:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.609U ± 0.626 (1.24)**	pCi/L	04/02/21 15:26	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04079 MW-17R **Lab ID: 92526258013** Collected: 02/23/21 12:53 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.177U ± 0.231 (0.495) C:99% T:NA**	pCi/L	04/02/21 09:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.263U ± 0.317 (0.666) C:72% T:86%**	pCi/L	03/31/21 11:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.440U ± 0.548 (1.16)**	pCi/L	04/02/21 15:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04080 MW-18 **Lab ID: 92526258014** Collected: 02/23/21 14:00 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.494U ± 0.414 (0.831) C:84% T:NA**	pCi/L	04/02/21 09:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.254U ± 0.283 (0.590) C:75% T:96%**	pCi/L	03/31/21 11:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.748U ± 0.697 (1.42)**	pCi/L	04/02/21 15:26	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04081 MW-12V **Lab ID: 92526258015** Collected: 02/24/21 08:38 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.865 ± 0.404 (0.587) C:91% T:NA**	pCi/L	04/02/21 09:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.0367U ± 0.259 (0.619) C:77% T:91%**	pCi/L	03/31/21 11:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.865U ± 0.663 (1.21)**	pCi/L	04/02/21 15:26	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04082 MW-12 **Lab ID: 92526258016** Collected: 02/24/21 09:48 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.260U ± 0.266 (0.526) C:84% T:NA**	pCi/L	04/02/21 09:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.975 ± 0.427 (0.697) C:80% T:82%**	pCi/L	03/31/21 11:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.24 ± 0.693 (1.22)**	pCi/L	04/02/21 15:26	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04083 FB-1 **Lab ID: 92526258017** Collected: 02/24/21 10:20 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.189U ± 0.343 (0.781) C:90% T:NA**	pCi/L	04/02/21 09:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.253U ± 0.338 (0.723) C:75% T:90%**	pCi/L	03/31/21 11:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.442U ± 0.681 (1.50)**	pCi/L	04/02/21 15:26	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04158 MW-5 **Lab ID: 92526258018** Collected: 02/23/21 11:58 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.129U ± 0.233 (0.531) C:88% T:NA**	pCi/L	04/02/21 09:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.581U ± 0.324 (0.590) C:80% T:102%**	pCi/L	03/31/21 11:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.710U ± 0.557 (1.12)**	pCi/L	04/02/21 15:26	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04159 MW-10 **Lab ID: 92526258019** Collected: 02/23/21 13:40 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.164U ± 0.245 (0.541) C:90% T:NA**	pCi/L	04/02/21 09:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.165U ± 0.350 (0.773) C:80% T:81%**	pCi/L	03/31/21 11:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.329U ± 0.595 (1.31)**	pCi/L	04/02/21 16:11	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04160 MW-20 **Lab ID: 92526258020** Collected: 02/23/21 14:50 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.464U ± 0.312 (0.547) C:96% T:NA**	pCi/L	04/02/21 09:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.727 ± 0.385 (0.680) C:81% T:85%**	pCi/L	03/31/21 11:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.19U ± 0.697 (1.23)**	pCi/L	04/02/21 16:11	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04161 FB-2 **Lab ID: 92526258021** Collected: 02/23/21 15:10 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0821U ± 0.220 (0.527) C:95% T:NA**	pCi/L	04/02/21 09:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.295U ± 0.363 (0.768) C:73% T:82%**	pCi/L	03/22/21 13:06	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.377U ± 0.583 (1.30)**	pCi/L	04/05/21 09:03	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04162 MW-11 **Lab ID: 92526258022** Collected: 02/24/21 10:13 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.261U ± 0.293 (0.610) C:96% T:NA**	pCi/L	04/02/21 09:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.608U ± 0.383 (0.706) C:71% T:83%**	pCi/L	03/22/21 13:06	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.869U ± 0.676 (1.32)**	pCi/L	04/05/21 09:03	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04163 MW-19 **Lab ID: 92526258023** Collected: 02/24/21 12:40 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.295U ± 0.254 (0.475) C:97% T:NA**	pCi/L	04/02/21 09:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.525U ± 0.391 (0.761) C:66% T:90%**	pCi/L	03/22/21 13:06	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.820U ± 0.645 (1.24)**	pCi/L	04/05/21 09:03	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04164 MW-19 DUP **Lab ID: 92526258024** Collected: 02/24/21 12:40 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.103U ± 0.246 (0.581) C:97% T:NA**	pCi/L	04/02/21 09:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.578U ± 0.379 (0.717) C:68% T:95%**	pCi/L	03/22/21 13:06	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.681U ± 0.625 (1.30)**	pCi/L	04/05/21 09:03	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Sample: BB04165 EB-1 **Lab ID: 92526258025** Collected: 02/24/21 13:30 Received: 03/08/21 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.362U ± 0.235 (0.400) C:100% T:NA**	pCi/L	04/02/21 13:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.294U ± 0.384 (0.818) C:69% T:82%**	pCi/L	03/22/21 13:07	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.656U ± 0.619 (1.22)**	pCi/L	04/05/21 09:03	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

QC Batch: 438036 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92526258021, 92526258022, 92526258023, 92526258024, 92526258025

METHOD BLANK: 2114421 Matrix: Water
Associated Lab Samples: 92526258021, 92526258022, 92526258023, 92526258024, 92526258025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.660 ± 0.339 (0.509) C:100% T:NA	pCi/L	04/02/21 09:47	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

QC Batch: 437939
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92526258001, 92526258002, 92526258003, 92526258004, 92526258005, 92526258006, 92526258007, 92526258008, 92526258009, 92526258010, 92526258011, 92526258012, 92526258013, 92526258014, 92526258015, 92526258016, 92526258017, 92526258018, 92526258019, 92526258020

METHOD BLANK: 2114111
Matrix: Water
Associated Lab Samples: 92526258001, 92526258002, 92526258003, 92526258004, 92526258005, 92526258006, 92526258007, 92526258008, 92526258009, 92526258010, 92526258011, 92526258012, 92526258013, 92526258014, 92526258015, 92526258016, 92526258017, 92526258018, 92526258019, 92526258020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.202 ± 0.272 (0.582) C:78% T:NA	pCi/L	04/02/21 09:56	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

QC Batch: 437954
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92526258001, 92526258002, 92526258003, 92526258004, 92526258005, 92526258006, 92526258007, 92526258008, 92526258009, 92526258010, 92526258011, 92526258012, 92526258013, 92526258014, 92526258015, 92526258016, 92526258017, 92526258018, 92526258019, 92526258020

METHOD BLANK: 2114137
Matrix: Water
Associated Lab Samples: 92526258001, 92526258002, 92526258003, 92526258004, 92526258005, 92526258006, 92526258007, 92526258008, 92526258009, 92526258010, 92526258011, 92526258012, 92526258013, 92526258014, 92526258015, 92526258016, 92526258017, 92526258018, 92526258019, 92526258020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.108 ± 0.317 (0.711) C:76% T:87%	pCi/L	03/31/21 11:20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

QC Batch: 437961 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92526258021, 92526258022, 92526258023, 92526258024, 92526258025

METHOD BLANK: 2114144 Matrix: Water
Associated Lab Samples: 92526258021, 92526258022, 92526258023, 92526258024, 92526258025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.271 ± 0.377 (0.808) C:72% T:79%	pCi/L	03/22/21 13:07	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92526258001	BB04035 MW-6	EPA 9315	437939		
92526258002	BB04035 MW-6 MS	EPA 9315	437939		
92526258003	BB04035 MW-6 MSD	EPA 9315	437939		
92526258004	BB04036 MW-7	EPA 9315	437939		
92526258005	BB04037 MW-8	EPA 9315	437939		
92526258006	BB04074 MW-13	EPA 9315	437939		
92526258007	BB04075 MW-14	EPA 9315	437939		
92526258008	BB04075 MW-14 MS	EPA 9315	437939		
92526258009	BB04075 MW-14 MSD	EPA 9315	437939		
92526258010	BB04076 MW-15	EPA 9315	437939		
92526258011	BB04077 MW-16	EPA 9315	437939		
92526258012	BB04078 MW-16 DUP	EPA 9315	437939		
92526258013	BB04079 MW-17R	EPA 9315	437939		
92526258014	BB04080 MW-18	EPA 9315	437939		
92526258015	BB04081 MW-12V	EPA 9315	437939		
92526258016	BB04082 MW-12	EPA 9315	437939		
92526258017	BB04083 FB-1	EPA 9315	437939		
92526258018	BB04158 MW-5	EPA 9315	437939		
92526258019	BB04159 MW-10	EPA 9315	437939		
92526258020	BB04160 MW-20	EPA 9315	437939		
92526258021	BB04161 FB-2	EPA 9315	438036		
92526258022	BB04162 MW-11	EPA 9315	438036		
92526258023	BB04163 MW-19	EPA 9315	438036		
92526258024	BB04164 MW-19 DUP	EPA 9315	438036		
92526258025	BB04165 EB-1	EPA 9315	438036		
92526258001	BB04035 MW-6	EPA 9320	437954		
92526258002	BB04035 MW-6 MS	EPA 9320	437954		
92526258003	BB04035 MW-6 MSD	EPA 9320	437954		
92526258004	BB04036 MW-7	EPA 9320	437954		
92526258005	BB04037 MW-8	EPA 9320	437954		
92526258006	BB04074 MW-13	EPA 9320	437954		
92526258007	BB04075 MW-14	EPA 9320	437954		
92526258008	BB04075 MW-14 MS	EPA 9320	437954		
92526258009	BB04075 MW-14 MSD	EPA 9320	437954		
92526258010	BB04076 MW-15	EPA 9320	437954		
92526258011	BB04077 MW-16	EPA 9320	437954		
92526258012	BB04078 MW-16 DUP	EPA 9320	437954		
92526258013	BB04079 MW-17R	EPA 9320	437954		
92526258014	BB04080 MW-18	EPA 9320	437954		
92526258015	BB04081 MW-12V	EPA 9320	437954		
92526258016	BB04082 MW-12	EPA 9320	437954		
92526258017	BB04083 FB-1	EPA 9320	437954		
92526258018	BB04158 MW-5	EPA 9320	437954		
92526258019	BB04159 MW-10	EPA 9320	437954		
92526258020	BB04160 MW-20	EPA 9320	437954		
92526258021	BB04161 FB-2	EPA 9320	437961		
92526258022	BB04162 MW-11	EPA 9320	437961		

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS LANDFILL WMWGORLF_1309
Pace Project No.: 92526258

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92526258023	**BB04163 MW-19**	EPA 9320	437961		
92526258024	**BB04164 MW-19 DUP**	EPA 9320	437961		
92526258025	**BB04165 EB-1**	EPA 9320	437961		
92526258001	**BB04035 MW-6**	Total Radium Calculation	441637		
92526258004	**BB04036 MW-7**	Total Radium Calculation	441637		
92526258005	**BB04037 MW-8**	Total Radium Calculation	441637		
92526258006	**BB04074 MW-13**	Total Radium Calculation	441637		
92526258007	**BB04075 MW-14**	Total Radium Calculation	441637		
92526258010	**BB04076 MW-15**	Total Radium Calculation	441637		
92526258011	**BB04077 MW-16**	Total Radium Calculation	441637		
92526258012	**BB04078 MW-16 DUP**	Total Radium Calculation	441637		
92526258013	**BB04079 MW-17R**	Total Radium Calculation	441637		
92526258014	**BB04080 MW-18**	Total Radium Calculation	441637		
92526258015	**BB04081 MW-12V**	Total Radium Calculation	441637		
92526258016	**BB04082 MW-12**	Total Radium Calculation	441637		
92526258017	**BB04083 FB-1**	Total Radium Calculation	441637		
92526258018	**BB04158 MW-5**	Total Radium Calculation	441637		
92526258019	**BB04159 MW-10**	Total Radium Calculation	441656		
92526258020	**BB04160 MW-20**	Total Radium Calculation	441656		
92526258021	**BB04161 FB-2**	Total Radium Calculation	441779		
92526258022	**BB04162 MW-11**	Total Radium Calculation	441779		
92526258023	**BB04163 MW-19**	Total Radium Calculation	441779		
92526258024	**BB04164 MW-19 DUP**	Total Radium Calculation	441779		
92526258025	**BB04165 EB-1**	Total Radium Calculation	441779		

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Alabama Power Company

WO# : 92526258

92526258

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other

Tracking #: 9551 0669 9520

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp N/A °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# 100101 / Date and Initials of person examining contents: MC
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4. NO Signature on COC
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓ ✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16.
All containers meet method preservation requirements.	✓			Initial when completed: MC / Date/time of preservation / Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: MC / Date: 3-8-2021 / Survey Meter SN: 15163

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 3

Section A — Required Client Information:

Company:	Alabama Power Company
Address:	744 Highway 87 GSC Bldg #8, Calera, AL 35040
Email To:	lbmidkif@southernco.com
Phone:	205-664-6197 Fax:
Requested Due Date:	28 days

Section B — Required Project Information:

Report To:	Laura Midkiff
Copy To:	Brooke Caton & Renee Jernigan
Purchase Order #:	APC57570-0001
Project Name:	Gorgas Landfill
Project Number:	WMWGORLF 1309

Section C — Invoice Information:

Attention:	Laura Midkiff
Company Name:	Alabama Power Co.
Address:	744 Highway 87 GSC Bldg #8
Pace Quote:	CCR
Pace Project Manager:	Kevin Herring
Pace Profile #:	

Regulatory Agency:

State / Location: AL

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

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

ITEM #	SAMPLE ID		MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike Du	Residual Chlorine (Y/N)	
1	BB04035	MW-6	GW	G			2/23/2021	10:45		3			X						X	X	X	X		001
2	BB04036	MW-7	GW	G			2/23/2021	11:35		1			X						X	X	X			002
3	BB04037	MW-8	GW	G			2/23/2021	12:35		1			X						X	X	X			003
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Laura Midkiff/ APC GTL	2/26/2021	13:55	Marnu L Cary	3/8/2021	900	1.6	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 2 Of 3

Section A — Required Client Information:

Company:	Alabama Power Company
Address:	744 Highway 87 GSC Bldg #8 Calera, AL 35040
Email To:	lbmidkif@southernco.com
Phone:	205-664-6197 Fax
Requested Due Date:	28 days

Section B — Required Project Information:

Report To:	Laura Midkiff
Copy To:	Brooke Caton & Renee Jernigan
Purchase Order #:	APC57570-0001
Project Name:	Gorgas Landfill
Project Number:	WMWGORLF_1309

Section C — Invoice Information:

Attention:	Laura Midkiff
Company Name:	Alabama Power Co.
Address:	744 Highway 87 GSC Bldg #8
Pace Quote:	CCR
Pace Project Manager:	Kevin Herring
Pace Profile #:	

Regulatory Agency

State / Location: AL

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike D	Residual Chlorine (Y/N)
1	BB04074	MW-13	GW	G			2/23/2021	8:33		1			X							X	X	X		
2	BB04075	MW-14	GW	G			2/23/2021	9:45		3			X							X	X	X	X	
3	BB04076	MW-15	GW	G			2/23/2021	10:45		1			X							X	X	X		
4	BB04077	MW-16	GW	G			2/23/2021	11:40		1			X							X	X	X		
5	BB04078	MW-16 DUP	GW	G			2/23/2021	11:40		1			X							X	X	X		
6	BB04079	MW-17R	GW	G			2/23/2021	12:53		1			X							X	X	X		
7	BB04080	MW-18	GW	G			2/23/2021	14:00		1			X							X	X	X		
8	BB04081	MW-12V	GW	G			2/24/2021	8:38		1			X							X	X	X		
9	BB04082	MW-12	GW	G			2/24/2021	9:48		1			X							X	X	X		
10	BB04083	FB-1	GW	G			2/24/2021	10:20		1			X							X	X	X		
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Laura Midkiff/ APC GTL	2/26/2021	13:55	Marvin L Clay	3-8-21	900	N/A	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

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

001 002 003 004 005 006 007 008 009 010

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 3 Of 3

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Alabama Power Company	Report To:	Laura Midkiff	Attention:	Laura Midkiff
Address:	744 Highway 87 GSC Bldg #8 Calera, AL 35040	Copy To:	Brooke Caton & Renee Jernigan	Company Name:	Alabama Power Co.
				Address:	744 Highway 87 GSC Bldg #8
Email To:	lbmidkif@southernco.com	Purchase Order #:	APC57570-0001	Pace Quote:	CCR
Phone:	205-664-6197 Fax	Project Name:	Gorgas Landfill	Pace Project Manager:	Kevin Herring
Requested Due Date:	28 days	Project Number:	WMWGORLF_1309	Pace Profile #:	

Regulatory Agency

State / Location: AL

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique)		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike Du	Residual Chlorine (Y/N)
1	BB04158	MW-5	GW	G			2/23/2021	11:58		1			X							X	X	X		
2	BB04159	MW-10	GW	G			2/23/2021	13:40		1			X							X	X	X		
3	BB04160	MW-20	GW	G			2/23/2021	14:50		1			X							X	X	X		
4	BB04161	FB-2	GW	G			2/23/2021	15:10		1			X							X	X	X		
5	BB04162	MW-11	GW	G			2/24/2021	10:13		1			X							X	X	X		
6	BB04163	MW-19	GW	G			2/24/2021	12:40		1			X							X	X	X		
7	BB04164	MW-19 DUP	GW	G			2/24/2021	12:40		1			X							X	X	X		
8	BB04165	EB-1	GW	G			2/24/2021	13:30		1			X							X	X	X		
9																								
10																								
11																								
12																								

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Laura Midkiff/ APC GTL	2/26/2021	13:55				N/A	4	N	4

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

001 002 003 004 005 006 007 008

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	CLA
Date:	3/12/2021
Worklist:	59196
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2114111
MB concentration:	0.202
M/B Counting Uncertainty:	0.270
MB MDC:	0.582
MB Numerical Performance Indicator:	1.46
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59196	LCSD59196
Count Date:	4/2/2021	4/2/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.202	0.205
Target Conc. (pCi/L, g, F):	11.921	11.709
Uncertainty (Calculated):	0.143	0.141
Result (pCi/L, g, F):	13.284	13.008
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.259	1.244
Numerical Performance Indicator:	2.11	2.03
Percent Recovery:	111.44%	111.10%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	2/23/2021	2/23/2021
Sample I.D.	92526258001	92526258007
Sample MS I.D.	92526258002	92526258008
Sample MSD I.D.	92526258003	92526258009
Spike I.D.:	19-033	19-033
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.040	24.040
Spike Volume Used in MS (mL):	0.20	0.20
Spike Volume Used in MSD (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.203	0.200
MS Target Conc.(pCi/L, g, F):	23.660	23.997
MSD Aliquot (L, g, F):	0.206	0.200
MSD Target Conc. (pCi/L, g, F):	23.341	24.017
MS Spike Uncertainty (calculated):	0.284	0.288
MSD Spike Uncertainty (calculated):	0.280	0.288
Sample Result:	0.262	0.245
Sample Result Counting Uncertainty (pCi/L, g, F):	0.267	0.215
Sample Matrix Spike Result:	25.055	25.026
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.721	1.652
Sample Matrix Spike Duplicate Result:	25.579	25.225
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.731	1.683
MS Numerical Performance Indicator:	1.259	0.909
MSD Numerical Performance Indicator:	2.184	1.097
MS Percent Recovery:	104.79%	103.27%
MSD Percent Recovery:	108.46%	104.01%
MS Status vs Numerical Indicator:	N/A	N/A
MSD Status vs Numerical Indicator:	N/A	N/A
MS Status vs Recovery:	Pass	Pass
MSD Status vs Recovery:	Pass	Pass
MS/MSD Upper % Recovery Limits:	125%	125%
MS/MSD Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment		
Sample I.D.:	LCS59196	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59196	
Sample Result (pCi/L, g, F):	13.284	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.259	
Sample Duplicate Result (pCi/L, g, F):	13.008	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.244	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.306	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	0.30%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	92526258001	92526258007
Sample MS I.D.	92526258002	92526258008
Sample MSD I.D.	92526258003	92526258009
Sample Matrix Spike Result:	25.055	25.026
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.721	1.652
Sample Matrix Spike Duplicate Result:	25.579	25.225
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.731	1.683
Duplicate Numerical Performance Indicator:	-0.420	-0.166
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	3.45%	0.72%
MS/ MSD Duplicate Status vs Numerical Indicator:	N/A	N/A
MS/ MSD Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	25%	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

LAM 4/2/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	CLA
Date:	3/12/2021
Worklist:	59242
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2114421
MB concentration:	0.660
M/B Counting Uncertainty:	0.325
MB MDC:	0.509
MB Numerical Performance Indicator:	3.98
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59242	LCSD59242
Count Date:	4/2/2021	4/2/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.202	0.207
Target Conc. (pCi/L, g, F):	11.912	11.602
Uncertainty (Calculated):	0.143	0.139
Result (pCi/L, g, F):	11.069	11.497
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.142	1.099
Numerical Performance Indicator:	-1.43	-0.18
Percent Recovery:	92.93%	99.10%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc.(pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS59242	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59242	
Sample Result (pCi/L, g, F):	11.069	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.142	
Sample Duplicate Result (pCi/L, g, F):	11.497	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.099	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.530	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	6.43%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

LAM 4/5/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	3/16/2021
Worklist:	59206
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2114137
MB concentration:	0.108
M/B 2 Sigma CSU:	0.317
MB MDC:	0.711
MB Numerical Performance Indicator:	0.67
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS59206	LCSD59206
Count Date:	3/31/2021	
Spike I.D.:	21-003	
Decay Corrected Spike Concentration (pCi/mL):	38.256	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.831	
Target Conc. (pCi/L, g, F):	4.606	
Uncertainty (Calculated):	0.226	
Result (pCi/L, g, F):	5.169	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.136	
Numerical Performance Indicator:	0.95	
Percent Recovery:	112.23%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	2/23/2021	2/23/2021
Sample I.D.	92526258001	92526258007
Sample MS I.D.	92526258002	92526258008
Sample MSD I.D.	92526258003	92526258009
Spike I.D.:	21-003	21-003
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	38.713	38.713
Spike Volume Used in MS (mL):	0.20	0.20
Spike Volume Used in MSD (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.806	0.810
MS Target Conc.(pCi/L, g, F):	9.604	9.564
MSD Aliquot (L, g, F):	0.812	0.804
MSD Target Conc. (pCi/L, g, F):	9.536	9.628
MS Spike Uncertainty (calculated):	0.471	0.469
MSD Spike Uncertainty (calculated):	0.467	0.472
Sample Result:	0.892	0.559
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.404	0.361
Sample Matrix Spike Result:	8.860	9.025
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.768	1.795
Sample Matrix Spike Duplicate Result:	10.755	10.676
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.116	2.105
MS Numerical Performance Indicator:	-1.711	-1.139
MSD Numerical Performance Indicator:	0.291	0.438
MS Percent Recovery:	82.97%	88.52%
MSD Percent Recovery:	103.43%	105.07%
MS Status vs Numerical Indicator:	Pass	Pass
MSD Status vs Numerical Indicator:	Pass	Pass
MS Status vs Recovery:	Pass	Pass
MSD Status vs Recovery:	Pass	Pass
MS/MSD Upper % Recovery Limits:	135%	135%
MS/MSD Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment		
Sample I.D.:		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	92526258001	92526258007
Sample MS I.D.	92526258002	92526258008
Sample MSD I.D.	92526258003	92526258009
Sample Matrix Spike Result:	8.860	9.025
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.768	1.795
Sample Matrix Spike Duplicate Result:	10.755	10.676
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.116	2.105
Duplicate Numerical Performance Indicator:	-1.346	-1.169
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	21.95%	17.10%
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	Pass
MS/ MSD Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	36%	36%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

4/1/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	3/15/2021
Worklist:	59213
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2114144
MB concentration:	0.271
MB 2 Sigma CSU:	0.377
MB MDC:	0.808
MB Numerical Performance Indicator:	1.41
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS59213	LCSD59213
Count Date:	3/22/2021	3/22/2021
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	36.085	36.085
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.805	0.824
Target Conc. (pCi/L, g, F):	4.484	4.377
Uncertainty (Calculated):	0.220	0.214
Result (pCi/L, g, F):	4.955	4.740
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.134	1.103
Numerical Performance Indicator:	0.80	0.63
Percent Recovery:	110.50%	108.28%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment		
Sample I.D.:	LCS59213	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD59213	
Sample Result (pCi/L, g, F):	4.955	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.134	
Sample Duplicate Result (pCi/L, g, F):	4.740	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.103	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.266	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.03%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc.(pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

3/23/21

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-1	2/22/2021 10:24	Conductivity	2346.35	uS/cm
MW-1	2/22/2021 10:24	DO	1.16	mg/L
MW-1	2/22/2021 10:24	Depth to Water Detail	92.76	ft
MW-1	2/22/2021 10:24	Oxidation Reduction Potention	154.15	mv
MW-1	2/22/2021 10:24	pH	5.01	SU
MW-1	2/22/2021 10:24	Temperature	18.91	C
MW-1	2/22/2021 10:24	Turbidity	1.02	NTU
MW-1	2/22/2021 10:29	Conductivity	2363.24	uS/cm
MW-1	2/22/2021 10:29	DO	1.09	mg/L
MW-1	2/22/2021 10:29	Depth to Water Detail	92.96	ft
MW-1	2/22/2021 10:29	Oxidation Reduction Potention	167.13	mv
MW-1	2/22/2021 10:29	pH	5.02	SU
MW-1	2/22/2021 10:29	Temperature	18.92	C
MW-1	2/22/2021 10:29	Turbidity	0.51	NTU
MW-1	2/22/2021 10:34	Conductivity	2365.14	uS/cm
MW-1	2/22/2021 10:34	DO	0.89	mg/L
MW-1	2/22/2021 10:34	Depth to Water Detail	93.06	ft
MW-1	2/22/2021 10:34	Oxidation Reduction Potention	182.76	mv
MW-1	2/22/2021 10:34	pH	5.04	SU
MW-1	2/22/2021 10:34	Temperature	18.94	C
MW-1	2/22/2021 10:34	Turbidity	0.46	NTU
MW-1	2/22/2021 10:39	Conductivity	2365.94	uS/cm
MW-1	2/22/2021 10:39	DO	0.83	mg/L
MW-1	2/22/2021 10:39	Depth to Water Detail	93.06	ft
MW-1	2/22/2021 10:39	Oxidation Reduction Potention	191.62	mv
MW-1	2/22/2021 10:39	pH	5.06	SU
MW-1	2/22/2021 10:39	Temperature	18.96	C
MW-1	2/22/2021 10:39	Turbidity	0.28	NTU
MW-1	2/22/2021 10:44	Conductivity	2369.76	uS/cm
MW-1	2/22/2021 10:44	DO	0.81	mg/L
MW-1	2/22/2021 10:44	Depth to Water Detail	93.06	ft
MW-1	2/22/2021 10:44	Oxidation Reduction Potention	201.77	mv
MW-1	2/22/2021 10:44	pH	5.06	SU
MW-1	2/22/2021 10:44	Temperature	19.04	C
MW-1	2/22/2021 10:44	Turbidity	0.4	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-2	2/22/2021 11:29	Conductivity	1939.56	uS/cm
MW-2	2/22/2021 11:29	DO	0.19	mg/L
MW-2	2/22/2021 11:29	Depth to Water Detail	83.67	ft
MW-2	2/22/2021 11:29	Oxidation Reduction Potention	103.6	mv
MW-2	2/22/2021 11:29	pH	5.96	SU
MW-2	2/22/2021 11:29	Temperature	18.62	C
MW-2	2/22/2021 11:29	Turbidity	7.81	NTU
MW-2	2/22/2021 11:34	Conductivity	1939.67	uS/cm
MW-2	2/22/2021 11:34	DO	0.17	mg/L
MW-2	2/22/2021 11:34	Depth to Water Detail	83.67	ft
MW-2	2/22/2021 11:34	Oxidation Reduction Potention	89.47	mv
MW-2	2/22/2021 11:34	pH	5.99	SU
MW-2	2/22/2021 11:34	Temperature	18.76	C
MW-2	2/22/2021 11:34	Turbidity	2.96	NTU
MW-2	2/22/2021 11:39	Conductivity	1941.57	uS/cm
MW-2	2/22/2021 11:39	DO	0.17	mg/L
MW-2	2/22/2021 11:39	Depth to Water Detail	83.67	ft
MW-2	2/22/2021 11:39	Oxidation Reduction Potention	82.21	mv
MW-2	2/22/2021 11:39	pH	6.05	SU
MW-2	2/22/2021 11:39	Temperature	18.71	C
MW-2	2/22/2021 11:39	Turbidity	2.02	NTU
MW-2	2/22/2021 11:44	Conductivity	1939.81	uS/cm
MW-2	2/22/2021 11:44	DO	0.17	mg/L
MW-2	2/22/2021 11:44	Depth to Water Detail	83.67	ft
MW-2	2/22/2021 11:44	Oxidation Reduction Potention	86.94	mv
MW-2	2/22/2021 11:44	pH	6.1	SU
MW-2	2/22/2021 11:44	Temperature	18.7	C
MW-2	2/22/2021 11:44	Turbidity	1.49	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-3	2/22/2021 12:29	Conductivity	3231.87	uS/cm
MW-3	2/22/2021 12:29	DO	7.83	mg/L
MW-3	2/22/2021 12:29	Depth to Water Detail	106.14	ft
MW-3	2/22/2021 12:29	Oxidation Reduction Potention	152.47	mv
MW-3	2/22/2021 12:29	pH	5	SU
MW-3	2/22/2021 12:29	Temperature	19.62	C
MW-3	2/22/2021 12:29	Turbidity	3.46	NTU
MW-3	2/22/2021 12:34	Conductivity	4206.45	uS/cm
MW-3	2/22/2021 12:34	DO	7.2	mg/L
MW-3	2/22/2021 12:34	Depth to Water Detail	106.16	ft
MW-3	2/22/2021 12:34	Oxidation Reduction Potention	158.51	mv
MW-3	2/22/2021 12:34	pH	5.35	SU
MW-3	2/22/2021 12:34	Temperature	19.66	C
MW-3	2/22/2021 12:34	Turbidity	8.06	NTU
MW-3	2/22/2021 12:39	Conductivity	4437.9	uS/cm
MW-3	2/22/2021 12:39	DO	7.05	mg/L
MW-3	2/22/2021 12:39	Depth to Water Detail	106.21	ft
MW-3	2/22/2021 12:39	Oxidation Reduction Potention	158.91	mv
MW-3	2/22/2021 12:39	pH	5.52	SU
MW-3	2/22/2021 12:39	Temperature	19.94	C
MW-3	2/22/2021 12:39	Turbidity	6.8	NTU
MW-3	2/22/2021 12:44	Conductivity	4450.29	uS/cm
MW-3	2/22/2021 12:44	DO	6.95	mg/L
MW-3	2/22/2021 12:44	Depth to Water Detail	106.23	ft
MW-3	2/22/2021 12:44	Oxidation Reduction Potention	160.86	mv
MW-3	2/22/2021 12:44	pH	5.56	SU
MW-3	2/22/2021 12:44	Temperature	19.61	C
MW-3	2/22/2021 12:44	Turbidity	6.17	NTU
MW-3	2/22/2021 12:49	Conductivity	4417.53	uS/cm
MW-3	2/22/2021 12:49	DO	6.92	mg/L
MW-3	2/22/2021 12:49	Depth to Water Detail	106.24	ft
MW-3	2/22/2021 12:49	Oxidation Reduction Potention	163.37	mv
MW-3	2/22/2021 12:49	pH	5.59	SU
MW-3	2/22/2021 12:49	Temperature	19.81	C
MW-3	2/22/2021 12:49	Turbidity	2.88	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-4	2/22/2021 13:39	Conductivity	3379.93	uS/cm
MW-4	2/22/2021 13:39	DO	1.76	mg/L
MW-4	2/22/2021 13:39	Depth to Water Detail	115.84	ft
MW-4	2/22/2021 13:39	Oxidation Reduction Potention	153.42	mv
MW-4	2/22/2021 13:39	pH	6.06	SU
MW-4	2/22/2021 13:39	Temperature	19.91	C
MW-4	2/22/2021 13:39	Turbidity	5.31	NTU
MW-4	2/22/2021 13:44	Conductivity	3358.45	uS/cm
MW-4	2/22/2021 13:44	DO	2.41	mg/L
MW-4	2/22/2021 13:44	Depth to Water Detail	115.84	ft
MW-4	2/22/2021 13:44	Oxidation Reduction Potention	150.01	mv
MW-4	2/22/2021 13:44	pH	6.09	SU
MW-4	2/22/2021 13:44	Temperature	19.85	C
MW-4	2/22/2021 13:44	Turbidity	2.84	NTU
MW-4	2/22/2021 13:49	Conductivity	3349.61	uS/cm
MW-4	2/22/2021 13:49	DO	3.14	mg/L
MW-4	2/22/2021 13:49	Depth to Water Detail	115.84	ft
MW-4	2/22/2021 13:49	Oxidation Reduction Potention	149.42	mv
MW-4	2/22/2021 13:49	pH	6.13	SU
MW-4	2/22/2021 13:49	Temperature	19.9	C
MW-4	2/22/2021 13:49	Turbidity	1.83	NTU
MW-4	2/22/2021 13:54	Conductivity	3344.62	uS/cm
MW-4	2/22/2021 13:54	DO	3.37	mg/L
MW-4	2/22/2021 13:54	Depth to Water Detail	115.84	ft
MW-4	2/22/2021 13:54	Oxidation Reduction Potention	149.86	mv
MW-4	2/22/2021 13:54	pH	6.16	SU
MW-4	2/22/2021 13:54	Temperature	19.96	C
MW-4	2/22/2021 13:54	Turbidity	1.29	NTU
MW-4	2/22/2021 13:59	Conductivity	3341.45	uS/cm
MW-4	2/22/2021 13:59	DO	3.52	mg/L
MW-4	2/22/2021 13:59	Depth to Water Detail	115.84	ft
MW-4	2/22/2021 13:59	Oxidation Reduction Potention	151.68	mv
MW-4	2/22/2021 13:59	pH	6.18	SU
MW-4	2/22/2021 13:59	Temperature	19.91	C
MW-4	2/22/2021 13:59	Turbidity	1.46	NTU
MW-4	2/22/2021 14:04	Conductivity	3340.97	uS/cm
MW-4	2/22/2021 14:04	DO	3.59	mg/L
MW-4	2/22/2021 14:04	Depth to Water Detail	115.84	ft
MW-4	2/22/2021 14:04	Oxidation Reduction Potention	151.86	mv
MW-4	2/22/2021 14:04	pH	6.19	SU
MW-4	2/22/2021 14:04	Temperature	19.93	C
MW-4	2/22/2021 14:04	Turbidity	0.75	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-12	2/24/2021 9:25	Conductivity	3476.43	uS/cm
APCO-GS-CCB-MW-12	2/24/2021 9:25	DO	1.07	mg/L
APCO-GS-CCB-MW-12	2/24/2021 9:25	Depth to Water Detail	154.6	ft
APCO-GS-CCB-MW-12	2/24/2021 9:25	Oxidation Reduction Potention	11.36	mv
APCO-GS-CCB-MW-12	2/24/2021 9:25	pH	5.77	SU
APCO-GS-CCB-MW-12	2/24/2021 9:25	Temperature	20.2	C
APCO-GS-CCB-MW-12	2/24/2021 9:25	Turbidity	15.3	NTU
APCO-GS-CCB-MW-12	2/24/2021 9:30	Conductivity	3477.08	uS/cm
APCO-GS-CCB-MW-12	2/24/2021 9:30	DO	0.52	mg/L
APCO-GS-CCB-MW-12	2/24/2021 9:30	Depth to Water Detail	154.6	ft
APCO-GS-CCB-MW-12	2/24/2021 9:30	Oxidation Reduction Potention	-5.36	mv
APCO-GS-CCB-MW-12	2/24/2021 9:30	pH	5.84	SU
APCO-GS-CCB-MW-12	2/24/2021 9:30	Temperature	20.25	C
APCO-GS-CCB-MW-12	2/24/2021 9:30	Turbidity	10.2	NTU
APCO-GS-CCB-MW-12	2/24/2021 9:35	Conductivity	3523.08	uS/cm
APCO-GS-CCB-MW-12	2/24/2021 9:35	DO	0.4	mg/L
APCO-GS-CCB-MW-12	2/24/2021 9:35	Depth to Water Detail	154.6	ft
APCO-GS-CCB-MW-12	2/24/2021 9:35	Oxidation Reduction Potention	-6.14	mv
APCO-GS-CCB-MW-12	2/24/2021 9:35	pH	5.84	SU
APCO-GS-CCB-MW-12	2/24/2021 9:35	Temperature	20.32	C
APCO-GS-CCB-MW-12	2/24/2021 9:35	Turbidity	7.26	NTU
APCO-GS-CCB-MW-12	2/24/2021 9:40	Conductivity	3553.92	uS/cm
APCO-GS-CCB-MW-12	2/24/2021 9:40	DO	0.38	mg/L
APCO-GS-CCB-MW-12	2/24/2021 9:40	Depth to Water Detail	154.6	ft
APCO-GS-CCB-MW-12	2/24/2021 9:40	Oxidation Reduction Potention	-5.02	mv
APCO-GS-CCB-MW-12	2/24/2021 9:40	pH	5.83	SU
APCO-GS-CCB-MW-12	2/24/2021 9:40	Temperature	20.18	C
APCO-GS-CCB-MW-12	2/24/2021 9:40	Turbidity	3.99	NTU
APCO-GS-CCB-MW-12	2/24/2021 9:45	Conductivity	3570.82	uS/cm
APCO-GS-CCB-MW-12	2/24/2021 9:45	DO	0.36	mg/L
APCO-GS-CCB-MW-12	2/24/2021 9:45	Depth to Water Detail	154.6	ft
APCO-GS-CCB-MW-12	2/24/2021 9:45	Oxidation Reduction Potention	-4.11	mv
APCO-GS-CCB-MW-12	2/24/2021 9:45	pH	5.83	SU
APCO-GS-CCB-MW-12	2/24/2021 9:45	Temperature	20.29	C
APCO-GS-CCB-MW-12	2/24/2021 9:45	Turbidity	3.19	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-12V	2/24/2021 8:09	Conductivity	2607.38	uS/cm
APCO-GS-CCB-MW-12V	2/24/2021 8:09	DO	0.77	mg/L
APCO-GS-CCB-MW-12V	2/24/2021 8:09	Depth to Water Detail	155.69	ft
APCO-GS-CCB-MW-12V	2/24/2021 8:09	Oxidation Reduction Potention	-127.62	mv
APCO-GS-CCB-MW-12V	2/24/2021 8:09	pH	6.79	SU
APCO-GS-CCB-MW-12V	2/24/2021 8:09	Temperature	19.4	C
APCO-GS-CCB-MW-12V	2/24/2021 8:09	Turbidity	2.18	NTU
APCO-GS-CCB-MW-12V	2/24/2021 8:14	Conductivity	2604.15	uS/cm
APCO-GS-CCB-MW-12V	2/24/2021 8:14	DO	0.43	mg/L
APCO-GS-CCB-MW-12V	2/24/2021 8:14	Depth to Water Detail	155.96	ft
APCO-GS-CCB-MW-12V	2/24/2021 8:14	Oxidation Reduction Potention	-114.17	mv
APCO-GS-CCB-MW-12V	2/24/2021 8:14	pH	6.79	SU
APCO-GS-CCB-MW-12V	2/24/2021 8:14	Temperature	19.9	C
APCO-GS-CCB-MW-12V	2/24/2021 8:14	Turbidity	1.6	NTU
APCO-GS-CCB-MW-12V	2/24/2021 8:19	Conductivity	2603.58	uS/cm
APCO-GS-CCB-MW-12V	2/24/2021 8:19	DO	0.37	mg/L
APCO-GS-CCB-MW-12V	2/24/2021 8:19	Depth to Water Detail	156.29	ft
APCO-GS-CCB-MW-12V	2/24/2021 8:19	Oxidation Reduction Potention	-106.54	mv
APCO-GS-CCB-MW-12V	2/24/2021 8:19	pH	6.81	SU
APCO-GS-CCB-MW-12V	2/24/2021 8:19	Temperature	19.83	C
APCO-GS-CCB-MW-12V	2/24/2021 8:19	Turbidity	1.4	NTU
APCO-GS-CCB-MW-12V	2/24/2021 8:24	Conductivity	2605.02	uS/cm
APCO-GS-CCB-MW-12V	2/24/2021 8:24	DO	0.38	mg/L
APCO-GS-CCB-MW-12V	2/24/2021 8:24	Depth to Water Detail	156.47	ft
APCO-GS-CCB-MW-12V	2/24/2021 8:24	Oxidation Reduction Potention	-100.35	mv
APCO-GS-CCB-MW-12V	2/24/2021 8:24	pH	6.82	SU
APCO-GS-CCB-MW-12V	2/24/2021 8:24	Temperature	19.82	C
APCO-GS-CCB-MW-12V	2/24/2021 8:24	Turbidity	0.22	NTU
APCO-GS-CCB-MW-12V	2/24/2021 8:29	Conductivity	2604.51	uS/cm
APCO-GS-CCB-MW-12V	2/24/2021 8:29	DO	0.41	mg/L
APCO-GS-CCB-MW-12V	2/24/2021 8:29	Depth to Water Detail	156.61	ft
APCO-GS-CCB-MW-12V	2/24/2021 8:29	Oxidation Reduction Potention	-96.12	mv
APCO-GS-CCB-MW-12V	2/24/2021 8:29	pH	6.83	SU
APCO-GS-CCB-MW-12V	2/24/2021 8:29	Temperature	19.79	C
APCO-GS-CCB-MW-12V	2/24/2021 8:29	Turbidity	0.19	NTU
APCO-GS-CCB-MW-12V	2/24/2021 8:34	Conductivity	2603.6	uS/cm
APCO-GS-CCB-MW-12V	2/24/2021 8:34	DO	0.45	mg/L
APCO-GS-CCB-MW-12V	2/24/2021 8:34	Depth to Water Detail	156.74	ft
APCO-GS-CCB-MW-12V	2/24/2021 8:34	Oxidation Reduction Potention	-93.09	mv
APCO-GS-CCB-MW-12V	2/24/2021 8:34	pH	6.83	SU
APCO-GS-CCB-MW-12V	2/24/2021 8:34	Temperature	20.02	C
APCO-GS-CCB-MW-12V	2/24/2021 8:34	Turbidity	0.11	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-13	2/23/2021 8:16	Conductivity	2437.29	uS/cm
APCO-GS-CCB-MW-13	2/23/2021 8:16	DO	0.81	mg/L
APCO-GS-CCB-MW-13	2/23/2021 8:16	Depth to Water Detail	94.56	ft
APCO-GS-CCB-MW-13	2/23/2021 8:16	Oxidation Reduction Potention	171.95	mv
APCO-GS-CCB-MW-13	2/23/2021 8:16	pH	6.52	SU
APCO-GS-CCB-MW-13	2/23/2021 8:16	Temperature	17.71	C
APCO-GS-CCB-MW-13	2/23/2021 8:16	Turbidity	0.25	NTU
APCO-GS-CCB-MW-13	2/23/2021 8:21	Conductivity	2348.41	uS/cm
APCO-GS-CCB-MW-13	2/23/2021 8:21	DO	0.37	mg/L
APCO-GS-CCB-MW-13	2/23/2021 8:21	Depth to Water Detail	94.56	ft
APCO-GS-CCB-MW-13	2/23/2021 8:21	Oxidation Reduction Potention	104.87	mv
APCO-GS-CCB-MW-13	2/23/2021 8:21	pH	6.54	SU
APCO-GS-CCB-MW-13	2/23/2021 8:21	Temperature	17.95	C
APCO-GS-CCB-MW-13	2/23/2021 8:21	Turbidity	0.27	NTU
APCO-GS-CCB-MW-13	2/23/2021 8:26	Conductivity	2297.82	uS/cm
APCO-GS-CCB-MW-13	2/23/2021 8:26	DO	0.45	mg/L
APCO-GS-CCB-MW-13	2/23/2021 8:26	Depth to Water Detail	94.56	ft
APCO-GS-CCB-MW-13	2/23/2021 8:26	Oxidation Reduction Potention	78.54	mv
APCO-GS-CCB-MW-13	2/23/2021 8:26	pH	6.55	SU
APCO-GS-CCB-MW-13	2/23/2021 8:26	Temperature	17.65	C
APCO-GS-CCB-MW-13	2/23/2021 8:26	Turbidity	0.2	NTU
APCO-GS-CCB-MW-13	2/23/2021 8:31	Conductivity	2250.95	uS/cm
APCO-GS-CCB-MW-13	2/23/2021 8:31	DO	0.54	mg/L
APCO-GS-CCB-MW-13	2/23/2021 8:31	Depth to Water Detail	94.56	ft
APCO-GS-CCB-MW-13	2/23/2021 8:31	Oxidation Reduction Potention	73.29	mv
APCO-GS-CCB-MW-13	2/23/2021 8:31	pH	6.55	SU
APCO-GS-CCB-MW-13	2/23/2021 8:31	Temperature	17.67	C
APCO-GS-CCB-MW-13	2/23/2021 8:31	Turbidity	0.21	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-14	2/23/2021 9:17	Conductivity	3005.16	uS/cm
APCO-GS-CCB-MW-14	2/23/2021 9:17	DO	0.31	mg/L
APCO-GS-CCB-MW-14	2/23/2021 9:17	Depth to Water Detail	89.17	ft
APCO-GS-CCB-MW-14	2/23/2021 9:17	Oxidation Reduction Potention	25.02	mv
APCO-GS-CCB-MW-14	2/23/2021 9:17	pH	6.37	SU
APCO-GS-CCB-MW-14	2/23/2021 9:17	Temperature	18.2	C
APCO-GS-CCB-MW-14	2/23/2021 9:17	Turbidity	2.9	NTU
APCO-GS-CCB-MW-14	2/23/2021 9:22	Conductivity	2922.04	uS/cm
APCO-GS-CCB-MW-14	2/23/2021 9:22	DO	0.24	mg/L
APCO-GS-CCB-MW-14	2/23/2021 9:22	Depth to Water Detail	89.17	ft
APCO-GS-CCB-MW-14	2/23/2021 9:22	Oxidation Reduction Potention	22.11	mv
APCO-GS-CCB-MW-14	2/23/2021 9:22	pH	6.37	SU
APCO-GS-CCB-MW-14	2/23/2021 9:22	Temperature	18.22	C
APCO-GS-CCB-MW-14	2/23/2021 9:22	Turbidity	5.17	NTU
APCO-GS-CCB-MW-14	2/23/2021 9:27	Conductivity	3012.35	uS/cm
APCO-GS-CCB-MW-14	2/23/2021 9:27	DO	0.33	mg/L
APCO-GS-CCB-MW-14	2/23/2021 9:27	Depth to Water Detail	89.17	ft
APCO-GS-CCB-MW-14	2/23/2021 9:27	Oxidation Reduction Potention	20.64	mv
APCO-GS-CCB-MW-14	2/23/2021 9:27	pH	6.37	SU
APCO-GS-CCB-MW-14	2/23/2021 9:27	Temperature	18.35	C
APCO-GS-CCB-MW-14	2/23/2021 9:27	Turbidity	106	NTU
APCO-GS-CCB-MW-14	2/23/2021 9:32	Conductivity	2992.5	uS/cm
APCO-GS-CCB-MW-14	2/23/2021 9:32	DO	0.53	mg/L
APCO-GS-CCB-MW-14	2/23/2021 9:32	Depth to Water Detail	89.17	ft
APCO-GS-CCB-MW-14	2/23/2021 9:32	Oxidation Reduction Potention	20.02	mv
APCO-GS-CCB-MW-14	2/23/2021 9:32	pH	6.38	SU
APCO-GS-CCB-MW-14	2/23/2021 9:32	Temperature	18.28	C
APCO-GS-CCB-MW-14	2/23/2021 9:32	Turbidity	20.1	NTU
APCO-GS-CCB-MW-14	2/23/2021 9:37	Conductivity	2937.22	uS/cm
APCO-GS-CCB-MW-14	2/23/2021 9:37	DO	0.56	mg/L
APCO-GS-CCB-MW-14	2/23/2021 9:37	Depth to Water Detail	89.17	ft
APCO-GS-CCB-MW-14	2/23/2021 9:37	Oxidation Reduction Potention	21.67	mv
APCO-GS-CCB-MW-14	2/23/2021 9:37	pH	6.38	SU
APCO-GS-CCB-MW-14	2/23/2021 9:37	Temperature	18.35	C
APCO-GS-CCB-MW-14	2/23/2021 9:37	Turbidity	4.35	NTU
APCO-GS-CCB-MW-14	2/23/2021 9:42	Conductivity	2931.33	uS/cm
APCO-GS-CCB-MW-14	2/23/2021 9:42	DO	0.53	mg/L
APCO-GS-CCB-MW-14	2/23/2021 9:42	Depth to Water Detail	89.17	ft
APCO-GS-CCB-MW-14	2/23/2021 9:42	Oxidation Reduction Potention	23.26	mv
APCO-GS-CCB-MW-14	2/23/2021 9:42	pH	6.38	SU
APCO-GS-CCB-MW-14	2/23/2021 9:42	Temperature	18.54	C
APCO-GS-CCB-MW-14	2/23/2021 9:42	Turbidity	3.95	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-15	2/23/2021 10:27	Conductivity	2855.92	uS/cm
APCO-GS-CCB-MW-15	2/23/2021 10:27	DO	0.3	mg/L
APCO-GS-CCB-MW-15	2/23/2021 10:27	Depth to Water Detail	67.49	ft
APCO-GS-CCB-MW-15	2/23/2021 10:27	Oxidation Reduction Potention	16.03	mv
APCO-GS-CCB-MW-15	2/23/2021 10:27	pH	6.05	SU
APCO-GS-CCB-MW-15	2/23/2021 10:27	Temperature	18.22	C
APCO-GS-CCB-MW-15	2/23/2021 10:27	Turbidity	1.57	NTU
APCO-GS-CCB-MW-15	2/23/2021 10:32	Conductivity	2832.76	uS/cm
APCO-GS-CCB-MW-15	2/23/2021 10:32	DO	0.41	mg/L
APCO-GS-CCB-MW-15	2/23/2021 10:32	Depth to Water Detail	67.49	ft
APCO-GS-CCB-MW-15	2/23/2021 10:32	Oxidation Reduction Potention	18.69	mv
APCO-GS-CCB-MW-15	2/23/2021 10:32	pH	6.05	SU
APCO-GS-CCB-MW-15	2/23/2021 10:32	Temperature	18.26	C
APCO-GS-CCB-MW-15	2/23/2021 10:32	Turbidity	3.13	NTU
APCO-GS-CCB-MW-15	2/23/2021 10:37	Conductivity	2825.35	uS/cm
APCO-GS-CCB-MW-15	2/23/2021 10:37	DO	0.34	mg/L
APCO-GS-CCB-MW-15	2/23/2021 10:37	Depth to Water Detail	67.49	ft
APCO-GS-CCB-MW-15	2/23/2021 10:37	Oxidation Reduction Potention	14.47	mv
APCO-GS-CCB-MW-15	2/23/2021 10:37	pH	6.06	SU
APCO-GS-CCB-MW-15	2/23/2021 10:37	Temperature	18.3	C
APCO-GS-CCB-MW-15	2/23/2021 10:37	Turbidity	1.44	NTU
APCO-GS-CCB-MW-15	2/23/2021 10:42	Conductivity	2816.88	uS/cm
APCO-GS-CCB-MW-15	2/23/2021 10:42	DO	0.22	mg/L
APCO-GS-CCB-MW-15	2/23/2021 10:42	Depth to Water Detail	67.49	ft
APCO-GS-CCB-MW-15	2/23/2021 10:42	Oxidation Reduction Potention	11.45	mv
APCO-GS-CCB-MW-15	2/23/2021 10:42	pH	6.07	SU
APCO-GS-CCB-MW-15	2/23/2021 10:42	Temperature	18.39	C
APCO-GS-CCB-MW-15	2/23/2021 10:42	Turbidity	1.68	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-16	2/23/2021 11:22	Conductivity	2594.02	uS/cm
APCO-GS-CCB-MW-16	2/23/2021 11:22	DO	0.21	mg/L
APCO-GS-CCB-MW-16	2/23/2021 11:22	Depth to Water Detail	90.16	ft
APCO-GS-CCB-MW-16	2/23/2021 11:22	Oxidation Reduction Potention	-12.58	mv
APCO-GS-CCB-MW-16	2/23/2021 11:22	pH	6.47	SU
APCO-GS-CCB-MW-16	2/23/2021 11:22	Temperature	19.1	C
APCO-GS-CCB-MW-16	2/23/2021 11:22	Turbidity	0.57	NTU
APCO-GS-CCB-MW-16	2/23/2021 11:27	Conductivity	2549.67	uS/cm
APCO-GS-CCB-MW-16	2/23/2021 11:27	DO	0.15	mg/L
APCO-GS-CCB-MW-16	2/23/2021 11:27	Depth to Water Detail	90.16	ft
APCO-GS-CCB-MW-16	2/23/2021 11:27	Oxidation Reduction Potention	-9.12	mv
APCO-GS-CCB-MW-16	2/23/2021 11:27	pH	6.46	SU
APCO-GS-CCB-MW-16	2/23/2021 11:27	Temperature	19.08	C
APCO-GS-CCB-MW-16	2/23/2021 11:27	Turbidity	0.54	NTU
APCO-GS-CCB-MW-16	2/23/2021 11:32	Conductivity	2540.41	uS/cm
APCO-GS-CCB-MW-16	2/23/2021 11:32	DO	0.13	mg/L
APCO-GS-CCB-MW-16	2/23/2021 11:32	Depth to Water Detail	90.16	ft
APCO-GS-CCB-MW-16	2/23/2021 11:32	Oxidation Reduction Potention	-8.4	mv
APCO-GS-CCB-MW-16	2/23/2021 11:32	pH	6.47	SU
APCO-GS-CCB-MW-16	2/23/2021 11:32	Temperature	19.07	C
APCO-GS-CCB-MW-16	2/23/2021 11:32	Turbidity	0.09	NTU
APCO-GS-CCB-MW-16	2/23/2021 11:37	Conductivity	2563.12	uS/cm
APCO-GS-CCB-MW-16	2/23/2021 11:37	DO	0.14	mg/L
APCO-GS-CCB-MW-16	2/23/2021 11:37	Depth to Water Detail	90.16	ft
APCO-GS-CCB-MW-16	2/23/2021 11:37	Oxidation Reduction Potention	-7.23	mv
APCO-GS-CCB-MW-16	2/23/2021 11:37	pH	6.47	SU
APCO-GS-CCB-MW-16	2/23/2021 11:37	Temperature	19.08	C
APCO-GS-CCB-MW-16	2/23/2021 11:37	Turbidity	0.08	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-17R	2/23/2021 12:31	Conductivity	3445.9	uS/cm
APCO-GS-CCB-MW-17R	2/23/2021 12:31	DO	1.54	mg/L
APCO-GS-CCB-MW-17R	2/23/2021 12:31	Depth to Water Detail	126.27	ft
APCO-GS-CCB-MW-17R	2/23/2021 12:31	Oxidation Reduction Potention	33.22	mv
APCO-GS-CCB-MW-17R	2/23/2021 12:31	pH	5.7	SU
APCO-GS-CCB-MW-17R	2/23/2021 12:31	Temperature	21.29	C
APCO-GS-CCB-MW-17R	2/23/2021 12:31	Turbidity	1.92	NTU
APCO-GS-CCB-MW-17R	2/23/2021 12:36	Conductivity	3369.71	uS/cm
APCO-GS-CCB-MW-17R	2/23/2021 12:36	DO	0.76	mg/L
APCO-GS-CCB-MW-17R	2/23/2021 12:36	Depth to Water Detail	126.27	ft
APCO-GS-CCB-MW-17R	2/23/2021 12:36	Oxidation Reduction Potention	39.38	mv
APCO-GS-CCB-MW-17R	2/23/2021 12:36	pH	5.67	SU
APCO-GS-CCB-MW-17R	2/23/2021 12:36	Temperature	21.08	C
APCO-GS-CCB-MW-17R	2/23/2021 12:36	Turbidity	1.7	NTU
APCO-GS-CCB-MW-17R	2/23/2021 12:41	Conductivity	3299.42	uS/cm
APCO-GS-CCB-MW-17R	2/23/2021 12:41	DO	0.59	mg/L
APCO-GS-CCB-MW-17R	2/23/2021 12:41	Depth to Water Detail	126.27	ft
APCO-GS-CCB-MW-17R	2/23/2021 12:41	Oxidation Reduction Potention	36	mv
APCO-GS-CCB-MW-17R	2/23/2021 12:41	pH	5.74	SU
APCO-GS-CCB-MW-17R	2/23/2021 12:41	Temperature	21.16	C
APCO-GS-CCB-MW-17R	2/23/2021 12:41	Turbidity	0.53	NTU
APCO-GS-CCB-MW-17R	2/23/2021 12:46	Conductivity	3294.2	uS/cm
APCO-GS-CCB-MW-17R	2/23/2021 12:46	DO	0.53	mg/L
APCO-GS-CCB-MW-17R	2/23/2021 12:46	Depth to Water Detail	126.27	ft
APCO-GS-CCB-MW-17R	2/23/2021 12:46	Oxidation Reduction Potention	30.3	mv
APCO-GS-CCB-MW-17R	2/23/2021 12:46	pH	5.82	SU
APCO-GS-CCB-MW-17R	2/23/2021 12:46	Temperature	21.19	C
APCO-GS-CCB-MW-17R	2/23/2021 12:46	Turbidity	0.46	NTU
APCO-GS-CCB-MW-17R	2/23/2021 12:51	Conductivity	3239.73	uS/cm
APCO-GS-CCB-MW-17R	2/23/2021 12:51	DO	0.53	mg/L
APCO-GS-CCB-MW-17R	2/23/2021 12:51	Depth to Water Detail	126.27	ft
APCO-GS-CCB-MW-17R	2/23/2021 12:51	Oxidation Reduction Potention	24.3	mv
APCO-GS-CCB-MW-17R	2/23/2021 12:51	pH	5.91	SU
APCO-GS-CCB-MW-17R	2/23/2021 12:51	Temperature	21.27	C
APCO-GS-CCB-MW-17R	2/23/2021 12:51	Turbidity	0.47	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-18	2/23/2021 13:43	Conductivity	2672.73	uS/cm
APCO-GS-CCB-MW-18	2/23/2021 13:43	DO	4.98	mg/L
APCO-GS-CCB-MW-18	2/23/2021 13:43	Depth to Water Detail	111.22	ft
APCO-GS-CCB-MW-18	2/23/2021 13:43	Oxidation Reduction Potention	94.71	mv
APCO-GS-CCB-MW-18	2/23/2021 13:43	pH	6.47	SU
APCO-GS-CCB-MW-18	2/23/2021 13:43	Temperature	20.27	C
APCO-GS-CCB-MW-18	2/23/2021 13:43	Turbidity	0.84	NTU
APCO-GS-CCB-MW-18	2/23/2021 13:48	Conductivity	2628.04	uS/cm
APCO-GS-CCB-MW-18	2/23/2021 13:48	DO	4.45	mg/L
APCO-GS-CCB-MW-18	2/23/2021 13:48	Depth to Water Detail	111.22	ft
APCO-GS-CCB-MW-18	2/23/2021 13:48	Oxidation Reduction Potention	102.9	mv
APCO-GS-CCB-MW-18	2/23/2021 13:48	pH	6.45	SU
APCO-GS-CCB-MW-18	2/23/2021 13:48	Temperature	20.03	C
APCO-GS-CCB-MW-18	2/23/2021 13:48	Turbidity	0.81	NTU
APCO-GS-CCB-MW-18	2/23/2021 13:53	Conductivity	2617.85	uS/cm
APCO-GS-CCB-MW-18	2/23/2021 13:53	DO	4.32	mg/L
APCO-GS-CCB-MW-18	2/23/2021 13:53	Depth to Water Detail	111.22	ft
APCO-GS-CCB-MW-18	2/23/2021 13:53	Oxidation Reduction Potention	106.49	mv
APCO-GS-CCB-MW-18	2/23/2021 13:53	pH	6.46	SU
APCO-GS-CCB-MW-18	2/23/2021 13:53	Temperature	20.21	C
APCO-GS-CCB-MW-18	2/23/2021 13:53	Turbidity	1.08	NTU
APCO-GS-CCB-MW-18	2/23/2021 13:58	Conductivity	2615.49	uS/cm
APCO-GS-CCB-MW-18	2/23/2021 13:58	DO	4.28	mg/L
APCO-GS-CCB-MW-18	2/23/2021 13:58	Depth to Water Detail	111.22	ft
APCO-GS-CCB-MW-18	2/23/2021 13:58	Oxidation Reduction Potention	110.4	mv
APCO-GS-CCB-MW-18	2/23/2021 13:58	pH	6.47	SU
APCO-GS-CCB-MW-18	2/23/2021 13:58	Temperature	20.34	C
APCO-GS-CCB-MW-18	2/23/2021 13:58	Turbidity	1.01	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-5	2/23/2021 11:34	Conductivity	3690.45	uS/cm
APCO-GS-CCB-MW-5	2/23/2021 11:34	DO	2.7	mg/L
APCO-GS-CCB-MW-5	2/23/2021 11:34	Depth to Water Detail	125.83	ft
APCO-GS-CCB-MW-5	2/23/2021 11:34	Oxidation Reduction Potention	-30.08	mv
APCO-GS-CCB-MW-5	2/23/2021 11:34	pH	6.52	SU
APCO-GS-CCB-MW-5	2/23/2021 11:34	Temperature	19.86	C
APCO-GS-CCB-MW-5	2/23/2021 11:34	Turbidity	3.06	NTU
APCO-GS-CCB-MW-5	2/23/2021 11:39	Conductivity	3668.37	uS/cm
APCO-GS-CCB-MW-5	2/23/2021 11:39	DO	1.23	mg/L
APCO-GS-CCB-MW-5	2/23/2021 11:39	Depth to Water Detail	125.89	ft
APCO-GS-CCB-MW-5	2/23/2021 11:39	Oxidation Reduction Potention	-37.48	mv
APCO-GS-CCB-MW-5	2/23/2021 11:39	pH	6.45	SU
APCO-GS-CCB-MW-5	2/23/2021 11:39	Temperature	19.92	C
APCO-GS-CCB-MW-5	2/23/2021 11:39	Turbidity	2.92	NTU
APCO-GS-CCB-MW-5	2/23/2021 11:44	Conductivity	3661.12	uS/cm
APCO-GS-CCB-MW-5	2/23/2021 11:44	DO	0.92	mg/L
APCO-GS-CCB-MW-5	2/23/2021 11:44	Depth to Water Detail	125.89	ft
APCO-GS-CCB-MW-5	2/23/2021 11:44	Oxidation Reduction Potention	-37.49	mv
APCO-GS-CCB-MW-5	2/23/2021 11:44	pH	6.45	SU
APCO-GS-CCB-MW-5	2/23/2021 11:44	Temperature	19.96	C
APCO-GS-CCB-MW-5	2/23/2021 11:44	Turbidity	3.4	NTU
APCO-GS-CCB-MW-5	2/23/2021 11:49	Conductivity	3679.06	uS/cm
APCO-GS-CCB-MW-5	2/23/2021 11:49	DO	0.82	mg/L
APCO-GS-CCB-MW-5	2/23/2021 11:49	Depth to Water Detail	125.89	ft
APCO-GS-CCB-MW-5	2/23/2021 11:49	Oxidation Reduction Potention	-37.83	mv
APCO-GS-CCB-MW-5	2/23/2021 11:49	pH	6.46	SU
APCO-GS-CCB-MW-5	2/23/2021 11:49	Temperature	19.9	C
APCO-GS-CCB-MW-5	2/23/2021 11:49	Turbidity	3.35	NTU
APCO-GS-CCB-MW-5	2/23/2021 11:54	Conductivity	3701.43	uS/cm
APCO-GS-CCB-MW-5	2/23/2021 11:54	DO	0.78	mg/L
APCO-GS-CCB-MW-5	2/23/2021 11:54	Depth to Water Detail	125.89	ft
APCO-GS-CCB-MW-5	2/23/2021 11:54	Oxidation Reduction Potention	-34.6	mv
APCO-GS-CCB-MW-5	2/23/2021 11:54	pH	6.47	SU
APCO-GS-CCB-MW-5	2/23/2021 11:54	Temperature	19.94	C
APCO-GS-CCB-MW-5	2/23/2021 11:54	Turbidity	2.58	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-10	2/23/2021 13:12	Conductivity	1434.07	uS/cm
APCO-GS-CCB-MW-10	2/23/2021 13:12	DO	1.09	mg/L
APCO-GS-CCB-MW-10	2/23/2021 13:12	Depth to Water Detail	85.91	ft
APCO-GS-CCB-MW-10	2/23/2021 13:12	Oxidation Reduction Potention	-26.39	mv
APCO-GS-CCB-MW-10	2/23/2021 13:12	pH	6.45	SU
APCO-GS-CCB-MW-10	2/23/2021 13:12	Temperature	19.47	C
APCO-GS-CCB-MW-10	2/23/2021 13:12	Turbidity	21.7	NTU
APCO-GS-CCB-MW-10	2/23/2021 13:17	Conductivity	1420.38	uS/cm
APCO-GS-CCB-MW-10	2/23/2021 13:17	DO	0.55	mg/L
APCO-GS-CCB-MW-10	2/23/2021 13:17	Depth to Water Detail	86.33	ft
APCO-GS-CCB-MW-10	2/23/2021 13:17	Oxidation Reduction Potention	-36.13	mv
APCO-GS-CCB-MW-10	2/23/2021 13:17	pH	6.45	SU
APCO-GS-CCB-MW-10	2/23/2021 13:17	Temperature	19.52	C
APCO-GS-CCB-MW-10	2/23/2021 13:17	Turbidity	16.1	NTU
APCO-GS-CCB-MW-10	2/23/2021 13:22	Conductivity	1419.86	uS/cm
APCO-GS-CCB-MW-10	2/23/2021 13:22	DO	0.44	mg/L
APCO-GS-CCB-MW-10	2/23/2021 13:22	Depth to Water Detail	86.68	ft
APCO-GS-CCB-MW-10	2/23/2021 13:22	Oxidation Reduction Potention	-38.67	mv
APCO-GS-CCB-MW-10	2/23/2021 13:22	pH	6.46	SU
APCO-GS-CCB-MW-10	2/23/2021 13:22	Temperature	19.56	C
APCO-GS-CCB-MW-10	2/23/2021 13:22	Turbidity	13.6	NTU
APCO-GS-CCB-MW-10	2/23/2021 13:27	Conductivity	1423.34	uS/cm
APCO-GS-CCB-MW-10	2/23/2021 13:27	DO	0.4	mg/L
APCO-GS-CCB-MW-10	2/23/2021 13:27	Depth to Water Detail	86.82	ft
APCO-GS-CCB-MW-10	2/23/2021 13:27	Oxidation Reduction Potention	-37.75	mv
APCO-GS-CCB-MW-10	2/23/2021 13:27	pH	6.46	SU
APCO-GS-CCB-MW-10	2/23/2021 13:27	Temperature	19.6	C
APCO-GS-CCB-MW-10	2/23/2021 13:27	Turbidity	11.5	NTU
APCO-GS-CCB-MW-10	2/23/2021 13:32	Conductivity	1426.14	uS/cm
APCO-GS-CCB-MW-10	2/23/2021 13:32	DO	0.38	mg/L
APCO-GS-CCB-MW-10	2/23/2021 13:32	Depth to Water Detail	86.96	ft
APCO-GS-CCB-MW-10	2/23/2021 13:32	Oxidation Reduction Potention	-36.83	mv
APCO-GS-CCB-MW-10	2/23/2021 13:32	pH	6.46	SU
APCO-GS-CCB-MW-10	2/23/2021 13:32	Temperature	19.52	C
APCO-GS-CCB-MW-10	2/23/2021 13:32	Turbidity	8.86	NTU
APCO-GS-CCB-MW-10	2/23/2021 13:37	Conductivity	1434.52	uS/cm
APCO-GS-CCB-MW-10	2/23/2021 13:37	DO	0.36	mg/L
APCO-GS-CCB-MW-10	2/23/2021 13:37	Depth to Water Detail	87.04	ft
APCO-GS-CCB-MW-10	2/23/2021 13:37	Oxidation Reduction Potention	-36.83	mv
APCO-GS-CCB-MW-10	2/23/2021 13:37	pH	6.45	SU
APCO-GS-CCB-MW-10	2/23/2021 13:37	Temperature	19.52	C
APCO-GS-CCB-MW-10	2/23/2021 13:37	Turbidity	6.45	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-20	2/23/2021 14:31	Conductivity	2939.28	uS/cm
APCO-GS-CCB-MW-20	2/23/2021 14:31	DO	0.53	mg/L
APCO-GS-CCB-MW-20	2/23/2021 14:31	Depth to Water Detail	20.36	ft
APCO-GS-CCB-MW-20	2/23/2021 14:31	Oxidation Reduction Potention	-62.92	mv
APCO-GS-CCB-MW-20	2/23/2021 14:31	pH	6.73	SU
APCO-GS-CCB-MW-20	2/23/2021 14:31	Temperature	19.27	C
APCO-GS-CCB-MW-20	2/23/2021 14:31	Turbidity	2.69	NTU
APCO-GS-CCB-MW-20	2/23/2021 14:36	Conductivity	2935.23	uS/cm
APCO-GS-CCB-MW-20	2/23/2021 14:36	DO	0.49	mg/L
APCO-GS-CCB-MW-20	2/23/2021 14:36	Depth to Water Detail	20.61	ft
APCO-GS-CCB-MW-20	2/23/2021 14:36	Oxidation Reduction Potention	-63.63	mv
APCO-GS-CCB-MW-20	2/23/2021 14:36	pH	6.74	SU
APCO-GS-CCB-MW-20	2/23/2021 14:36	Temperature	19.27	C
APCO-GS-CCB-MW-20	2/23/2021 14:36	Turbidity	1.52	NTU
APCO-GS-CCB-MW-20	2/23/2021 14:41	Conductivity	2927.29	uS/cm
APCO-GS-CCB-MW-20	2/23/2021 14:41	DO	0.5	mg/L
APCO-GS-CCB-MW-20	2/23/2021 14:41	Depth to Water Detail	20.71	ft
APCO-GS-CCB-MW-20	2/23/2021 14:41	Oxidation Reduction Potention	-63.66	mv
APCO-GS-CCB-MW-20	2/23/2021 14:41	pH	6.74	SU
APCO-GS-CCB-MW-20	2/23/2021 14:41	Temperature	19.17	C
APCO-GS-CCB-MW-20	2/23/2021 14:41	Turbidity	0.88	NTU
APCO-GS-CCB-MW-20	2/23/2021 14:46	Conductivity	2908.99	uS/cm
APCO-GS-CCB-MW-20	2/23/2021 14:46	DO	0.49	mg/L
APCO-GS-CCB-MW-20	2/23/2021 14:46	Depth to Water Detail	20.83	ft
APCO-GS-CCB-MW-20	2/23/2021 14:46	Oxidation Reduction Potention	-63.31	mv
APCO-GS-CCB-MW-20	2/23/2021 14:46	pH	6.75	SU
APCO-GS-CCB-MW-20	2/23/2021 14:46	Temperature	19.18	C
APCO-GS-CCB-MW-20	2/23/2021 14:46	Turbidity	0.7	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-11	2/24/2021 9:45	Conductivity	2870.16	uS/cm
APCO-GS-CCB-MW-11	2/24/2021 9:45	DO	0.32	mg/L
APCO-GS-CCB-MW-11	2/24/2021 9:45	Depth to Water Detail	106.76	ft
APCO-GS-CCB-MW-11	2/24/2021 9:45	Oxidation Reduction Potention	-62.87	mv
APCO-GS-CCB-MW-11	2/24/2021 9:45	pH	6.58	SU
APCO-GS-CCB-MW-11	2/24/2021 9:45	Temperature	19.32	C
APCO-GS-CCB-MW-11	2/24/2021 9:45	Turbidity	0.36	NTU
APCO-GS-CCB-MW-11	2/24/2021 9:50	Conductivity	2872.56	uS/cm
APCO-GS-CCB-MW-11	2/24/2021 9:50	DO	0.29	mg/L
APCO-GS-CCB-MW-11	2/24/2021 9:50	Depth to Water Detail	108.65	ft
APCO-GS-CCB-MW-11	2/24/2021 9:50	Oxidation Reduction Potention	-67.58	mv
APCO-GS-CCB-MW-11	2/24/2021 9:50	pH	6.62	SU
APCO-GS-CCB-MW-11	2/24/2021 9:50	Temperature	19.32	C
APCO-GS-CCB-MW-11	2/24/2021 9:50	Turbidity	0.25	NTU
APCO-GS-CCB-MW-11	2/24/2021 9:55	Conductivity	2865.46	uS/cm
APCO-GS-CCB-MW-11	2/24/2021 9:55	DO	0.58	mg/L
APCO-GS-CCB-MW-11	2/24/2021 9:55	Depth to Water Detail	108.82	ft
APCO-GS-CCB-MW-11	2/24/2021 9:55	Oxidation Reduction Potention	-69.43	mv
APCO-GS-CCB-MW-11	2/24/2021 9:55	pH	6.65	SU
APCO-GS-CCB-MW-11	2/24/2021 9:55	Temperature	18.15	C
APCO-GS-CCB-MW-11	2/24/2021 9:55	Turbidity	0.25	NTU
APCO-GS-CCB-MW-11	2/24/2021 10:00	Conductivity	2864.75	uS/cm
APCO-GS-CCB-MW-11	2/24/2021 10:00	DO	0.77	mg/L
APCO-GS-CCB-MW-11	2/24/2021 10:00	Depth to Water Detail	108.88	ft
APCO-GS-CCB-MW-11	2/24/2021 10:00	Oxidation Reduction Potention	-70.16	mv
APCO-GS-CCB-MW-11	2/24/2021 10:00	pH	6.66	SU
APCO-GS-CCB-MW-11	2/24/2021 10:00	Temperature	17.97	C
APCO-GS-CCB-MW-11	2/24/2021 10:00	Turbidity	0.16	NTU
APCO-GS-CCB-MW-11	2/24/2021 10:05	Conductivity	2850.53	uS/cm
APCO-GS-CCB-MW-11	2/24/2021 10:05	DO	0.81	mg/L
APCO-GS-CCB-MW-11	2/24/2021 10:05	Depth to Water Detail	109.02	ft
APCO-GS-CCB-MW-11	2/24/2021 10:05	Oxidation Reduction Potention	-71.59	mv
APCO-GS-CCB-MW-11	2/24/2021 10:05	pH	6.66	SU
APCO-GS-CCB-MW-11	2/24/2021 10:05	Temperature	18.17	C
APCO-GS-CCB-MW-11	2/24/2021 10:05	Turbidity	0.17	NTU
APCO-GS-CCB-MW-11	2/24/2021 10:10	Conductivity	2839.08	uS/cm
APCO-GS-CCB-MW-11	2/24/2021 10:10	DO	0.81	mg/L
APCO-GS-CCB-MW-11	2/24/2021 10:10	Depth to Water Detail	109.09	ft
APCO-GS-CCB-MW-11	2/24/2021 10:10	Oxidation Reduction Potention	-72.59	mv
APCO-GS-CCB-MW-11	2/24/2021 10:10	pH	6.67	SU
APCO-GS-CCB-MW-11	2/24/2021 10:10	Temperature	18.25	C
APCO-GS-CCB-MW-11	2/24/2021 10:10	Turbidity	0.59	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-19	2/24/2021 11:56	Conductivity	3157.62	uS/cm
APCO-GS-CCB-MW-19	2/24/2021 11:56	DO	1.66	mg/L
APCO-GS-CCB-MW-19	2/24/2021 11:56	Depth to Water Detail	78.66	ft
APCO-GS-CCB-MW-19	2/24/2021 11:56	Oxidation Reduction Potention	18.23	mv
APCO-GS-CCB-MW-19	2/24/2021 11:56	pH	6.29	SU
APCO-GS-CCB-MW-19	2/24/2021 11:56	Temperature	20.34	C
APCO-GS-CCB-MW-19	2/24/2021 11:56	Turbidity	24.7	NTU
APCO-GS-CCB-MW-19	2/24/2021 12:01	Conductivity	3153.43	uS/cm
APCO-GS-CCB-MW-19	2/24/2021 12:01	DO	1.94	mg/L
APCO-GS-CCB-MW-19	2/24/2021 12:01	Depth to Water Detail	78.66	ft
APCO-GS-CCB-MW-19	2/24/2021 12:01	Oxidation Reduction Potention	20.1	mv
APCO-GS-CCB-MW-19	2/24/2021 12:01	pH	6.3	SU
APCO-GS-CCB-MW-19	2/24/2021 12:01	Temperature	20.35	C
APCO-GS-CCB-MW-19	2/24/2021 12:01	Turbidity	13.7	NTU
APCO-GS-CCB-MW-19	2/24/2021 12:06	Conductivity	3158.95	uS/cm
APCO-GS-CCB-MW-19	2/24/2021 12:06	DO	1.81	mg/L
APCO-GS-CCB-MW-19	2/24/2021 12:06	Depth to Water Detail	78.66	ft
APCO-GS-CCB-MW-19	2/24/2021 12:06	Oxidation Reduction Potention	21.86	mv
APCO-GS-CCB-MW-19	2/24/2021 12:06	pH	6.28	SU
APCO-GS-CCB-MW-19	2/24/2021 12:06	Temperature	20.3	C
APCO-GS-CCB-MW-19	2/24/2021 12:06	Turbidity	120	NTU
APCO-GS-CCB-MW-19	2/24/2021 12:11	Conductivity	3165.28	uS/cm
APCO-GS-CCB-MW-19	2/24/2021 12:11	DO	1.96	mg/L
APCO-GS-CCB-MW-19	2/24/2021 12:11	Depth to Water Detail	78.66	ft
APCO-GS-CCB-MW-19	2/24/2021 12:11	Oxidation Reduction Potention	23.14	mv
APCO-GS-CCB-MW-19	2/24/2021 12:11	pH	6.28	SU
APCO-GS-CCB-MW-19	2/24/2021 12:11	Temperature	20.29	C
APCO-GS-CCB-MW-19	2/24/2021 12:11	Turbidity	74.3	NTU
APCO-GS-CCB-MW-19	2/24/2021 12:16	Conductivity	3204.62	uS/cm
APCO-GS-CCB-MW-19	2/24/2021 12:16	DO	2.03	mg/L
APCO-GS-CCB-MW-19	2/24/2021 12:16	Depth to Water Detail	78.66	ft
APCO-GS-CCB-MW-19	2/24/2021 12:16	Oxidation Reduction Potention	25.7	mv
APCO-GS-CCB-MW-19	2/24/2021 12:16	pH	6.27	SU
APCO-GS-CCB-MW-19	2/24/2021 12:16	Temperature	20.17	C
APCO-GS-CCB-MW-19	2/24/2021 12:16	Turbidity	28	NTU
APCO-GS-CCB-MW-19	2/24/2021 12:21	Conductivity	3177.6	uS/cm
APCO-GS-CCB-MW-19	2/24/2021 12:21	DO	1.73	mg/L
APCO-GS-CCB-MW-19	2/24/2021 12:21	Depth to Water Detail	78.66	ft
APCO-GS-CCB-MW-19	2/24/2021 12:21	Oxidation Reduction Potention	29.04	mv
APCO-GS-CCB-MW-19	2/24/2021 12:21	pH	6.27	SU
APCO-GS-CCB-MW-19	2/24/2021 12:21	Temperature	20.24	C
APCO-GS-CCB-MW-19	2/24/2021 12:21	Turbidity	13.4	NTU
APCO-GS-CCB-MW-19	2/24/2021 12:26	Conductivity	3184.94	uS/cm
APCO-GS-CCB-MW-19	2/24/2021 12:26	DO	1.82	mg/L

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-19	2/24/2021 12:26	Depth to Water Detail	78.66	ft
APCO-GS-CCB-MW-19	2/24/2021 12:26	Oxidation Reduction Potention	30.51	mv
APCO-GS-CCB-MW-19	2/24/2021 12:26	pH	6.27	SU
APCO-GS-CCB-MW-19	2/24/2021 12:26	Temperature	20.31	C
APCO-GS-CCB-MW-19	2/24/2021 12:26	Turbidity	11.31	NTU
APCO-GS-CCB-MW-19	2/24/2021 12:31	Conductivity	3184.04	uS/cm
APCO-GS-CCB-MW-19	2/24/2021 12:31	DO	1.94	mg/L
APCO-GS-CCB-MW-19	2/24/2021 12:31	Depth to Water Detail	78.66	ft
APCO-GS-CCB-MW-19	2/24/2021 12:31	Oxidation Reduction Potention	32.91	mv
APCO-GS-CCB-MW-19	2/24/2021 12:31	pH	6.27	SU
APCO-GS-CCB-MW-19	2/24/2021 12:31	Temperature	20.12	C
APCO-GS-CCB-MW-19	2/24/2021 12:31	Turbidity	7.95	NTU
APCO-GS-CCB-MW-19	2/24/2021 12:36	Conductivity	3183.22	uS/cm
APCO-GS-CCB-MW-19	2/24/2021 12:36	DO	1.82	mg/L
APCO-GS-CCB-MW-19	2/24/2021 12:36	Depth to Water Detail	78.66	ft
APCO-GS-CCB-MW-19	2/24/2021 12:36	Oxidation Reduction Potention	32.35	mv
APCO-GS-CCB-MW-19	2/24/2021 12:36	pH	6.26	SU
APCO-GS-CCB-MW-19	2/24/2021 12:36	Temperature	20.14	C
APCO-GS-CCB-MW-19	2/24/2021 12:36	Turbidity	5.12	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-6	2/23/2021 10:22	Conductivity	3217.23	uS/cm
APCO-GS-CCB-MW-6	2/23/2021 10:22	DO	0.45	mg/L
APCO-GS-CCB-MW-6	2/23/2021 10:22	Depth to Water Detail	100.95	ft
APCO-GS-CCB-MW-6	2/23/2021 10:22	Oxidation Reduction Potention	115.76	mv
APCO-GS-CCB-MW-6	2/23/2021 10:22	pH	6.11	SU
APCO-GS-CCB-MW-6	2/23/2021 10:22	Temperature	19.97	C
APCO-GS-CCB-MW-6	2/23/2021 10:22	Turbidity	18.3	NTU
APCO-GS-CCB-MW-6	2/23/2021 10:27	Conductivity	3205.08	uS/cm
APCO-GS-CCB-MW-6	2/23/2021 10:27	DO	0.35	mg/L
APCO-GS-CCB-MW-6	2/23/2021 10:27	Depth to Water Detail	101.1	ft
APCO-GS-CCB-MW-6	2/23/2021 10:27	Oxidation Reduction Potention	97.76	mv
APCO-GS-CCB-MW-6	2/23/2021 10:27	pH	6.13	SU
APCO-GS-CCB-MW-6	2/23/2021 10:27	Temperature	19.82	C
APCO-GS-CCB-MW-6	2/23/2021 10:27	Turbidity	12.1	NTU
APCO-GS-CCB-MW-6	2/23/2021 10:32	Conductivity	3187.96	uS/cm
APCO-GS-CCB-MW-6	2/23/2021 10:32	DO	0.32	mg/L
APCO-GS-CCB-MW-6	2/23/2021 10:32	Depth to Water Detail	101.1	ft
APCO-GS-CCB-MW-6	2/23/2021 10:32	Oxidation Reduction Potention	85.35	mv
APCO-GS-CCB-MW-6	2/23/2021 10:32	pH	6.14	SU
APCO-GS-CCB-MW-6	2/23/2021 10:32	Temperature	19.91	C
APCO-GS-CCB-MW-6	2/23/2021 10:32	Turbidity	6.32	NTU
APCO-GS-CCB-MW-6	2/23/2021 10:37	Conductivity	3188.62	uS/cm
APCO-GS-CCB-MW-6	2/23/2021 10:37	DO	0.31	mg/L
APCO-GS-CCB-MW-6	2/23/2021 10:37	Depth to Water Detail	101.1	ft
APCO-GS-CCB-MW-6	2/23/2021 10:37	Oxidation Reduction Potention	77.24	mv
APCO-GS-CCB-MW-6	2/23/2021 10:37	pH	6.14	SU
APCO-GS-CCB-MW-6	2/23/2021 10:37	Temperature	19.92	C
APCO-GS-CCB-MW-6	2/23/2021 10:37	Turbidity	3.11	NTU
APCO-GS-CCB-MW-6	2/23/2021 10:42	Conductivity	3176.73	uS/cm
APCO-GS-CCB-MW-6	2/23/2021 10:42	DO	0.32	mg/L
APCO-GS-CCB-MW-6	2/23/2021 10:42	Depth to Water Detail	101.1	ft
APCO-GS-CCB-MW-6	2/23/2021 10:42	Oxidation Reduction Potention	70.5	mv
APCO-GS-CCB-MW-6	2/23/2021 10:42	pH	6.13	SU
APCO-GS-CCB-MW-6	2/23/2021 10:42	Temperature	19.94	C
APCO-GS-CCB-MW-6	2/23/2021 10:42	Turbidity	2.5	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-7	2/23/2021 11:17	Conductivity	2651.24	uS/cm
APCO-GS-CCB-MW-7	2/23/2021 11:17	DO	0.13	mg/L
APCO-GS-CCB-MW-7	2/23/2021 11:17	Depth to Water Detail	56.75	ft
APCO-GS-CCB-MW-7	2/23/2021 11:17	Oxidation Reduction Potention	67.48	mv
APCO-GS-CCB-MW-7	2/23/2021 11:17	pH	6.66	SU
APCO-GS-CCB-MW-7	2/23/2021 11:17	Temperature	18.9	C
APCO-GS-CCB-MW-7	2/23/2021 11:17	Turbidity	1.55	NTU
APCO-GS-CCB-MW-7	2/23/2021 11:22	Conductivity	2585.63	uS/cm
APCO-GS-CCB-MW-7	2/23/2021 11:22	DO	0.1	mg/L
APCO-GS-CCB-MW-7	2/23/2021 11:22	Depth to Water Detail	56.75	ft
APCO-GS-CCB-MW-7	2/23/2021 11:22	Oxidation Reduction Potention	62.68	mv
APCO-GS-CCB-MW-7	2/23/2021 11:22	pH	6.68	SU
APCO-GS-CCB-MW-7	2/23/2021 11:22	Temperature	18.94	C
APCO-GS-CCB-MW-7	2/23/2021 11:22	Turbidity	0.95	NTU
APCO-GS-CCB-MW-7	2/23/2021 11:27	Conductivity	2545.57	uS/cm
APCO-GS-CCB-MW-7	2/23/2021 11:27	DO	0.09	mg/L
APCO-GS-CCB-MW-7	2/23/2021 11:27	Depth to Water Detail	56.75	ft
APCO-GS-CCB-MW-7	2/23/2021 11:27	Oxidation Reduction Potention	58.74	mv
APCO-GS-CCB-MW-7	2/23/2021 11:27	pH	6.69	SU
APCO-GS-CCB-MW-7	2/23/2021 11:27	Temperature	18.9	C
APCO-GS-CCB-MW-7	2/23/2021 11:27	Turbidity	0.53	NTU
APCO-GS-CCB-MW-7	2/23/2021 11:32	Conductivity	2508.19	uS/cm
APCO-GS-CCB-MW-7	2/23/2021 11:32	DO	0.09	mg/L
APCO-GS-CCB-MW-7	2/23/2021 11:32	Depth to Water Detail	56.75	ft
APCO-GS-CCB-MW-7	2/23/2021 11:32	Oxidation Reduction Potention	55.76	mv
APCO-GS-CCB-MW-7	2/23/2021 11:32	pH	6.7	SU
APCO-GS-CCB-MW-7	2/23/2021 11:32	Temperature	18.98	C
APCO-GS-CCB-MW-7	2/23/2021 11:32	Turbidity	0.46	NTU

Alabama Power Company
Plant Gorgas

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
APCO-GS-CCB-MW-8	2/23/2021 12:06	Conductivity	2725.22	uS/cm
APCO-GS-CCB-MW-8	2/23/2021 12:06	DO	1.28	mg/L
APCO-GS-CCB-MW-8	2/23/2021 12:06	Depth to Water Detail	64.35	ft
APCO-GS-CCB-MW-8	2/23/2021 12:06	Oxidation Reduction Potention	66.73	mv
APCO-GS-CCB-MW-8	2/23/2021 12:06	pH	6.74	SU
APCO-GS-CCB-MW-8	2/23/2021 12:06	Temperature	20.63	C
APCO-GS-CCB-MW-8	2/23/2021 12:06	Turbidity	10.72	NTU
APCO-GS-CCB-MW-8	2/23/2021 12:11	Conductivity	2725.5	uS/cm
APCO-GS-CCB-MW-8	2/23/2021 12:11	DO	0.74	mg/L
APCO-GS-CCB-MW-8	2/23/2021 12:11	Depth to Water Detail	65.02	ft
APCO-GS-CCB-MW-8	2/23/2021 12:11	Oxidation Reduction Potention	62.12	mv
APCO-GS-CCB-MW-8	2/23/2021 12:11	pH	6.73	SU
APCO-GS-CCB-MW-8	2/23/2021 12:11	Temperature	20.7	C
APCO-GS-CCB-MW-8	2/23/2021 12:11	Turbidity	9.16	NTU
APCO-GS-CCB-MW-8	2/23/2021 12:16	Conductivity	2726.67	uS/cm
APCO-GS-CCB-MW-8	2/23/2021 12:16	DO	0.6	mg/L
APCO-GS-CCB-MW-8	2/23/2021 12:16	Depth to Water Detail	65.28	ft
APCO-GS-CCB-MW-8	2/23/2021 12:16	Oxidation Reduction Potention	59.09	mv
APCO-GS-CCB-MW-8	2/23/2021 12:16	pH	6.73	SU
APCO-GS-CCB-MW-8	2/23/2021 12:16	Temperature	20.72	C
APCO-GS-CCB-MW-8	2/23/2021 12:16	Turbidity	6.61	NTU
APCO-GS-CCB-MW-8	2/23/2021 12:21	Conductivity	2709.44	uS/cm
APCO-GS-CCB-MW-8	2/23/2021 12:21	DO	0.52	mg/L
APCO-GS-CCB-MW-8	2/23/2021 12:21	Depth to Water Detail	65.28	ft
APCO-GS-CCB-MW-8	2/23/2021 12:21	Oxidation Reduction Potention	56.51	mv
APCO-GS-CCB-MW-8	2/23/2021 12:21	pH	6.73	SU
APCO-GS-CCB-MW-8	2/23/2021 12:21	Temperature	20.82	C
APCO-GS-CCB-MW-8	2/23/2021 12:21	Turbidity	4.35	NTU
APCO-GS-CCB-MW-8	2/23/2021 12:26	Conductivity	2722.01	uS/cm
APCO-GS-CCB-MW-8	2/23/2021 12:26	DO	0.48	mg/L
APCO-GS-CCB-MW-8	2/23/2021 12:26	Depth to Water Detail	65.4	ft
APCO-GS-CCB-MW-8	2/23/2021 12:26	Oxidation Reduction Potention	54.28	mv
APCO-GS-CCB-MW-8	2/23/2021 12:26	pH	6.73	SU
APCO-GS-CCB-MW-8	2/23/2021 12:26	Temperature	20.81	C
APCO-GS-CCB-MW-8	2/23/2021 12:26	Turbidity	2.9	NTU
APCO-GS-CCB-MW-8	2/23/2021 12:31	Conductivity	2732.18	uS/cm
APCO-GS-CCB-MW-8	2/23/2021 12:31	DO	0.45	mg/L
APCO-GS-CCB-MW-8	2/23/2021 12:31	Depth to Water Detail	65.48	ft
APCO-GS-CCB-MW-8	2/23/2021 12:31	Oxidation Reduction Potention	52.49	mv
APCO-GS-CCB-MW-8	2/23/2021 12:31	pH	6.73	SU
APCO-GS-CCB-MW-8	2/23/2021 12:31	Temperature	20.88	C
APCO-GS-CCB-MW-8	2/23/2021 12:31	Turbidity	3.03	NTU

2nd
Semi-Annual
Monitoring Event

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
205-664-6001

Analytical Report

Alabama Power

Sample Group : WMWGORPU_1328

Project/Site : Gorgas Pooled Upgradient
Parrish, AL 35580

For : Southern Company Services
3535 Colonnade Parkway
Birmingham, AL 35243

Attention : Dustin Brooks & Greg Dyer

Released By : Laura Midkiff
lbmidkif@southernco.com
(205) 664-6197

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
(205) 664-6001

August 04, 2021

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2021.
All results reported herein conform to the laboratory's most current Quality Assurance Manual. Results marked with an asterisk conform to the most current applicable TNI/NELAC requirements. Exceptions will be noted in the body of the report.

Laboratory certification ID: E571114
Issued By: State of Florida, Department of Health
Expiration: June 30, 2022

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

Sincerely,

Quality Control: Laura Midkiff
Digitally signed by Laura Midkiff
DN: cn=Laura Midkiff, o=Alabama Power Company, ou=Environmental Affairs, email=lbmidkif@southernco.com, c=US
Date: 2021.08.04 10:24:40 -05'00'

Supervision: T. Durant Maske
Digitally signed by T. Durant Maske
DN: cn=T. Durant Maske, o=Alabama Power Company, ou=Environmental Affairs, email=tdmaske@southernco.com, c=US
Date: 2021.08.06 18:29:15 -05'00'

REPORT OF LABORATORY ANALYSIS

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Total Metals ICP

Gorgas Pooled Upgradient

WMWGORPU_1328

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB12485	703422	WMWGORPU_1328
BB12486	703422	WMWGORPU_1328
BB12487	703422	WMWGORPU_1328
BB12488	703422	WMWGORPU_1328
BB12489	703422	WMWGORPU_1328
BB12490	703422	WMWGORPU_1328
BB12491	703422	WMWGORPU_1328

4. All of the above samples were analyzed by EPA 200.7 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.

- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution Factor
BB12485	Calcium & Magnesium	10.15
BB12486	Calcium & Magnesium	10.15
BB12487	Calcium & Magnesium	10.15
BB12488	Calcium & Sodium	10.15
BB12489	Calcium	10.15
BB12488	Magnesium	101.5
BB12489	Magnesium	101.5

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Dissolved Metals ICP

Gorgas Pooled Upgradient

WMWGORPU_1328

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB12485	703488	WMWGORPU_1328
BB12486	703488	WMWGORPU_1328
BB12487	703488	WMWGORPU_1328
BB12488	703488	WMWGORPU_1328
BB12489	703488	WMWGORPU_1328

4. All of the above samples were analyzed and prepared by EPA 200.7 for dissolved analysis.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- Due to no filtered method blank (MB) or laboratory control sample (LCS) submitted with the sample set, an unfiltered MB and LCS were analyzed with the samples in each batch.
- All laboratory control sample criteria were met.
- The method blank associated with each batch passed all acceptance criteria for all requested analytes.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for precision were met.

7. All samples were analyzed without a dilution factor.
8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Total Metals ICPMS

Gorgas Pooled Upgradient

WMWGORPU_1328

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB12485	703415	WMWGORPU_1328
BB12486	703415	WMWGORPU_1328
BB12487	703415	WMWGORPU_1328
BB12488	703415	WMWGORPU_1328
BB12489	703415	WMWGORPU_1328
BB12490	703415	WMWGORPU_1328
BB12491	703415	WMWGORPU_1328

4. All of the above samples were analyzed by EPA 200.8 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution Factor
BB12485	Manganese	10.15
BB12486	Manganese	10.15
BB12487	Manganese	5.075

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Dissolved Metals ICPMS

Gorgas Pooled Upgradient

WMWGORPU_1328

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB12485	703029	WMWGORPU_1328
BB12486	703029	WMWGORPU_1328
BB12487	703029	WMWGORPU_1328
BB12488	703029	WMWGORPU_1328
BB12489	703029	WMWGORPU_1328

4. All of the above samples were analyzed and prepared by EPA 200.8 for dissolved analysis.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- Due to no filtered method blank (MB) or laboratory control sample (LCS) submitted with the sample set, an unfiltered MB and LCS were analyzed with the samples in each batch.
- All laboratory control sample criteria were met.
- The method blank associated with each preparation batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution Factor
BB12485	Manganese	10.15
BB12486	Manganese	10.15
BB12487	Manganese	10.15

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Mercury

Gorgas Pooled Upgradient

WMWGORPU_1328

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB12485	702684	WMWGORPU_1328
BB12486	702684	WMWGORPU_1328
BB12487	702684	WMWGORPU_1328
BB12488	702684	WMWGORPU_1328
BB12489	702684	WMWGORPU_1328
BB12490	702684	WMWGORPU_1328
BB12491	702684	WMWGORPU_1328

4. All of the above samples were analyzed and prepared by EPA 245.1.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the method detection limit for the requested analyte.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analyte.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analyte.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch was below the limit of quantitation for the requested analyte.
- All calibration met criteria for the requested analyte.
- All response signals were satisfactory.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.

7. All samples were analyzed without a dilution.
8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

TDS

Gorgas Pooled Upgradient

WMWGORPU_1328

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB12485	702701	WMWGORPU_1328
BB12486	702701	WMWGORPU_1328
BB12487	702701	WMWGORPU_1328
BB12488	702701	WMWGORPU_1328
BB12489	702701	WMWGORPU_1328
BB12490	702701	WMWGORPU_1328
BB12491	702701	WMWGORPU_1328

4. All of the above samples were analyzed by Standard Method 2540C.
5. All samples were analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- A Method Blank was analyzed with each batch. All criteria were met.
- All final weights of samples, standards, and blanks agreed within 0.5mg of the previous weight.
- A sample duplicate was analyzed with each batch. RPD/2 was less than 5%.
- A laboratory control sample was analyzed with each batch. All criteria were met.
- Samples were between 2.5mg and 200mg residue.
- All samples with residue <2.5mg had the maximum volume of 150mL filtered. Affected samples are as follows:
    - BB12490
    - BB12491

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Anions

Gorgas Pooled Upgradient

WMWGORPU_1328

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB12485	702708, 702964, 702707	WMWGORPU_1328
BB12486	702708, 702964, 702707	WMWGORPU_1328
BB12487	702708, 702964, 702707	WMWGORPU_1328
BB12488	702708, 702964, 702707	WMWGORPU_1328
BB12489	702708, 702964, 702707	WMWGORPU_1328
BB12490	702708, 702964, 702707	WMWGORPU_1328
BB12491	702708, 702964, 702707	WMWGORPU_1328

4. All of the above samples were analyzed and prepared by SM4500 Cl E, SM4500 F G, and SM4500 SO4 E.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All calibration met criteria for the requested analyte.
- Prior to sample analysis, an initial calibration verification (ICV), and all criteria were met.
- Prior to sample analysis, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for the requested analyte.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analyte.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analyte.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike was analyzed with each batch. Acceptance criteria for accuracy were met.
- A sample duplicate was analyzed with each batch. Acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution Factor
BB12485	Sulfate	50
BB12486	Sulfate	50
BB12487	Sulfate	32
BB12488	Sulfate	100
BB12489	Sulfate	100

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Alkalinity

Gorgas Pooled Upgradient

WMWGORPU_1328

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB12485	703193 & 703194	WMWGORPU_1328
BB12486	703193 & 703194	WMWGORPU_1328
BB12487	703193 & 703194	WMWGORPU_1328
BB12488	703193 & 703194	WMWGORPU_1328
BB12489	703193 & 703194	WMWGORPU_1328

4. All of the above samples were analyzed by Standard Method 2320B.
5. All samples were analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- An initial pH check was analyzed with each batch. The acceptance criteria were met.
- A final pH check was analyzed with each batch. The acceptance criteria were met.
- An alkalinity laboratory control sample was analyzed with each batch. Range criteria of within 10% of true value was met.
- An alkalinity sample duplicate was analyzed with each batch. Precision criteria less than 10 RPD was met.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-1

Location Code: WMWGORPU
Collected: 7/12/21 10:45
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12485

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 12:22	7/22/21 16:15		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	7/21/21 12:22	7/23/21 11:15		10.15	149	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 12:22	7/22/21 16:15		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	7/21/21 12:22	7/22/21 16:15		1.015	0.0266	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 12:22	7/23/21 11:15		10.15	283	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 12:22	7/22/21 16:15		1.015	38.4	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/27/21 09:49	7/27/21 10:57		1.015	Not Detected	mg/L	0.008120	0.0406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/15/21 15:15	7/16/21 15:18		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/15/21 15:15	7/16/21 15:18		1.015	0.000363	mg/L	0.000068	0.000203	
* Barium, Total	7/15/21 15:15	7/16/21 15:18		1.015	0.00991	mg/L	0.000102	0.000203	
* Beryllium, Total	7/15/21 15:15	7/16/21 15:18		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/15/21 15:15	7/16/21 15:18		1.015	0.00193	mg/L	0.000068	0.000203	
* Chromium, Total	7/15/21 15:15	7/16/21 15:18		1.015	0.000487	mg/L	0.000203	0.001015	J
* Cobalt, Total	7/15/21 15:15	7/16/21 15:18		1.015	0.0556	mg/L	0.000068	0.000203	
* Lead, Total	7/15/21 15:15	7/16/21 15:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/15/21 15:15	7/16/21 15:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	7/15/21 15:15	7/16/21 15:18		1.015	7.30	mg/L	0.169505	0.5075	
* Manganese, Total	7/15/21 15:15	7/22/21 10:52		10.15	10.2	mg/L	0.000680	0.00203	
* Selenium, Total	7/15/21 15:15	7/16/21 15:18		1.015	0.00280	mg/L	0.000508	0.001015	
* Thallium, Total	7/15/21 15:15	7/16/21 15:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: ABB***								
* Manganese, Dissolved	7/16/21 08:37	7/20/21 14:17		10.15	10.7	mg/L	0.000680	0.00203	
Analytical Method: EPA 245.1	***Analyst: CRB***								
* Mercury, Total by CVAA	7/14/21 10:02	7/14/21 13:43		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/21/21 09:10	7/21/21 09:40		1	22.0	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/14/21 12:18	7/15/21 13:41		1	2210	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-1

Location Code: WMWGORPU
Collected: 7/12/21 10:45
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12485

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/21/21 09:10	7/21/21 09:40		1	22.0	mg/L			
Carbonate Alkalinity, (calc.)	7/21/21 09:10	7/21/21 09:40		1	0.00	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/14/21 11:57	7/14/21 11:57		1	2.19	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/15/21 10:17	7/15/21 10:17		1	0.125	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/14/21 10:33	7/14/21 10:33		50	1560	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/12/21 10:41	7/12/21 10:41			2271.93	uS/cm			FA
pH	7/12/21 10:41	7/12/21 10:41			5.13	SU			FA
Temperature	7/12/21 10:41	7/12/21 10:41			19.83	C			FA
Turbidity	7/12/21 10:41	7/12/21 10:41			0.22	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPU
Sample Date: 7/12/21 10:45
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient - MW-1

Laboratory ID Number: BB12485

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12491	Molybdenum, Total	mg/L	0.0000261	0.000147	0.100	0.0984	0.103	0.100	0.0850 to 0.115	98.4	70.0 to 130	4.57	20.0
BB12491	Mercury, Total by CVAA	mg/L	5.390E-05	0.000500	0.004	0.00402	0.00398	0.00396	0.00340 to 0.00460	100	70.0 to 130	1.00	20.0
BB12491	Beryllium, Total	mg/L	0.0000533	0.000880	0.100	0.103	0.102	0.101	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB12491	Sodium, Total	mg/L	0.00119	0.0660	5.00	4.95	4.92	4.98	4.25 to 5.75	99.0	70.0 to 130	0.608	20.0
BB12491	Cobalt, Total	mg/L	-0.0000691	0.000147	0.100	0.0949	0.0984	0.0969	0.0850 to 0.115	94.9	70.0 to 130	3.62	20.0
BB12491	Manganese, Total	mg/L	-0.000003	0.000147	0.100	0.101	0.104	0.103	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Lithium, Total	mg/L	-8.650E-05	0.0154	0.200	0.197	0.195	0.199	0.170 to 0.230	98.5	70.0 to 130	1.02	20.0
BB12491	Lead, Total	mg/L	0.0000018	0.000147	0.100	0.113	0.113	0.107	0.0850 to 0.115	113	70.0 to 130	0.00	20.0
BB12491	Boron, Total	mg/L	0.000567	0.0650	1.00	0.980	0.977	0.995	0.850 to 1.15	98.0	70.0 to 130	0.307	20.0
BB12491	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0930	0.0983	0.0943	0.0850 to 0.115	93.0	70.0 to 130	5.54	20.0
BB12491	Selenium, Total	mg/L	-0.0000651	0.00100	0.100	0.102	0.105	0.104	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BB12489	Iron, Dissolved	mg/L	-0.000219	0.0176	0.2	0.193	0.189	0.197	0.170 to 0.230	96.5	70.0 to 130	2.09	20.0
BB12491	Barium, Total	mg/L	-0.0000459	0.000200	0.100	0.101	0.104	0.0999	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Calcium, Total	mg/L	0.00896	0.152	5.00	5.03	5.02	5.05	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB12491	Iron, Total	mg/L	2.630E-05	0.0176	0.2	0.199	0.198	0.201	0.170 to 0.230	99.5	70.0 to 130	0.504	20.0
BB12491	Potassium, Total	mg/L	0.00426	0.367	10.0	9.90	10.2	10.2	8.50 to 11.5	99.0	70.0 to 130	2.99	20.0
BB12491	Magnesium, Total	mg/L	-0.00929	0.0462	5.00	5.00	5.00	5.01	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB12491	Chromium, Total	mg/L	0.0000775	0.000440	0.100	0.0977	0.101	0.0999	0.0850 to 0.115	97.7	70.0 to 130	3.32	20.0
BB12491	Thallium, Total	mg/L	-0.000124	0.000147	0.100	0.115	0.115	0.112	0.0850 to 0.115	115	70.0 to 130	0.00	20.0
BB12491	Arsenic, Total	mg/L	0.0000344	0.000147	0.100	0.107	0.104	0.105	0.0850 to 0.115	107	70.0 to 130	2.84	20.0
BB12491	Antimony, Total	mg/L	0.000134	0.00100	0.100	0.0966	0.0989	0.0960	0.0850 to 0.115	96.6	70.0 to 130	2.35	20.0
BB12489	Manganese, Dissolved	mg/L	-0.0000252	0.000147	0.100	0.0976	0.100	0.0996	0.0850 to 0.115	97.4	70.0 to 130	2.43	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPU
Sample Date: 7/12/21 10:45
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient - MW-1

Laboratory ID Number: BB12485

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12491	Fluoride	mg/L	0.0195	0.100	2.50	2.58	0.0245	2.55	2.25 to 2.75	103	80.0 to 120	0.00	20.0
BB12491	Sulfate	mg/L	-0.557	1.00	20.0	20.0	-0.380	19.4	18.0 to 22.0	100	80.0 to 120	0.00	20.0
BB12491	Chloride	mg/L	-0.0691	1.00	10.0	11.3	0.232	10.0	9.00 to 11.0	113	80.0 to 120	0.00	20.0
BB12489	Alkalinity, Total as CaCO3	mg/L					192	53.9	45.0 to 55.0			1.04	10.0
BB12489	Solids, Dissolved	mg/L	-4.00	25.0			3040	47.0	40.0 to 60.0			0.662	5.00

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-1 DUP

Location Code: WMWGORPU
Collected: 7/12/21 10:45
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12486

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 12:22	7/22/21 16:19		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	7/21/21 12:22	7/23/21 11:18		10.15	152	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 12:22	7/22/21 16:19		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	7/21/21 12:22	7/22/21 16:19		1.015	0.0267	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 12:22	7/23/21 11:18		10.15	290	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 12:22	7/22/21 16:19		1.015	38.6	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/27/21 09:49	7/27/21 11:01		1.015	Not Detected	mg/L	0.008120	0.0406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/15/21 15:15	7/16/21 15:22		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/15/21 15:15	7/16/21 15:22		1.015	0.000300	mg/L	0.000068	0.000203	
* Barium, Total	7/15/21 15:15	7/16/21 15:22		1.015	0.00984	mg/L	0.000102	0.000203	
* Beryllium, Total	7/15/21 15:15	7/16/21 15:22		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/15/21 15:15	7/16/21 15:22		1.015	0.00185	mg/L	0.000068	0.000203	
* Chromium, Total	7/15/21 15:15	7/16/21 15:22		1.015	0.000389	mg/L	0.000203	0.001015	J
* Cobalt, Total	7/15/21 15:15	7/16/21 15:22		1.015	0.0549	mg/L	0.000068	0.000203	
* Lead, Total	7/15/21 15:15	7/16/21 15:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/15/21 15:15	7/16/21 15:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	7/15/21 15:15	7/16/21 15:22		1.015	7.25	mg/L	0.169505	0.5075	
* Manganese, Total	7/15/21 15:15	7/22/21 10:55		10.15	10.1	mg/L	0.000680	0.00203	
* Selenium, Total	7/15/21 15:15	7/16/21 15:22		1.015	0.00245	mg/L	0.000508	0.001015	
* Thallium, Total	7/15/21 15:15	7/16/21 15:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: ABB***								
* Manganese, Dissolved	7/16/21 08:37	7/20/21 14:20		10.15	9.90	mg/L	0.000680	0.00203	
Analytical Method: EPA 245.1	***Analyst: CRB***								
* Mercury, Total by CVAA	7/14/21 10:02	7/14/21 13:46		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/21/21 09:10	7/21/21 09:40		1	24.2	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/14/21 12:18	7/15/21 13:41		1	2210	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-1 DUP

Location Code: WMWGORPU
Collected: 7/12/21 10:45
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12486

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/21/21 09:10	7/21/21 09:40		1	24.2	mg/L			
Carbonate Alkalinity, (calc.)	7/21/21 09:10	7/21/21 09:40		1	0.00	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/14/21 11:58	7/14/21 11:58		1	2.25	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/15/21 10:18	7/15/21 10:18		1	0.112	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/14/21 10:34	7/14/21 10:34		50	1500	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/12/21 10:41	7/12/21 10:41			2271.93	uS/cm			FA
pH	7/12/21 10:41	7/12/21 10:41			5.13	SU			FA
Temperature	7/12/21 10:41	7/12/21 10:41			19.83	C			FA
Turbidity	7/12/21 10:41	7/12/21 10:41			0.22	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPU
Sample Date: 7/12/21 10:45
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient - MW-1 DUP

Laboratory ID Number: BB12486

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12491	Molybdenum, Total	mg/L	0.0000261	0.000147	0.100	0.0984	0.103	0.100	0.0850 to 0.115	98.4	70.0 to 130	4.57	20.0
BB12491	Mercury, Total by CVAA	mg/L	5.390E-05	0.000500	0.004	0.00402	0.00398	0.00396	0.00340 to 0.00460	100	70.0 to 130	1.00	20.0
BB12491	Beryllium, Total	mg/L	0.0000533	0.000880	0.100	0.103	0.102	0.101	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB12491	Sodium, Total	mg/L	0.00119	0.0660	5.00	4.95	4.92	4.98	4.25 to 5.75	99.0	70.0 to 130	0.608	20.0
BB12491	Lithium, Total	mg/L	-8.650E-05	0.0154	0.200	0.197	0.195	0.199	0.170 to 0.230	98.5	70.0 to 130	1.02	20.0
BB12491	Lead, Total	mg/L	0.0000018	0.000147	0.100	0.113	0.113	0.107	0.0850 to 0.115	113	70.0 to 130	0.00	20.0
BB12491	Cobalt, Total	mg/L	-0.0000691	0.000147	0.100	0.0949	0.0984	0.0969	0.0850 to 0.115	94.9	70.0 to 130	3.62	20.0
BB12491	Manganese, Total	mg/L	-0.000003	0.000147	0.100	0.101	0.104	0.103	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Iron, Total	mg/L	2.630E-05	0.0176	0.2	0.199	0.198	0.201	0.170 to 0.230	99.5	70.0 to 130	0.504	20.0
BB12491	Potassium, Total	mg/L	0.00426	0.367	10.0	9.90	10.2	10.2	8.50 to 11.5	99.0	70.0 to 130	2.99	20.0
BB12491	Boron, Total	mg/L	0.000567	0.0650	1.00	0.980	0.977	0.995	0.850 to 1.15	98.0	70.0 to 130	0.307	20.0
BB12491	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0930	0.0983	0.0943	0.0850 to 0.115	93.0	70.0 to 130	5.54	20.0
BB12491	Magnesium, Total	mg/L	-0.00929	0.0462	5.00	5.00	5.00	5.01	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB12491	Chromium, Total	mg/L	0.0000775	0.000440	0.100	0.0977	0.101	0.0999	0.0850 to 0.115	97.7	70.0 to 130	3.32	20.0
BB12491	Thallium, Total	mg/L	-0.000124	0.000147	0.100	0.115	0.115	0.112	0.0850 to 0.115	115	70.0 to 130	0.00	20.0
BB12491	Arsenic, Total	mg/L	0.0000344	0.000147	0.100	0.107	0.104	0.105	0.0850 to 0.115	107	70.0 to 130	2.84	20.0
BB12491	Antimony, Total	mg/L	0.000134	0.00100	0.100	0.0966	0.0989	0.0960	0.0850 to 0.115	96.6	70.0 to 130	2.35	20.0
BB12489	Manganese, Dissolved	mg/L	-0.0000252	0.000147	0.100	0.0976	0.100	0.0996	0.0850 to 0.115	97.4	70.0 to 130	2.43	20.0
BB12491	Selenium, Total	mg/L	-0.0000651	0.00100	0.100	0.102	0.105	0.104	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BB12489	Iron, Dissolved	mg/L	-0.000219	0.0176	0.2	0.193	0.189	0.197	0.170 to 0.230	96.5	70.0 to 130	2.09	20.0
BB12491	Barium, Total	mg/L	-0.0000459	0.000200	0.100	0.101	0.104	0.0999	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Calcium, Total	mg/L	0.00896	0.152	5.00	5.03	5.02	5.05	4.25 to 5.75	101	70.0 to 130	0.199	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPU
Sample Date: 7/12/21 10:45
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient - MW-1 DUP

Laboratory ID Number: BB12486

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12489	Solids, Dissolved	mg/L	-4.00	25.0			3040	47.0	40.0 to 60.0			0.662	5.00
BB12491	Fluoride	mg/L	0.0195	0.100	2.50	2.58	0.0245	2.55	2.25 to 2.75	103	80.0 to 120	0.00	20.0
BB12491	Sulfate	mg/L	-0.557	1.00	20.0	20.0	-0.380	19.4	18.0 to 22.0	100	80.0 to 120	0.00	20.0
BB12491	Chloride	mg/L	-0.0691	1.00	10.0	11.3	0.232	10.0	9.00 to 11.0	113	80.0 to 120	0.00	20.0
BB12489	Alkalinity, Total as CaCO3	mg/L					192	53.9	45.0 to 55.0			1.04	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-2

Location Code: WMWGORPU
Collected: 7/12/21 11:48
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12487

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 12:22	7/22/21 16:22		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	7/21/21 12:22	7/23/21 11:22		10.15	159	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 12:22	7/22/21 16:22		1.015	1.34	mg/L	0.008120	0.0406	
* Lithium, Total	7/21/21 12:22	7/22/21 16:22		1.015	0.0495	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 12:22	7/23/21 11:22		10.15	174	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 12:22	7/22/21 16:22		1.015	20.9	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/27/21 09:49	7/27/21 11:04		1.015	1.15	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/15/21 15:15	7/16/21 15:25		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/15/21 15:15	7/16/21 15:25		1.015	0.000364	mg/L	0.000068	0.000203	
* Barium, Total	7/15/21 15:15	7/16/21 15:25		1.015	0.0130	mg/L	0.000102	0.000203	
* Beryllium, Total	7/15/21 15:15	7/16/21 15:25		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/15/21 15:15	7/16/21 15:25		1.015	0.0000827	mg/L	0.000068	0.000203	J
* Chromium, Total	7/15/21 15:15	7/16/21 15:25		1.015	0.000251	mg/L	0.000203	0.001015	J
* Cobalt, Total	7/15/21 15:15	7/16/21 15:25		1.015	0.0155	mg/L	0.000068	0.000203	
* Lead, Total	7/15/21 15:15	7/16/21 15:25		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/15/21 15:15	7/16/21 15:25		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	7/15/21 15:15	7/16/21 15:25		1.015	5.86	mg/L	0.169505	0.5075	
* Manganese, Total	7/15/21 15:15	7/22/21 10:59		5.075	4.80	mg/L	0.000340	0.001015	
* Selenium, Total	7/15/21 15:15	7/16/21 15:25		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/15/21 15:15	7/16/21 15:25		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: ABB***								
* Manganese, Dissolved	7/16/21 08:37	7/20/21 14:24		10.15	4.49	mg/L	0.000680	0.00203	
Analytical Method: EPA 245.1	***Analyst: CRB***								
* Mercury, Total by CVAA	7/14/21 10:02	7/14/21 13:48		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/21/21 09:10	7/21/21 09:40		1	346	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/14/21 12:18	7/15/21 13:41		1	1390	mg/L		75.8	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-2

Location Code: WMWGORPU
Collected: 7/12/21 11:48
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12487

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/21/21 09:10	7/21/21 09:40		1	346	mg/L			
Carbonate Alkalinity, (calc.)	7/21/21 09:10	7/21/21 09:40		1	0.07	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/14/21 11:59	7/14/21 11:59		1	2.36	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/15/21 10:19	7/15/21 10:19		1	0.196	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/14/21 10:36	7/14/21 10:36		32	763	mg/L	16.00	32	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/12/21 11:45	7/12/21 11:45			1676.05	uS/cm			FA
pH	7/12/21 11:45	7/12/21 11:45			6.16	SU			FA
Temperature	7/12/21 11:45	7/12/21 11:45			19.38	C			FA
Turbidity	7/12/21 11:45	7/12/21 11:45			1.43	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPU
Sample Date: 7/12/21 11:48
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient - MW-2

Laboratory ID Number: BB12487

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12491	Lithium, Total	mg/L	-8.650E-05	0.0154	0.200	0.197	0.195	0.199	0.170 to 0.230	98.5	70.0 to 130	1.02	20.0
BB12491	Lead, Total	mg/L	0.0000018	0.000147	0.100	0.113	0.113	0.107	0.0850 to 0.115	113	70.0 to 130	0.00	20.0
BB12491	Molybdenum, Total	mg/L	0.0000261	0.000147	0.100	0.0984	0.103	0.100	0.0850 to 0.115	98.4	70.0 to 130	4.57	20.0
BB12491	Mercury, Total by CVAA	mg/L	5.390E-05	0.000500	0.004	0.00402	0.00398	0.00396	0.00340 to 0.00460	100	70.0 to 130	1.00	20.0
BB12491	Beryllium, Total	mg/L	0.0000533	0.000880	0.100	0.103	0.102	0.101	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB12491	Sodium, Total	mg/L	0.00119	0.0660	5.00	4.95	4.92	4.98	4.25 to 5.75	99.0	70.0 to 130	0.608	20.0
BB12491	Iron, Total	mg/L	2.630E-05	0.0176	0.2	0.199	0.198	0.201	0.170 to 0.230	99.5	70.0 to 130	0.504	20.0
BB12491	Potassium, Total	mg/L	0.00426	0.367	10.0	9.90	10.2	10.2	8.50 to 11.5	99.0	70.0 to 130	2.99	20.0
BB12491	Boron, Total	mg/L	0.000567	0.0650	1.00	0.980	0.977	0.995	0.850 to 1.15	98.0	70.0 to 130	0.307	20.0
BB12491	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0930	0.0983	0.0943	0.0850 to 0.115	93.0	70.0 to 130	5.54	20.0
BB12491	Cobalt, Total	mg/L	-0.0000691	0.000147	0.100	0.0949	0.0984	0.0969	0.0850 to 0.115	94.9	70.0 to 130	3.62	20.0
BB12491	Manganese, Total	mg/L	-0.000003	0.000147	0.100	0.101	0.104	0.103	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Selenium, Total	mg/L	-0.0000651	0.00100	0.100	0.102	0.105	0.104	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BB12489	Iron, Dissolved	mg/L	-0.000219	0.0176	0.2	0.193	0.189	0.197	0.170 to 0.230	96.5	70.0 to 130	2.09	20.0
BB12491	Barium, Total	mg/L	-0.0000459	0.000200	0.100	0.101	0.104	0.0999	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Calcium, Total	mg/L	0.00896	0.152	5.00	5.03	5.02	5.05	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB12491	Magnesium, Total	mg/L	-0.00929	0.0462	5.00	5.00	5.00	5.01	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB12491	Chromium, Total	mg/L	0.0000775	0.000440	0.100	0.0977	0.101	0.0999	0.0850 to 0.115	97.7	70.0 to 130	3.32	20.0
BB12491	Thallium, Total	mg/L	-0.000124	0.000147	0.100	0.115	0.115	0.112	0.0850 to 0.115	115	70.0 to 130	0.00	20.0
BB12491	Arsenic, Total	mg/L	0.0000344	0.000147	0.100	0.107	0.104	0.105	0.0850 to 0.115	107	70.0 to 130	2.84	20.0
BB12491	Antimony, Total	mg/L	0.000134	0.00100	0.100	0.0966	0.0989	0.0960	0.0850 to 0.115	96.6	70.0 to 130	2.35	20.0
BB12489	Manganese, Dissolved	mg/L	-0.0000252	0.000147	0.100	0.0976	0.100	0.0996	0.0850 to 0.115	97.4	70.0 to 130	2.43	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPU
Sample Date: 7/12/21 11:48
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient - MW-2

Laboratory ID Number: BB12487

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12489	Solids, Dissolved	mg/L	-4.00	25.0			3040	47.0	40.0 to 60.0			0.662	5.00
BB12491	Fluoride	mg/L	0.0195	0.100	2.50	2.58	0.0245	2.55	2.25 to 2.75	103	80.0 to 120	0.00	20.0
BB12491	Sulfate	mg/L	-0.557	1.00	20.0	20.0	-0.380	19.4	18.0 to 22.0	100	80.0 to 120	0.00	20.0
BB12491	Chloride	mg/L	-0.0691	1.00	10.0	11.3	0.232	10.0	9.00 to 11.0	113	80.0 to 120	0.00	20.0
BB12489	Alkalinity, Total as CaCO3	mg/L					192	53.9	45.0 to 55.0			1.04	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-3

Location Code: WMWGORPU
Collected: 7/12/21 12:53
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12488

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 12:22	7/22/21 16:25		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	7/21/21 12:22	7/23/21 11:25		10.15	252	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 12:22	7/22/21 16:25		1.015	0.269	mg/L	0.008120	0.0406	
* Lithium, Total	7/21/21 12:22	7/22/21 16:25		1.015	0.0808	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 12:22	7/23/21 11:32		101.5	471	mg/L	2.1315	40.6	
* Sodium, Total	7/21/21 12:22	7/23/21 11:25		10.15	42.5	mg/L	0.3045	4.06	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/27/21 09:49	7/27/21 11:08		1.015	0.104	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/15/21 15:15	7/16/21 15:29		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/15/21 15:15	7/16/21 15:29		1.015	0.000376	mg/L	0.000068	0.000203	
* Barium, Total	7/15/21 15:15	7/16/21 15:29		1.015	0.00857	mg/L	0.000102	0.000203	
* Beryllium, Total	7/15/21 15:15	7/16/21 15:29		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/15/21 15:15	7/16/21 15:29		1.015	0.000937	mg/L	0.000068	0.000203	
* Chromium, Total	7/15/21 15:15	7/16/21 15:29		1.015	0.000307	mg/L	0.000203	0.001015	J
* Cobalt, Total	7/15/21 15:15	7/16/21 15:29		1.015	0.00567	mg/L	0.000068	0.000203	
* Lead, Total	7/15/21 15:15	7/16/21 15:29		1.015	0.0000842	mg/L	0.000068	0.000203	J
* Molybdenum, Total	7/15/21 15:15	7/16/21 15:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	7/15/21 15:15	7/16/21 15:29		1.015	6.90	mg/L	0.169505	0.5075	
* Manganese, Total	7/15/21 15:15	7/16/21 15:29		1.015	0.160	mg/L	0.000068	0.000203	
* Selenium, Total	7/15/21 15:15	7/16/21 15:29		1.015	0.0133	mg/L	0.000508	0.001015	
* Thallium, Total	7/15/21 15:15	7/16/21 15:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: ABB***								
* Manganese, Dissolved	7/16/21 08:37	7/16/21 14:45		1.015	0.374	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: CRB***								
* Mercury, Total by CVAA	7/14/21 10:02	7/14/21 13:50		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/21/21 09:10	7/21/21 09:40		1	49.4	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/14/21 12:18	7/15/21 13:41		1	3510	mg/L		178.6	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-3

Location Code: WMWGORPU
Collected: 7/12/21 12:53
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12488

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/21/21 09:10	7/21/21 09:40		1	49.4	mg/L			
Carbonate Alkalinity, (calc.)	7/21/21 09:10	7/21/21 09:40		1	0.00	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/14/21 12:01	7/14/21 12:01		1	2.13	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/15/21 10:20	7/15/21 10:20		1	0.287	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/14/21 10:37	7/14/21 10:37		100	2380	mg/L	50.00	100	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/12/21 12:49	7/12/21 12:49			3288.64	uS/cm			FA
pH	7/12/21 12:49	7/12/21 12:49			5.86	SU			FA
Temperature	7/12/21 12:49	7/12/21 12:49			25.58	C			FA
Turbidity	7/12/21 12:49	7/12/21 12:49			1.31	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPU
Sample Date: 7/12/21 12:53
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient - MW-3

Laboratory ID Number: BB12488

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12491	Lithium, Total	mg/L	-8.650E-05	0.0154	0.200	0.197	0.195	0.199	0.170 to 0.230	98.5	70.0 to 130	1.02	20.0
BB12491	Lead, Total	mg/L	0.0000018	0.000147	0.100	0.113	0.113	0.107	0.0850 to 0.115	113	70.0 to 130	0.00	20.0
BB12491	Molybdenum, Total	mg/L	0.0000261	0.000147	0.100	0.0984	0.103	0.100	0.0850 to 0.115	98.4	70.0 to 130	4.57	20.0
BB12491	Mercury, Total by CVAA	mg/L	5.390E-05	0.000500	0.004	0.00402	0.00398	0.00396	0.00340 to 0.00460	100	70.0 to 130	1.00	20.0
BB12491	Beryllium, Total	mg/L	0.0000533	0.000880	0.100	0.103	0.102	0.101	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB12491	Sodium, Total	mg/L	0.00119	0.0660	5.00	4.95	4.92	4.98	4.25 to 5.75	99.0	70.0 to 130	0.608	20.0
BB12491	Cobalt, Total	mg/L	-0.0000691	0.000147	0.100	0.0949	0.0984	0.0969	0.0850 to 0.115	94.9	70.0 to 130	3.62	20.0
BB12491	Manganese, Total	mg/L	-0.000003	0.000147	0.100	0.101	0.104	0.103	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Iron, Total	mg/L	2.630E-05	0.0176	0.2	0.199	0.198	0.201	0.170 to 0.230	99.5	70.0 to 130	0.504	20.0
BB12491	Potassium, Total	mg/L	0.00426	0.367	10.0	9.90	10.2	10.2	8.50 to 11.5	99.0	70.0 to 130	2.99	20.0
BB12491	Boron, Total	mg/L	0.000567	0.0650	1.00	0.980	0.977	0.995	0.850 to 1.15	98.0	70.0 to 130	0.307	20.0
BB12491	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0930	0.0983	0.0943	0.0850 to 0.115	93.0	70.0 to 130	5.54	20.0
BB12491	Selenium, Total	mg/L	-0.0000651	0.00100	0.100	0.102	0.105	0.104	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BB12489	Iron, Dissolved	mg/L	-0.000219	0.0176	0.2	0.193	0.189	0.197	0.170 to 0.230	96.5	70.0 to 130	2.09	20.0
BB12491	Barium, Total	mg/L	-0.0000459	0.000200	0.100	0.101	0.104	0.0999	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Calcium, Total	mg/L	0.00896	0.152	5.00	5.03	5.02	5.05	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB12491	Magnesium, Total	mg/L	-0.00929	0.0462	5.00	5.00	5.00	5.01	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB12491	Chromium, Total	mg/L	0.0000775	0.000440	0.100	0.0977	0.101	0.0999	0.0850 to 0.115	97.7	70.0 to 130	3.32	20.0
BB12491	Thallium, Total	mg/L	-0.000124	0.000147	0.100	0.115	0.115	0.112	0.0850 to 0.115	115	70.0 to 130	0.00	20.0
BB12491	Arsenic, Total	mg/L	0.0000344	0.000147	0.100	0.107	0.104	0.105	0.0850 to 0.115	107	70.0 to 130	2.84	20.0
BB12491	Antimony, Total	mg/L	0.000134	0.00100	0.100	0.0966	0.0989	0.0960	0.0850 to 0.115	96.6	70.0 to 130	2.35	20.0
BB12489	Manganese, Dissolved	mg/L	-0.0000252	0.000147	0.100	0.0976	0.100	0.0996	0.0850 to 0.115	97.4	70.0 to 130	2.43	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPU
Sample Date: 7/12/21 12:53
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient - MW-3

Laboratory ID Number: BB12488

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12491	Fluoride	mg/L	0.0195	0.100	2.50	2.58	0.0245	2.55	2.25 to 2.75	103	80.0 to 120	0.00	20.0
BB12489	Alkalinity, Total as CaCO3	mg/L					192	53.9	45.0 to 55.0			1.04	10.0
BB12489	Solids, Dissolved	mg/L	-4.00	25.0			3040	47.0	40.0 to 60.0			0.662	5.00
BB12491	Sulfate	mg/L	-0.557	1.00	20.0	20.0	-0.380	19.4	18.0 to 22.0	100	80.0 to 120	0.00	20.0
BB12491	Chloride	mg/L	-0.0691	1.00	10.0	11.3	0.232	10.0	9.00 to 11.0	113	80.0 to 120	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-4

Location Code: WMWGORPU
Collected: 7/12/21 14:35
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12489

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 12:22	7/22/21 16:29		1.015	0.0411	mg/L	0.030000	0.1015	J
* Calcium, Total	7/21/21 12:22	7/23/21 11:29		10.15	242	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 12:22	7/22/21 16:29		1.015	0.0132	mg/L	0.008120	0.0406	J
* Lithium, Total	7/21/21 12:22	7/22/21 16:29		1.015	0.0533	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 12:22	7/23/21 11:35		101.5	389	mg/L	2.1315	40.6	
* Sodium, Total	7/21/21 12:22	7/22/21 16:29		1.015	36.6	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/27/21 09:49	7/27/21 11:11		1.015	Not Detected	mg/L	0.008120	0.0406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/15/21 15:15	7/16/21 15:32		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/15/21 15:15	7/16/21 15:32		1.015	0.000116	mg/L	0.000068	0.000203	J
* Barium, Total	7/15/21 15:15	7/16/21 15:32		1.015	0.0108	mg/L	0.000102	0.000203	
* Beryllium, Total	7/15/21 15:15	7/16/21 15:32		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/15/21 15:15	7/16/21 15:32		1.015	0.0000819	mg/L	0.000068	0.000203	J
* Chromium, Total	7/15/21 15:15	7/16/21 15:32		1.015	0.000302	mg/L	0.000203	0.001015	J
* Cobalt, Total	7/15/21 15:15	7/16/21 15:32		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	7/15/21 15:15	7/16/21 15:32		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/15/21 15:15	7/16/21 15:32		1.015	0.000138	mg/L	0.000068	0.000203	J
* Potassium, Total	7/15/21 15:15	7/16/21 15:32		1.015	7.65	mg/L	0.169505	0.5075	
* Manganese, Total	7/15/21 15:15	7/16/21 15:32		1.015	0.000607	mg/L	0.000068	0.000203	
* Selenium, Total	7/15/21 15:15	7/16/21 15:32		1.015	0.00155	mg/L	0.000508	0.001015	
* Thallium, Total	7/15/21 15:15	7/16/21 15:32		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: ABB***								
* Manganese, Dissolved	7/16/21 08:37	7/16/21 14:49		1.015	0.000225	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: CRB***								
* Mercury, Total by CVAA	7/14/21 10:02	7/14/21 13:53		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/21/21 09:10	7/21/21 09:40		1	194	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/14/21 12:18	7/15/21 13:41		1	3000	mg/L		147.1	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient - MW-4

Location Code: WMWGORPU
Collected: 7/12/21 14:35
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12489

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/21/21 09:10	7/21/21 09:40		1	194	mg/L			
Carbonate Alkalinity, (calc.)	7/21/21 09:10	7/21/21 09:40		1	0.06	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/14/21 12:02	7/14/21 12:02		1	1.56	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/15/21 10:22	7/15/21 10:22		1	0.350	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/14/21 10:38	7/14/21 10:38		100	1930	mg/L	50.00	100	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/12/21 14:31	7/12/21 14:31			2977.13	uS/cm			FA
pH	7/12/21 14:31	7/12/21 14:31			6.06	SU			FA
Temperature	7/12/21 14:31	7/12/21 14:31			21.22	C			FA
Turbidity	7/12/21 14:31	7/12/21 14:31			0.66	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPU
Sample Date: 7/12/21 14:35
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient - MW-4

Laboratory ID Number: BB12489

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12491	Molybdenum, Total	mg/L	0.0000261	0.000147	0.100	0.0984	0.103	0.100	0.0850 to 0.115	98.4	70.0 to 130	4.57	20.0
BB12491	Mercury, Total by CVAA	mg/L	5.390E-05	0.000500	0.004	0.00402	0.00398	0.00396	0.00340 to 0.00460	100	70.0 to 130	1.00	20.0
BB12491	Beryllium, Total	mg/L	0.0000533	0.000880	0.100	0.103	0.102	0.101	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB12491	Sodium, Total	mg/L	0.00119	0.0660	5.00	4.95	4.92	4.98	4.25 to 5.75	99.0	70.0 to 130	0.608	20.0
BB12491	Iron, Total	mg/L	2.630E-05	0.0176	0.2	0.199	0.198	0.201	0.170 to 0.230	99.5	70.0 to 130	0.504	20.0
BB12491	Potassium, Total	mg/L	0.00426	0.367	10.0	9.90	10.2	10.2	8.50 to 11.5	99.0	70.0 to 130	2.99	20.0
BB12491	Cobalt, Total	mg/L	-0.0000691	0.000147	0.100	0.0949	0.0984	0.0969	0.0850 to 0.115	94.9	70.0 to 130	3.62	20.0
BB12491	Manganese, Total	mg/L	-0.000003	0.000147	0.100	0.101	0.104	0.103	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Selenium, Total	mg/L	-0.0000651	0.00100	0.100	0.102	0.105	0.104	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BB12489	Iron, Dissolved	mg/L	-0.000219	0.0176	0.2	0.193	0.189	0.197	0.170 to 0.230	96.5	70.0 to 130	2.09	20.0
BB12491	Barium, Total	mg/L	-0.0000459	0.000200	0.100	0.101	0.104	0.0999	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Calcium, Total	mg/L	0.00896	0.152	5.00	5.03	5.02	5.05	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB12491	Magnesium, Total	mg/L	-0.00929	0.0462	5.00	5.00	5.00	5.01	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB12491	Chromium, Total	mg/L	0.0000775	0.000440	0.100	0.0977	0.101	0.0999	0.0850 to 0.115	97.7	70.0 to 130	3.32	20.0
BB12491	Thallium, Total	mg/L	-0.000124	0.000147	0.100	0.115	0.115	0.112	0.0850 to 0.115	115	70.0 to 130	0.00	20.0
BB12491	Arsenic, Total	mg/L	0.0000344	0.000147	0.100	0.107	0.104	0.105	0.0850 to 0.115	107	70.0 to 130	2.84	20.0
BB12491	Antimony, Total	mg/L	0.000134	0.00100	0.100	0.0966	0.0989	0.0960	0.0850 to 0.115	96.6	70.0 to 130	2.35	20.0
BB12489	Manganese, Dissolved	mg/L	-0.0000252	0.000147	0.100	0.0976	0.100	0.0996	0.0850 to 0.115	97.4	70.0 to 130	2.43	20.0
BB12491	Lithium, Total	mg/L	-8.650E-05	0.0154	0.200	0.197	0.195	0.199	0.170 to 0.230	98.5	70.0 to 130	1.02	20.0
BB12491	Lead, Total	mg/L	0.0000018	0.000147	0.100	0.113	0.113	0.107	0.0850 to 0.115	113	70.0 to 130	0.00	20.0
BB12491	Boron, Total	mg/L	0.000567	0.0650	1.00	0.980	0.977	0.995	0.850 to 1.15	98.0	70.0 to 130	0.307	20.0
BB12491	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0930	0.0983	0.0943	0.0850 to 0.115	93.0	70.0 to 130	5.54	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPU
Sample Date: 7/12/21 14:35
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient - MW-4

Laboratory ID Number: BB12489

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12489	Solids, Dissolved	mg/L	-4.00	25.0			3040	47.0	40.0 to 60.0			0.662	5.00
BB12491	Fluoride	mg/L	0.0195	0.100	2.50	2.58	0.0245	2.55	2.25 to 2.75	103	80.0 to 120	0.00	20.0
BB12491	Sulfate	mg/L	-0.557	1.00	20.0	20.0	-0.380	19.4	18.0 to 22.0	100	80.0 to 120	0.00	20.0
BB12491	Chloride	mg/L	-0.0691	1.00	10.0	11.3	0.232	10.0	9.00 to 11.0	113	80.0 to 120	0.00	20.0
BB12489	Alkalinity, Total as CaCO3	mg/L					192	53.9	45.0 to 55.0			1.04	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.
LBM 8/2/2021

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient Equipment Blank-1

Location Code: WMWGORPUEB
Collected: 7/12/21 15:00
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12490

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 12:22	7/22/21 16:32		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	7/21/21 12:22	7/22/21 16:32		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	7/21/21 12:22	7/22/21 16:32		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	7/21/21 12:22	7/22/21 16:32		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	7/21/21 12:22	7/22/21 16:32		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	7/21/21 12:22	7/22/21 16:32		1.015	Not Detected	mg/L	0.03045	0.406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Beryllium, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/15/21 15:15	7/16/21 15:36		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1	***Analyst: CRB***								
* Mercury, Total by CVAA	7/14/21 10:02	7/14/21 13:55		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/14/21 12:18	7/15/21 13:41		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/14/21 12:03	7/14/21 12:03		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/15/21 10:23	7/15/21 10:23		1	Not Detected	mg/L	0.06	0.1	U
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/14/21 10:39	7/14/21 10:39		1	Not Detected	mg/L	0.50	1	U

MDL's and RL's are adjusted for sample dilution, as applicable

Comments:

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPUEB
Sample Date: 7/12/21 15:00
Customer ID:
Delivery Date: 7/13/21 09:15

Description:Gorgas Pooled Upgradient Equipment Blank-1

Laboratory ID Number: BB12490

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12491	Lithium, Total	mg/L	-8.650E-05	0.0154	0.200	0.197	0.195	0.199	0.170 to 0.230	98.5	70.0 to 130	1.02	20.0
BB12491	Lead, Total	mg/L	0.0000018	0.000147	0.100	0.113	0.113	0.107	0.0850 to 0.115	113	70.0 to 130	0.00	20.0
BB12491	Beryllium, Total	mg/L	0.0000533	0.000880	0.100	0.103	0.102	0.101	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB12491	Sodium, Total	mg/L	0.00119	0.0660	5.00	4.95	4.92	4.98	4.25 to 5.75	99.0	70.0 to 130	0.608	20.0
BB12491	Selenium, Total	mg/L	-0.0000651	0.00100	0.100	0.102	0.105	0.104	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BB12491	Barium, Total	mg/L	-0.0000459	0.000200	0.100	0.101	0.104	0.0999	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Calcium, Total	mg/L	0.00896	0.152	5.00	5.03	5.02	5.05	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB12491	Cobalt, Total	mg/L	-0.0000691	0.000147	0.100	0.0949	0.0984	0.0969	0.0850 to 0.115	94.9	70.0 to 130	3.62	20.0
BB12491	Manganese, Total	mg/L	-0.000003	0.000147	0.100	0.101	0.104	0.103	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Boron, Total	mg/L	0.000567	0.0650	1.00	0.980	0.977	0.995	0.850 to 1.15	98.0	70.0 to 130	0.307	20.0
BB12491	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0930	0.0983	0.0943	0.0850 to 0.115	93.0	70.0 to 130	5.54	20.0
BB12491	Molybdenum, Total	mg/L	0.0000261	0.000147	0.100	0.0984	0.103	0.100	0.0850 to 0.115	98.4	70.0 to 130	4.57	20.0
BB12491	Mercury, Total by CVAA	mg/L	5.390E-05	0.000500	0.004	0.00402	0.00398	0.00396	0.00340 to 0.00460	100	70.0 to 130	1.00	20.0
BB12491	Iron, Total	mg/L	2.630E-05	0.0176	0.2	0.199	0.198	0.201	0.170 to 0.230	99.5	70.0 to 130	0.504	20.0
BB12491	Potassium, Total	mg/L	0.00426	0.367	10.0	9.90	10.2	10.2	8.50 to 11.5	99.0	70.0 to 130	2.99	20.0
BB12491	Magnesium, Total	mg/L	-0.00929	0.0462	5.00	5.00	5.00	5.01	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB12491	Chromium, Total	mg/L	0.0000775	0.000440	0.100	0.0977	0.101	0.0999	0.0850 to 0.115	97.7	70.0 to 130	3.32	20.0
BB12491	Thallium, Total	mg/L	-0.000124	0.000147	0.100	0.115	0.115	0.112	0.0850 to 0.115	115	70.0 to 130	0.00	20.0
BB12491	Arsenic, Total	mg/L	0.0000344	0.000147	0.100	0.107	0.104	0.105	0.0850 to 0.115	107	70.0 to 130	2.84	20.0
BB12491	Antimony, Total	mg/L	0.000134	0.00100	0.100	0.0966	0.0989	0.0960	0.0850 to 0.115	96.6	70.0 to 130	2.35	20.0

Comments:

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPUEB
Sample Date: 7/12/21 15:00
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient Equipment Blank-1

Laboratory ID Number: BB12490

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12491	Fluoride	mg/L	0.0195	0.100	2.50	2.58	0.0245	2.55	2.25 to 2.75	103	80.0 to 120	0.00	20.0
BB12489	Solids, Dissolved	mg/L	-4.00	25.0			3040	47.0	40.0 to 60.0			0.662	5.00
BB12491	Sulfate	mg/L	-0.557	1.00	20.0	20.0	-0.380	19.4	18.0 to 22.0	100	80.0 to 120	0.00	20.0
BB12491	Chloride	mg/L	-0.0691	1.00	10.0	11.3	0.232	10.0	9.00 to 11.0	113	80.0 to 120	0.00	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Pooled Upgradient Field Blank-1

Location Code: WMWGORPUFB
Collected: 7/12/21 15:10
Customer ID:
Submittal Date: 7/13/21 09:15

Laboratory ID Number: BB12491

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 12:22	7/22/21 16:36		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	7/21/21 12:22	7/22/21 16:36		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	7/21/21 12:22	7/22/21 16:36		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	7/21/21 12:22	7/22/21 16:36		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	7/21/21 12:22	7/22/21 16:36		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	7/21/21 12:22	7/22/21 16:36		1.015	Not Detected	mg/L	0.03045	0.406	U
Analytical Method: EPA 200.8	***Analyst: DLJ***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Beryllium, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/15/21 15:15	7/16/21 15:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1	***Analyst: CRB***								
* Mercury, Total by CVAA	7/14/21 10:02	7/14/21 13:57		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/14/21 12:18	7/15/21 13:41		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/14/21 12:04	7/14/21 12:04		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/15/21 10:24	7/15/21 10:24		1	Not Detected	mg/L	0.06	0.1	U
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/14/21 10:41	7/14/21 10:41		1	Not Detected	mg/L	0.50	1	U

MDL's and RL's are adjusted for sample dilution, as applicable

Comments:

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORPUFB
Sample Date: 7/12/21 15:10
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient Field Blank-1

Laboratory ID Number: BB12491

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12491	Molybdenum, Total	mg/L	0.0000261	0.000147	0.100	0.0984	0.103	0.100	0.0850 to 0.115	98.4	70.0 to 130	4.57	20.0
BB12491	Mercury, Total by CVAA	mg/L	5.390E-05	0.000500	0.004	0.00402	0.00398	0.00396	0.00340 to 0.00460	100	70.0 to 130	1.00	20.0
BB12491	Lithium, Total	mg/L	-8.650E-05	0.0154	0.200	0.197	0.195	0.199	0.170 to 0.230	98.5	70.0 to 130	1.02	20.0
BB12491	Lead, Total	mg/L	0.0000018	0.000147	0.100	0.113	0.113	0.107	0.0850 to 0.115	113	70.0 to 130	0.00	20.0
BB12491	Cobalt, Total	mg/L	-0.0000691	0.000147	0.100	0.0949	0.0984	0.0969	0.0850 to 0.115	94.9	70.0 to 130	3.62	20.0
BB12491	Manganese, Total	mg/L	-0.000003	0.000147	0.100	0.101	0.104	0.103	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Boron, Total	mg/L	0.000567	0.0650	1.00	0.980	0.977	0.995	0.850 to 1.15	98.0	70.0 to 130	0.307	20.0
BB12491	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0930	0.0983	0.0943	0.0850 to 0.115	93.0	70.0 to 130	5.54	20.0
BB12491	Beryllium, Total	mg/L	0.0000533	0.000880	0.100	0.103	0.102	0.101	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB12491	Sodium, Total	mg/L	0.00119	0.0660	5.00	4.95	4.92	4.98	4.25 to 5.75	99.0	70.0 to 130	0.608	20.0
BB12491	Iron, Total	mg/L	2.630E-05	0.0176	0.2	0.199	0.198	0.201	0.170 to 0.230	99.5	70.0 to 130	0.504	20.0
BB12491	Potassium, Total	mg/L	0.00426	0.367	10.0	9.90	10.2	10.2	8.50 to 11.5	99.0	70.0 to 130	2.99	20.0
BB12491	Selenium, Total	mg/L	-0.0000651	0.00100	0.100	0.102	0.105	0.104	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BB12491	Barium, Total	mg/L	-0.0000459	0.000200	0.100	0.101	0.104	0.0999	0.0850 to 0.115	101	70.0 to 130	2.93	20.0
BB12491	Calcium, Total	mg/L	0.00896	0.152	5.00	5.03	5.02	5.05	4.25 to 5.75	101	70.0 to 130	0.199	20.0
BB12491	Magnesium, Total	mg/L	-0.00929	0.0462	5.00	5.00	5.00	5.01	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB12491	Chromium, Total	mg/L	0.0000775	0.000440	0.100	0.0977	0.101	0.0999	0.0850 to 0.115	97.7	70.0 to 130	3.32	20.0
BB12491	Thallium, Total	mg/L	-0.000124	0.000147	0.100	0.115	0.115	0.112	0.0850 to 0.115	115	70.0 to 130	0.00	20.0
BB12491	Arsenic, Total	mg/L	0.0000344	0.000147	0.100	0.107	0.104	0.105	0.0850 to 0.115	107	70.0 to 130	2.84	20.0
BB12491	Antimony, Total	mg/L	0.000134	0.00100	0.100	0.0966	0.0989	0.0960	0.0850 to 0.115	96.6	70.0 to 130	2.35	20.0

Comments:

Reported: 8/4/2021
Version: 3.3
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORPUFB
Sample Date: 7/12/21 15:10
Customer ID:
Delivery Date: 7/13/21 09:15

Description: Gorgas Pooled Upgradient Field Blank-1

Laboratory ID Number: BB12491

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB12489	Solids, Dissolved	mg/L	-4.00	25.0			3040	47.0	40.0 to 60.0			0.662	5.00
BB12491	Sulfate	mg/L	-0.557	1.00	20.0	20.0	-0.380	19.4	18.0 to 22.0	100	80.0 to 120	0.00	20.0
BB12491	Chloride	mg/L	-0.0691	1.00	10.0	11.3	0.232	10.0	9.00 to 11.0	113	80.0 to 120	0.00	20.0
BB12491	Fluoride	mg/L	0.0195	0.100	2.50	2.58	0.0245	2.55	2.25 to 2.75	103	80.0 to 120	0.00	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
(205) 664-6001

Definitions

Alabama Power

Abbreviation	Description
DF	Dilution Factor
LCS	Lab Control Sample
LFM	Lab Fortified Matrix
MB	Method Blank
MDL	Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Prec	Precision (% RPD)
Q	Qualifier; comment used to note deviations or additional information associated with analytical results.
QC	Quality Control
Rec	Recovery of Matrix Spike
RL	Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.
Vio Spec	Violation Specification; regulatory limit which has been exceeded by the sample analyzed.

Qualifier	Description
FA	Field results were reviewed by the Water Field Group. Refer to APC Field Case Narrative.
J	Reported value is an estimate because concentration is less than reporting limit.
U	Compound was analyzed, but not detected.

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☐ Outside Lab
☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Pooled Upgradient

Bottles

1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
2	Diss Metals	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	07/12/2021	10:45	6	Groundwater		BB12485
MW-1 Dup	07/12/2021	10:45	6	Sample Duplicate		BB12486
MW-2	07/12/2021	11:48	6	Groundwater		BB12487
MW-3	07/12/2021	12:53	6	Groundwater		BB12488
MW-4	07/12/2021	14:35	6	Groundwater		BB12489
EB-1	07/12/2021	15:00	4	Equipment Blank		BB12490
FB-1	07/12/2021	15:10	4	Field Blank		BB12491

Relinquished By	Received By	Date/Time
		07/13/2021 08:33

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20009-2-1	Cooler Temp	0.2 degrees C
Sample Event	1328	Thermometer ID	5408-27568-2-2
		pH Strip ID	8206-45805-10-9

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☑ Outside Lab
☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Pooled Upgradient

Bottles																
	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	N/A	N/A	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments: Rad MS/MSD collected @ MW-2

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	07/12/2021	10:45	1	Groundwater		BB12492
MW-1 Dup	07/12/2021	10:45	1	Sample Duplicate		BB12493
MW-2	07/12/2021	11:48	3	Groundwater		BB12494
MW-3	07/12/2021	12:53	1	Groundwater		BB12495
MW-4	07/12/2021	14:35	1	Groundwater		BB12496
EB-1	07/12/2021	15:00	1	Equipment Blank		BB12497
FB-1	07/12/2021	15:10	1	Field Blank		BB12498

Relinquished By	Received By	Date/Time
		07/13/2021 08:33

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20009-2-1	Cooler Temp	N/A
Sample Event	1328	Thermometer ID	N/A
		pH Strip ID	8206-45805-10-9

Bottles/Pre-Preserved Bottles are provided by the GTL

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

August 19, 2021

Laura Midkiff
Alabama Power
744 Highway 87
GSC #8
Calera, AL 35040

RE: Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on July 15, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

Kevin Herring
kevin.herring@pacelabs.com
1(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Brooke Caton, Alabama Power
Renee Jernigan, Alabama Power

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92549918001	**BB12492 MW-1**	Water	07/12/21 10:45	07/15/21 09:20
92549918002	**BB12493 MW-1 DUP**	Water	07/12/21 10:45	07/15/21 09:20
92549918003	**BB12494 MW-2**	Water	07/12/21 11:48	07/15/21 09:20
92549918004	**BB12494 MW-2 MS**	Water	07/12/21 11:48	07/15/21 09:20
92549918005	**BB12494 MW-2 MSD**	Water	07/12/21 11:48	07/15/21 09:20
92549918006	**BB12495 MW-3**	Water	07/12/21 12:53	07/15/21 09:20
92549918007	**BB12496 MW-4**	Water	07/12/21 14:35	07/15/21 09:20
92549918008	**BB12497 EB-1**	Water	07/12/21 15:00	07/15/21 09:20
92549918009	**BB12498 FB-1**	Water	07/12/21 15:10	07/15/21 09:20

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92549918001	**BB12492 MW-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92549918002	**BB12493 MW-1 DUP**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92549918003	**BB12494 MW-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92549918004	**BB12494 MW-2 MS**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92549918005	**BB12494 MW-2 MSD**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92549918006	**BB12495 MW-3**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92549918007	**BB12496 MW-4**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92549918008	**BB12497 EB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92549918009	**BB12498 FB-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Method: **EPA 9315**
Description: 9315 Total Radium
Client: Alabama Power
Date: August 19, 2021

General Information:
9 samples were analyzed for EPA 9315 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Method: **EPA 9320**
Description: 9320 Radium 228
Client: Alabama Power
Date: August 19, 2021

General Information:
9 samples were analyzed for EPA 9320 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Alabama Power
Date: August 19, 2021

General Information:
7 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Sample: BB12492 MW-1 **Lab ID: 92549918001** Collected: 07/12/21 10:45 Received: 07/15/21 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.112U ± 0.166 (0.354) C:89% T:NA**	pCi/L	08/13/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.364U ± 0.366 (0.751) C:66% T:83%**	pCi/L	08/03/21 14:37	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.476U ± 0.532 (1.11)**	pCi/L	08/16/21 16:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Sample: BB12493 MW-1 DUP **Lab ID: 92549918002** Collected: 07/12/21 10:45 Received: 07/15/21 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.0928U ± 0.150 (0.490) C:90% T:NA**	pCi/L	08/13/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.767 ± 0.411 (0.721) C:68% T:85%**	pCi/L	08/03/21 14:37	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.767U ± 0.561 (1.21)**	pCi/L	08/16/21 16:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Sample: BB12494 MW-2 **Lab ID: 92549918003** Collected: 07/12/21 11:48 Received: 07/15/21 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.155U ± 0.210 (0.445) C:85% T:NA**	pCi/L	08/13/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**-0.00397U ± 0.356 (0.828) C:72% T:82%**	pCi/L	08/03/21 14:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.155U ± 0.566 (1.27)**	pCi/L	08/16/21 16:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Sample: BB12494 MW-2 MS **Lab ID: 92549918004** Collected: 07/12/21 11:48 Received: 07/15/21 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**85.72 %REC ± NA (NA) C:NA T:NA**	pCi/L	08/13/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**104.17 %REC ± NA (NA) C:NA T:NA**	pCi/L	08/03/21 14:38	15262-20-1	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Sample: BB12494 MW-2 MSD **Lab ID: 92549918005** Collected: 07/12/21 11:48 Received: 07/15/21 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**87.19 %REC 1.70 RPD ± NA (NA) C:NA T:NA**	pCi/L	08/13/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**108.02 %REC 3.63 RPD ± NA (NA) C:NA T:NA**	pCi/L	08/03/21 14:38	15262-20-1	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Sample: BB12495 MW-3 **Lab ID: 92549918006** Collected: 07/12/21 12:53 Received: 07/15/21 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.000304U ± 0.176 (0.482) C:89% T:NA**	pCi/L	08/13/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.114U ± 0.333 (0.750) C:65% T:84%**	pCi/L	08/03/21 14:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.114U ± 0.509 (1.23)**	pCi/L	08/16/21 16:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Sample: BB12496 MW-4 **Lab ID: 92549918007** Collected: 07/12/21 14:35 Received: 07/15/21 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.107U ± 0.176 (0.390) C:95% T:NA**	pCi/L	08/13/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.194U ± 0.358 (0.784) C:72% T:84%**	pCi/L	08/03/21 14:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.301U ± 0.534 (1.17)**	pCi/L	08/16/21 16:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Sample: BB12497 EB-1 **Lab ID: 92549918008** Collected: 07/12/21 15:00 Received: 07/15/21 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0598U ± 0.171 (0.423) C:83% T:NA**	pCi/L	08/13/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.269U ± 0.375 (0.805) C:69% T:86%**	pCi/L	08/03/21 14:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.329U ± 0.546 (1.23)**	pCi/L	08/16/21 16:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Sample: BB12498 FB-1 **Lab ID: 92549918009** Collected: 07/12/21 15:10 Received: 07/15/21 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**-0.0401U ± 0.143 (0.443) C:85% T:NA**	pCi/L	08/13/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.101U ± 0.314 (0.709) C:67% T:88%**	pCi/L	08/03/21 14:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.101U ± 0.457 (1.15)**	pCi/L	08/16/21 16:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

QC Batch: 457856
QC Batch Method: EPA 9320
Analysis Method: EPA 9320
Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92549918001, 92549918002, 92549918003, 92549918004, 92549918005, 92549918006, 92549918007, 92549918008, 92549918009

METHOD BLANK: 2210350 Matrix: Water
Associated Lab Samples: 92549918001, 92549918002, 92549918003, 92549918004, 92549918005, 92549918006, 92549918007, 92549918008, 92549918009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.186 ± 0.369 (0.813) C:71% T:80%	pCi/L	08/03/21 14:39	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

QC Batch: 457316
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92549918001, 92549918002, 92549918003, 92549918004, 92549918005, 92549918006, 92549918007, 92549918008, 92549918009

METHOD BLANK: 2207826 Matrix: Water
Associated Lab Samples: 92549918001, 92549918002, 92549918003, 92549918004, 92549918005, 92549918006, 92549918007, 92549918008, 92549918009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0608 ± 0.218 (0.537) C:89% T:NA	pCi/L	08/13/21 08:32	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS POOLED WMWGORPU_1328
Pace Project No.: 92549918

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92549918001	**BB12492 MW-1**	EPA 9315	457316		
92549918002	**BB12493 MW-1 DUP**	EPA 9315	457316		
92549918003	**BB12494 MW-2**	EPA 9315	457316		
92549918004	**BB12494 MW-2 MS**	EPA 9315	457316		
92549918005	**BB12494 MW-2 MSD**	EPA 9315	457316		
92549918006	**BB12495 MW-3**	EPA 9315	457316		
92549918007	**BB12496 MW-4**	EPA 9315	457316		
92549918008	**BB12497 EB-1**	EPA 9315	457316		
92549918009	**BB12498 FB-1**	EPA 9315	457316		
92549918001	**BB12492 MW-1**	EPA 9320	457856		
92549918002	**BB12493 MW-1 DUP**	EPA 9320	457856		
92549918003	**BB12494 MW-2**	EPA 9320	457856		
92549918004	**BB12494 MW-2 MS**	EPA 9320	457856		
92549918005	**BB12494 MW-2 MSD**	EPA 9320	457856		
92549918006	**BB12495 MW-3**	EPA 9320	457856		
92549918007	**BB12496 MW-4**	EPA 9320	457856		
92549918008	**BB12497 EB-1**	EPA 9320	457856		
92549918009	**BB12498 FB-1**	EPA 9320	457856		
92549918001	**BB12492 MW-1**	Total Radium Calculation	460439		
92549918002	**BB12493 MW-1 DUP**	Total Radium Calculation	460439		
92549918003	**BB12494 MW-2**	Total Radium Calculation	460439		
92549918006	**BB12495 MW-3**	Total Radium Calculation	460439		
92549918007	**BB12496 MW-4**	Total Radium Calculation	460439		
92549918008	**BB12497 EB-1**	Total Radium Calculation	460439		
92549918009	**BB12498 FB-1**	Total Radium Calculation	460439		

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Alabama Power

WO# : 92549918

92549918

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other ___

LIMS Login

Tracking #: 5140 3411 5909

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

Thermometer Used — Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# 1003801 / Date and Initials of person examining contents: RJA 7-15-21
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. PH<2
All containers meet method preservation requirements.	✓			Initial when completed: RJA / Date/time of preservation / Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: RJA / Date: / Survey Meter SN:

Client Notification/ Resolution:

Person Contacted: ___ Date/Time: ___ Contacted By: ___

Comments/ Resolution: Rcvd MS/MSD for MW-2

☐ A check in this box indicates that additional information has been stored in ereports.

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A — Required Client Information:

Company:	Alabama Power Company
Address:	744 Highway 87 GSC Bldg #8 Calera, AL 35040
Email To:	lbmidkif@southernco.com
Phone:	205-664-6197 Fax:
Requested Due Date:	28 days

Section B — Required Project Information:

Report To:	Laura Midkiff
Copy To:	Brooke Caton & Renee Jernigan
Purchase Order #:	APC10700668
Project Name:	Plant Gorgas Pooled Upgradient
Project Number:	WMWGORPU_1328

Section C — Invoice Information:

Attention:	Laura Midkiff
Company Name:	Alabama Power Co.
Address:	744 Highway 87 GSC Bldg #8
Pace Quote:	CCR
Pace Project Manager:	Kevin.Herring@pacelabs.com
Pace Profile #:	13805

Regulatory Agency:

State / Location: AL

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike Du	Residual Chlorine (Y/N)
1	BB12492	MW-1	GW	G			7/12/2021	10:45		1			X							X	X	X		
2	BB12493	MW-1 DUP	GW	G			7/12/2021	10:45		1			X							X	X	X		
3	BB12494	MW-2	GW	G			7/12/2021	11:48		3			X							X	X	X	X	
4	BB12495	MW-3	GW	G			7/12/2021	12:53		1			X							X	X	X		
5	BB12496	MW-4	GW	G			7/12/2021	14:35		1			X							X	X	X		
6	BB12497	EB-1	GW	G			7/12/2021	15:00		1			X							X	X	X		
7	BB12498	FB-1	GW	G			7/12/2021	15:10		1			X							X	X	X		
8																								
9																								
10																								
11																								
12																								

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Laura Midkiff/ APC GTL	7/13/2021	10:15		7-15-21	0920	N/A	N	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

WO#: 92549918

PM: KLH1 Due Date: 08/13/21

CLIENT: 92-AL Power

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JC2
Date:	7/30/2021
Worklist:	61831
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2210350
MB concentration:	0.186
M/B 2 Sigma CSU:	0.369
MB MDC:	0.813
MB Numerical Performance Indicator:	0.99
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS61831	LCSD61831
Count Date:	8/3/2021	
Spike I.D.:	21-003	
Decay Corrected Spike Concentration (pCi/mL):	36.708	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.810	
Target Conc. (pCi/L, g, F):	4.534	
Uncertainty (Calculated):	0.222	
Result (pCi/L, g, F):	4.013	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.972	
Numerical Performance Indicator:	-1.03	
Percent Recovery:	88.50%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	7/14/2021	7/12/2021
Sample I.D.	92550955021	92549918003
Sample MS I.D.	92550955022	92549918004
Sample MSD I.D.	92550955023	92549918005
Spike I.D.:	21-003	21-003
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	36.952	36.952
Spike Volume Used in MS (mL):	0.20	0.20
Spike Volume Used in MSD (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.806	0.812
MS Target Conc.(pCi/L, g, F):	9.165	9.099
MSD Aliquot (L, g, F):	0.810	0.809
MSD Target Conc. (pCi/L, g, F):	9.123	9.137
MS Spike Uncertainty (calculated):	0.449	0.446
MSD Spike Uncertainty (calculated):	0.447	0.448
Sample Result:	-0.002	-0.004
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.326	0.356
Sample Matrix Spike Result:	9.623	9.474
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.948	1.878
Sample Matrix Spike Duplicate Result:	10.171	9.866
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.026	1.960
MS Numerical Performance Indicator:	0.446	0.379
MSD Numerical Performance Indicator:	0.980	0.703
MS Percent Recovery:	105.02%	104.17%
MSD Percent Recovery:	111.51%	108.02%
MS Status vs Numerical Indicator:	Pass	Pass
MSD Status vs Numerical Indicator:	Pass	Pass
MS Status vs Recovery:	Pass	Pass
MSD Status vs Recovery:	Pass	Pass
MS/MSD Upper % Recovery Limits:	135%	135%
MS/MSD Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment		
Sample I.D.:		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	92550955021	92549918003
Sample MS I.D.	92550955022	92549918004
Sample MSD I.D.	92550955023	92549918005
Sample Matrix Spike Result:	9.623	9.474
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.948	1.878
Sample Matrix Spike Duplicate Result:	10.171	9.866
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.026	1.960
Duplicate Numerical Performance Indicator:	-0.382	-0.283
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	5.99%	3.63%
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	Pass
MS/ MSD Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	36%	36%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

JC 8/4/21

OM 8/4/21

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LAL
Date:	7/23/2021
Worklist:	61766
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2207826
MB concentration:	0.061
M/B Counting Uncertainty:	0.218
MB MDC:	0.537
MB Numerical Performance Indicator:	0.55
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS61766	LCSD61766
Count Date:	8/13/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.035	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.200	
Target Conc. (pCi/L, g, F):	12.013	
Uncertainty (Calculated):	0.144	
Result (pCi/L, g, F):	13.562	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.284	
Numerical Performance Indicator:	2.35	
Percent Recovery:	112.89%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.	92549918003	
Sample MS I.D.	92549918004	
Sample MSD I.D.	92549918005	
Spike I.D.:	19-033	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	25.335	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.201	
MS Target Conc.(pCi/L, g, F):	25.256	
MSD Aliquot (L, g, F):	0.210	
MSD Target Conc. (pCi/L, g, F):	24.093	
MS Spike Uncertainty (calculated):	0.303	
MSD Spike Uncertainty (calculated):	0.289	
Sample Result:	0.155	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.208	
Sample Matrix Spike Result:	21.803	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.637	
Sample Matrix Spike Duplicate Result:	21.161	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.655	
MS Numerical Performance Indicator:	-4.215	
MSD Numerical Performance Indicator:	-3.573	
MS Percent Recovery:	85.72%	
MSD Percent Recovery:	87.19%	
MS Status vs Numerical Indicator:	N/A	
MSD Status vs Numerical Indicator:	N/A	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	125%	
MS/MSD Lower % Recovery Limits:	75%	

Duplicate Sample Assessment		
Sample I.D.:		
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Result Counting Uncertainty (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	92549918003	
Sample MS I.D.	92549918004	
Sample MSD I.D.	92549918005	
Sample Matrix Spike Result:	21.803	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.637	
Sample Matrix Spike Duplicate Result:	21.161	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.655	
Duplicate Numerical Performance Indicator:	0.540	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	1.70%	
MS/ MSD Duplicate Status vs Numerical Indicator:	N/A	
MS/ MSD Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

8/19/21

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
205-664-6001

Analytical Report

Alabama Power

Sample Group : WMWGORLF_1330

Project/Site : Gorgas Landfill
Parrish, AL 35580

For : Southern Company Services
3535 Colonnade Parkway
Birmingham, AL 35243

Attention : Dustin Brooks & Greg Dyer

Released By : Laura Midkiff
lbmidkif@southernco.com
(205) 664-6197

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
(205) 664-6001

August 23, 2021

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory between July 21, 2021 and July 22, 2021. All results reported herein conform to the laboratory's most current Quality Assurance Manual. Results marked with an asterisk conform to the most current applicable TNI/NELAC requirements. Exceptions will be noted in the body of the report.

Some analyses were subcontracted. The test report from the external subcontractor is attached to this report in its entirety.

Laboratory certification ID: E571114
Issued By: State of Florida, Department of Health
Expiration: June 30, 2022

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

Sincerely,

Quality Control: Laura Midkiff
Digitally signed by Laura Midkiff
DN: cn=Laura Midkiff, o=Alabama Power Company, ou=Environmental Affairs, email=lbmidkif@southernco.com, c=US
Date: 2021.08.23 12:55:12 -05'00'

Supervision: T. Durant Maske
Digitally signed by T. Durant Maske
DN: cn=T. Durant Maske, o=Alabama Power Company, ou=Environmental Affairs, email=tdmaske@southernco.com, c=US
Date: 2021.08.23 14:26:38 -05'00'

REPORT OF LABORATORY ANALYSIS

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Total Metals ICP

Gorgas Landfill

WMWGORLF_1330

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB13181	703638 & 703658 (Ca Only)	WMWGORLF_1330
BB13182	703638 & 703658 (Ca Only)	WMWGORLF_1330
BB13183	703638 & 703658 (Ca Only)	WMWGORLF_1330
BB13184	703638 & 703658 (Ca Only)	WMWGORLF_1330
BB13185	703638 & 703658 (Ca Only)	WMWGORLF_1330
BB13186	703638 & 703658 (Ca Only)	WMWGORLF_1330
BB13187	703638 & 703658 (Ca Only)	WMWGORLF_1330
BB13188	703638 & 703658 (Ca Only)	WMWGORLF_1330
BB13189	703638 & 703658 (Ca Only)	WMWGORLF_1330
BB13190	703638 & 703658 (Ca Only)	WMWGORLF_1330
BB13191	704249	WMWGORLF_1330
BB13324	704249	WMWGORLF_1330
BB13325	704249	WMWGORLF_1330
BB13326	704249	WMWGORLF_1330
BB13327	704249	WMWGORLF_1330
BB13328	704249	WMWGORLF_1330
BB13329	704249	WMWGORLF_1330
BB13330	704249	WMWGORLF_1330
BB13331	704249	WMWGORLF_1330
BB13332	704249	WMWGORLF_1330
BB13333	704250	WMWGORLF_1330

4. All of the above samples were analyzed by EPA 200.7 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes, except for the following:
    - The method blank for Calcium failed in batch 703638. All affected samples were reprepared and reanalyzed in batch 703658 for Calcium only. The method blank associated with batch 703658 passed all acceptance criteria for Calcium.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met, except for the following:
    - BB13190 Iron, Magnesium, and Sodium MS/MSD spike levels were <30% of the sample concentrations.
    - BB13332 Calcium, Iron, Magnesium, and Sodium MS/MSD spike levels were <30% of the sample concentrations.
    - BB13333 Calcium, Magnesium, and Sodium MS/MSD spike levels were <30% of the sample concentrations.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution Factor
BB13181	Calcium, Magnesium	10.15
BB13182	Calcium, Magnesium	10.15
BB13183	Calcium, Iron, Magnesium	10.15
BB13184	Calcium, Magnesium, Sodium	10.15
BB13185	Calcium, Iron, Magnesium, Sodium	10.15
BB13186	Calcium, Iron, Magnesium, Sodium	10.15
BB13187	Calcium, Magnesium, Sodium	10.15
BB13189	Calcium, Magnesium, Sodium	10.15
BB13190	Calcium, Iron, Magnesium, Sodium	10.15
BB13189	Iron	101.5
BB13191	Calcium, Magnesium	10.15
BB13324	Calcium, Magnesium, Sodium	10.15
BB13325	Calcium, Magnesium	10.15
BB13326	Calcium	10.15
BB13327	Calcium, Iron, Magnesium	10.15
BB13328	Calcium, Magnesium	10.15
BB13331	Calcium, Magnesium, Sodium	10.15
BB13332	Calcium, Iron, Magnesium, Sodium	10.15
BB13333	Calcium, Magnesium,	10.15
BB13327	Magnesium	101.5

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Dissolved Metals ICP

Gorgas Landfill

WMWGORLF_1330

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB13181	703659	WMWGORLF_1330
BB13182	703659	WMWGORLF_1330
BB13183	703659	WMWGORLF_1330
BB13184	703659	WMWGORLF_1330
BB13185	703659	WMWGORLF_1330
BB13186	703659	WMWGORLF_1330
BB13187	703659	WMWGORLF_1330
BB13189	703659	WMWGORLF_1330
BB13190	703659	WMWGORLF_1330
BB13191	703659	WMWGORLF_1330
BB13324	703661	WMWGORLF_1330
BB13325	703661	WMWGORLF_1330
BB13326	703661	WMWGORLF_1330
BB13327	703661	WMWGORLF_1330
BB13328	703661	WMWGORLF_1330
BB13331	703661	WMWGORLF_1330
BB13332	703661	WMWGORLF_1330
BB13333	703661	WMWGORLF_1330

4. All of the above samples were analyzed and prepared by EPA 200.7 for dissolved analysis.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.

- Due to no filtered method blank (MB) or laboratory control sample (LCS) submitted with the sample set, an unfiltered MB and LCS were analyzed with the samples in each batch.
- All laboratory control sample criteria were met.
- The method blank associated with each batch passed all acceptance criteria for all requested analytes.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution Factor
BB13183	Iron	10.15
BB13185	Iron	10.15
BB13186	Iron	10.15
BB13189	Iron	101.5
BB13190	Iron	10.15
BB13327	Iron	10.15
BB13332	Iron	10.15

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Total Metals ICPMS

Gorgas Landfill

WMWGORLF_1330

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB13181	703864	WMWGORLF_1330
BB13182	703864	WMWGORLF_1330
BB13183	703864	WMWGORLF_1330
BB13184	703864	WMWGORLF_1330
BB13185	703864	WMWGORLF_1330
BB13186	703864	WMWGORLF_1330
BB13187	703864	WMWGORLF_1330
BB13188	703864	WMWGORLF_1330
BB13189	703864	WMWGORLF_1330
BB13190	703864	WMWGORLF_1330
BB13191	703865	WMWGORLF_1330
BB13324	703865	WMWGORLF_1330
BB13325	703865	WMWGORLF_1330
BB13326	703865	WMWGORLF_1330
BB13327	703865	WMWGORLF_1330
BB13328	703865	WMWGORLF_1330
BB13329	703865	WMWGORLF_1330
BB13330	703865	WMWGORLF_1330
BB13331	703865	WMWGORLF_1330
BB13332	703865	WMWGORLF_1330
BB13333	703866	WMWGORLF_1330

4. All of the above samples were analyzed by EPA 200.8 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.

- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
    - BB13333 Manganese MS/MSD spike level was <30% of the sample concentration.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution Factor
BB13181	Manganese	5.075
BB13182	Manganese	5.075
BB13183	Manganese	92.365
BB13185	Manganese	92.365
BB13186	Manganese	92.365
BB13189	Manganese	92.365
BB13190	Manganese	5.075
BB13191	Manganese	5.075
BB13325	Manganese	5.075
BB13326	Manganese	5.075
BB13327	Manganese	92.365
BB13333	Manganese	5.075

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Dissolved Metals ICPMS

Gorgas Landfill

WMWGORLF_1330

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB13181	703867	WMWGORLF_1330
BB13182	703867	WMWGORLF_1330
BB13183	703867	WMWGORLF_1330
BB13184	703867	WMWGORLF_1330
BB13185	703867	WMWGORLF_1330
BB13186	703867	WMWGORLF_1330
BB13187	703867	WMWGORLF_1330
BB13189	703867	WMWGORLF_1330
BB13190	703867	WMWGORLF_1330
BB13191	703867	WMWGORLF_1330
BB13324	703868	WMWGORLF_1330
BB13325	703868	WMWGORLF_1330
BB13326	703868	WMWGORLF_1330
BB13327	703868	WMWGORLF_1330
BB13328	703868	WMWGORLF_1330
BB13331	703868	WMWGORLF_1330
BB13332	703868	WMWGORLF_1330
BB13333	703868	WMWGORLF_1330

4. All of the above samples were analyzed and prepared by EPA 200.8 for dissolved analysis.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.

- Due to no filtered method blank (MB) or laboratory control sample (LCS) submitted with the sample set, an unfiltered MB and LCS were analyzed with the samples in each batch.
- All laboratory control sample criteria were met.
- The method blank associated with each preparation batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
    - BB13191 & BB13333 Manganese MS/MSD spike levels were <30% of the sample concentrations.
- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution Factor
BB13181	Manganese	5.075
BB13182	Manganese	5.075
BB13183	Manganese	92.365
BB13185	Manganese	92.365
BB13186	Manganese	92.365
BB13189	Manganese	92.365
BB13190	Manganese	5.075
BB13191	Manganese	5.075
BB13325	Manganese	5.075
BB13326	Manganese	5.075
BB13327	Manganese	92.365
BB13333	Manganese	5.075

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Mercury

Gorgas Landfill

WMWGORLF_1330

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB13181	703259	WMWGORLF_1330
BB13182	703259	WMWGORLF_1330
BB13183	703259	WMWGORLF_1330
BB13184	703259	WMWGORLF_1330
BB13185	703259	WMWGORLF_1330
BB13186	703259	WMWGORLF_1330
BB13187	703259	WMWGORLF_1330
BB13188	703259	WMWGORLF_1330
BB13189	703259	WMWGORLF_1330
BB13190	703259	WMWGORLF_1330
BB13191	703260	WMWGORLF_1330
BB13324	703260	WMWGORLF_1330
BB13325	703260	WMWGORLF_1330
BB13326	703260	WMWGORLF_1330
BB13327	703260	WMWGORLF_1330
BB13328	703260	WMWGORLF_1330
BB13329	703260	WMWGORLF_1330
BB13330	703260	WMWGORLF_1330
BB13331	703260	WMWGORLF_1330
BB13332	703260	WMWGORLF_1330
BB13333	703261	WMWGORLF_1330

4. All of the above samples were analyzed and prepared by EPA 245.1.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the method detection limit for the requested analyte.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analyte.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analyte.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch was below the limit of quantitation for the requested analyte.
- All calibration met criteria for the requested analyte.
- All response signals were satisfactory.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.

7. All samples were analyzed without a dilution.
8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

TDS

Gorgas Landfill

WMWGORLF_1330

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB13181	703262	WMWGORLF_1330
BB13182	703262	WMWGORLF_1330
BB13183	703262	WMWGORLF_1330
BB13184	703262	WMWGORLF_1330
BB13185	703262	WMWGORLF_1330
BB13186	703262	WMWGORLF_1330
BB13187	703262	WMWGORLF_1330
BB13188	703262	WMWGORLF_1330
BB13189	703262	WMWGORLF_1330
BB13190	703262	WMWGORLF_1330
BB13191	703263	WMWGORLF_1330
BB13324	703336	WMWGORLF_1330
BB13325	703336	WMWGORLF_1330
BB13326	703336	WMWGORLF_1330
BB13327	703336	WMWGORLF_1330
BB13328	703336	WMWGORLF_1330
BB13329	703336	WMWGORLF_1330
BB13330	703336	WMWGORLF_1330
BB13331	703336	WMWGORLF_1330
BB13332	703336	WMWGORLF_1330
BB13333	703336	WMWGORLF_1330

4. All of the above samples were analyzed by Standard Method 2540C.
5. All samples were analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- A Method Blank was analyzed with each batch. All criteria were met.
- All final weights of samples, standards, and blanks agreed within 0.5mg of the previous weight.
- A sample duplicate was analyzed with each batch. RPD/2 was less than 5%.
- A laboratory control sample was analyzed with each batch. All criteria were met.
- Samples were between 2.5mg and 200mg residue.
- All samples with residue <2.5mg had the maximum volume of 150mL filtered. Affected samples are as follows:
    - BB13188
    - BB13329
    - BB13330

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Anions

Gorgas Landfill

WMWGORLF_1330

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB13181	703372, 703375, & 703378	WMWGORLF_1330
BB13182	703372, 703375, & 703378	WMWGORLF_1330
BB13183	703372, 703375, & 703378	WMWGORLF_1330
BB13184	703372, 703375, & 703378	WMWGORLF_1330
BB13185	703372, 703375, & 703378	WMWGORLF_1330
BB13186	703372, 703375, & 703378	WMWGORLF_1330
BB13187	703372, 703375, & 703378	WMWGORLF_1330
BB13188	703372, 703375, & 703378	WMWGORLF_1330
BB13189	703372, 703375, & 703378	WMWGORLF_1330
BB13190	703372, 703375, & 703378	WMWGORLF_1330
BB13191	703373, 703376, & 703379	WMWGORLF_1330
BB13324	703373, 703376, & 703379	WMWGORLF_1330
BB13325	703373, 703376, & 703379	WMWGORLF_1330
BB13326	703373, 703376, & 703379	WMWGORLF_1330
BB13327	703373, 703376, & 703379	WMWGORLF_1330
BB13328	703373, 703376, & 703379	WMWGORLF_1330
BB13329	703373, 703376, & 703379	WMWGORLF_1330
BB13330	703373, 703376, & 703379	WMWGORLF_1330
BB13331	703373, 703376, & 703379	WMWGORLF_1330
BB13332	703373, 703376, & 703379	WMWGORLF_1330
BB13333	703374, 703377, & 703380	WMWGORLF_1330

4. All of the above samples were analyzed and prepared by SM4500 Cl E, SM4500 F G, and SM4500 SO4 E.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All calibration met criteria for the requested analyte.
- Prior to sample analysis, an initial calibration verification (ICV), and all criteria were met.
- Prior to sample analysis, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for the requested analyte.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analyte.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analyte.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike was analyzed with each batch. Acceptance criteria for accuracy were met.
- A sample duplicate was analyzed with each batch. Acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Sample ID	Analyte	Dilution Factor
BB13181	Sulfate	50
BB13182	Sulfate	80
BB13183	Sulfate	50
BB13184	Chloride & Sulfate	8 & 40
BB13185	Sulfate	160
BB13186	Sulfate	160
BB13187	Sulfate	40
BB13189	Sulfate	160
BB13190	Sulfate	50
BB13191	Sulfate	40
BB13324	Sulfate	100

BB13325	Sulfate	40
BB13326	Sulfate	40
BB13327	Sulfate	100
BB13328	Sulfate	80
BB13331	Chloride & Sulfate	10 & 40
BB13332	Chloride & Sulfate	16 & 80
BB13333	Sulfate	160

8. The raw data results are shown with dilution factors included.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Case Narrative

Alabama Power

Alkalinity

Gorgas Landfill

WMWGORLF_1330

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

Sample ID	Batch ID	Project ID
BB13181	703999 & 704000	WMWGORLF_1330
BB13182	703999 & 704000	WMWGORLF_1330
BB13183	703999 & 704000	WMWGORLF_1330
BB13184	703999 & 704000	WMWGORLF_1330
BB13185	703999 & 704000	WMWGORLF_1330
BB13186	703999 & 704000	WMWGORLF_1330
BB13187	703999 & 704000	WMWGORLF_1330
BB13188	703999 & 704000	WMWGORLF_1330
BB13189	703999 & 704000	WMWGORLF_1330
BB13190	703999 & 704000	WMWGORLF_1330
BB13191	703999 & 704000	WMWGORLF_1330
BB13324	703999 & 704000	WMWGORLF_1330
BB13325	703999 & 704000	WMWGORLF_1330
BB13326	703999 & 704000	WMWGORLF_1330
BB13327	703999 & 704000	WMWGORLF_1330
BB13328	703999 & 704000	WMWGORLF_1330
BB13329	703999 & 704000	WMWGORLF_1330
BB13330	703999 & 704000	WMWGORLF_1330
BB13331	703999 & 704000	WMWGORLF_1330
BB13332	703999 & 704000	WMWGORLF_1330
BB13333	703999 & 704000	WMWGORLF_1330

4. All of the above samples were analyzed by Standard Method 2320B.
5. All samples were analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- An initial pH check was analyzed with each batch. The acceptance criteria were met.
- A final pH check was analyzed with each batch. The acceptance criteria were met.
- An alkalinity laboratory control sample was analyzed with each batch. Range criteria of within 10% of true value was met.
- An alkalinity sample duplicate was analyzed with each batch. Precision criteria less than 10 RPD was met.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-13

Location Code: WMWGORLF
Collected: 7/20/21 09:13
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13181

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 13:33	7/22/21 19:08		1.015	0.0592	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 13:33		10.15	262	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 13:33	7/22/21 19:08		1.015	0.0540	mg/L	0.008120	0.0406	
* Lithium, Total	7/21/21 13:33	7/22/21 19:08		1.015	0.0282	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 13:33	7/27/21 15:45		10.15	305	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 13:33	7/22/21 19:08		1.015	31.5	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 10:29		1.015	0.0483	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 13:57		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 13:57		1.015	0.000154	mg/L	0.000068	0.000203	J
* Barium, Total	7/23/21 13:00	7/26/21 13:57		1.015	0.0118	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 13:57		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 13:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 13:57		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 13:57		1.015	0.00414	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 13:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 13:57		1.015	0.000506	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 13:57		1.015	8.28	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 22:35		5.075	1.38	mg/L	0.000340	0.001015	
* Selenium, Total	7/23/21 13:00	7/26/21 13:57		1.015	0.00315	mg/L	0.000508	0.001015	
* Thallium, Total	7/23/21 13:00	7/26/21 13:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 21:24		5.075	1.42	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 19:17		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	223	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	2520	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-13

Location Code: WMWGORLF
Collected: 7/20/21 09:13
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13181

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	223	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.11	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:18	7/26/21 10:18		1	1.70	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:23	7/26/21 13:23		1	0.323	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 13:28	7/23/21 13:28		50	1560	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	7/20/21 09:10	7/20/21 09:10			2629.85	uS/cm			FA
pH	7/20/21 09:10	7/20/21 09:10			6.59	SU			FA
Temperature	7/20/21 09:10	7/20/21 09:10			20.50	C			FA
Turbidity	7/20/21 09:10	7/20/21 09:10			0.57	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/20/21 09:13
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-13

Laboratory ID Number: BB13181

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.107	0.109	0.106	0.0850 to 0.115	106	70.0 to 130	1.85	20.0
BB13191	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.15	2.11	0.197	0.170 to 0.230	95.0	70.0 to 130	1.88	20.0
BB13190	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0902	0.0876	0.0932	0.0850 to 0.115	89.2	70.0 to 130	2.92	20.0
BB13190	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0990	0.0993	0.0929	0.0850 to 0.115	99.0	70.0 to 130	0.303	20.0
BB13190	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.108	0.109	0.112	0.0850 to 0.115	108	70.0 to 130	0.922	20.0
BB13190	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.0963	0.0976	0.103	0.0850 to 0.115	95.3	70.0 to 130	1.34	20.0
BB13190	Lithium, Total	mg/L	4.400E-06	0.0154	0.200	0.436	0.437	0.197	0.170 to 0.230	120	70.0 to 130	0.229	20.0
BB13190	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.0984	0.103	0.0998	0.0850 to 0.115	98.2	70.0 to 130	4.57	20.0
BB13190	Magnesium, Total	mg/L	0.0146	0.0462	5.00	78.6	78.8	5.02	4.25 to 5.75	46.0	70.0 to 130	0.254	20.0
BB13190	Sodium, Total	mg/L	0.00987	0.0660	5.00	68.8	68.5	4.98	4.25 to 5.75	64.0	70.0 to 130	0.437	20.0
BB13190	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.111	0.114	0.101	0.0850 to 0.115	97.9	70.0 to 130	2.67	20.0
BB13190	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.73	1.74	0.100	0.0850 to 0.115	100	70.0 to 130	0.576	20.0
BB13190	Boron, Total	mg/L	0.00843	0.0650	1.00	1.22	1.22	0.982	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BB13189	Calcium, Total	mg/L	0.00423	0.152	5.00	334	335	4.97	4.25 to 5.75	80.0	70.0 to 130	0.299	20.0
BB13190	Iron, Total	mg/L	0.00365	0.0176	0.2	8.54	8.58	0.201	0.170 to 0.230	-65.0	70.0 to 130	0.467	20.0
BB13190	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.122	0.122	0.0990	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BB13190	Potassium, Total	mg/L	0.0209	0.367	10.0	16.3	16.2	10.5	8.50 to 11.5	105	70.0 to 130	0.615	20.0
BB13190	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00388	0.00388	0.00389	0.00340 to 0.00460	97.0	70.0 to 130	0.00	20.0
BB13190	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.0928	0.0941	0.0982	0.0850 to 0.115	92.7	70.0 to 130	1.39	20.0
BB13190	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.103	0.106	0.110	0.0850 to 0.115	103	70.0 to 130	2.87	20.0
BB13191	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	3.05	3.03	0.108	0.0850 to 0.115	10.0	70.0 to 130	0.658	20.0
BB13190	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0961	0.0967	0.0988	0.0850 to 0.115	96.0	70.0 to 130	0.622	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/20/21 09:13
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-13

Laboratory ID Number: BB13181

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Sulfate	mg/L	-0.437	1.00	1000	1680	667	19.0	18.0 to 22.0	102	80.0 to 120	0.300	20.0
BB13190	Chloride	mg/L	-0.107	1.00	10.0	13.3	3.46	9.89	9.00 to 11.0	96.6	80.0 to 120	5.07	20.0
BB13190	Solids, Dissolved	mg/L	-2.00	25.0			1060	55.0	40.0 to 60.0			0.935	5.00
BB13190	Fluoride	mg/L	0.0205	0.100	2.50	2.84	0.286	2.59	2.25 to 2.75	103	80.0 to 120	6.50	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-14

Location Code: WMWGORLF
Collected: 7/20/21 10:16
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13182

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 13:33	7/22/21 19:11		1.015	0.0485	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 13:37		10.15	316	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 13:33	7/22/21 19:11		1.015	1.33	mg/L	0.008120	0.0406	
* Lithium, Total	7/21/21 13:33	7/22/21 19:11		1.015	0.0376	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 13:33	7/27/21 15:48		10.15	347	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 13:33	7/22/21 19:11		1.015	32.1	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 10:33		1.015	1.23	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:00		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:00		1.015	0.000783	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:00		1.015	0.0116	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:00		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 14:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 14:00		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 14:00		1.015	0.00847	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 14:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:00		1.015	0.000280	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 14:00		1.015	8.53	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 22:38		5.075	2.30	mg/L	0.000340	0.001015	
* Selenium, Total	7/23/21 13:00	7/26/21 14:00		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 14:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 21:27		5.075	2.23	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 19:21		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	244	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	2990	mg/L		147.1	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-14

Location Code: WMWGORLF
Collected: 7/20/21 10:16
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13182

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	244	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.08	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:20	7/26/21 10:20		1	3.65	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:24	7/26/21 13:24		1	0.276	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 13:29	7/23/21 13:29		80	1830	mg/L	40.00	80	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	7/20/21 10:12	7/20/21 10:12			2964.18	uS/cm			FA
pH	7/20/21 10:12	7/20/21 10:12			6.38	SU			FA
Temperature	7/20/21 10:12	7/20/21 10:12			20.10	C			FA
Turbidity	7/20/21 10:12	7/20/21 10:12			2.44	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/20/21 10:16
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-14

Laboratory ID Number: BB13182

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.0963	0.0976	0.103	0.0850 to 0.115	95.3	70.0 to 130	1.34	20.0
BB13190	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.73	1.74	0.100	0.0850 to 0.115	100	70.0 to 130	0.576	20.0
BB13190	Boron, Total	mg/L	0.00843	0.0650	1.00	1.22	1.22	0.982	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BB13189	Calcium, Total	mg/L	0.00423	0.152	5.00	334	335	4.97	4.25 to 5.75	80.0	70.0 to 130	0.299	20.0
BB13190	Iron, Total	mg/L	0.00365	0.0176	0.2	8.54	8.58	0.201	0.170 to 0.230	-65.0	70.0 to 130	0.467	20.0
BB13190	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0990	0.0993	0.0929	0.0850 to 0.115	99.0	70.0 to 130	0.303	20.0
BB13190	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.108	0.109	0.112	0.0850 to 0.115	108	70.0 to 130	0.922	20.0
BB13190	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.107	0.109	0.106	0.0850 to 0.115	106	70.0 to 130	1.85	20.0
BB13191	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.15	2.11	0.197	0.170 to 0.230	95.0	70.0 to 130	1.88	20.0
BB13190	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0902	0.0876	0.0932	0.0850 to 0.115	89.2	70.0 to 130	2.92	20.0
BB13190	Sodium, Total	mg/L	0.00987	0.0660	5.00	68.8	68.5	4.98	4.25 to 5.75	64.0	70.0 to 130	0.437	20.0
BB13190	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.111	0.114	0.101	0.0850 to 0.115	97.9	70.0 to 130	2.67	20.0
BB13190	Lithium, Total	mg/L	4.400E-06	0.0154	0.200	0.436	0.437	0.197	0.170 to 0.230	120	70.0 to 130	0.229	20.0
BB13190	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.0984	0.103	0.0998	0.0850 to 0.115	98.2	70.0 to 130	4.57	20.0
BB13190	Magnesium, Total	mg/L	0.0146	0.0462	5.00	78.6	78.8	5.02	4.25 to 5.75	46.0	70.0 to 130	0.254	20.0
BB13190	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.0928	0.0941	0.0982	0.0850 to 0.115	92.7	70.0 to 130	1.39	20.0
BB13190	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.103	0.106	0.110	0.0850 to 0.115	103	70.0 to 130	2.87	20.0
BB13191	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	3.05	3.03	0.108	0.0850 to 0.115	10.0	70.0 to 130	0.658	20.0
BB13190	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0961	0.0967	0.0988	0.0850 to 0.115	96.0	70.0 to 130	0.622	20.0
BB13190	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.122	0.122	0.0990	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BB13190	Potassium, Total	mg/L	0.0209	0.367	10.0	16.3	16.2	10.5	8.50 to 11.5	105	70.0 to 130	0.615	20.0
BB13190	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00388	0.00388	0.00389	0.00340 to 0.00460	97.0	70.0 to 130	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/20/21 10:16
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-14

Laboratory ID Number: BB13182

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Sulfate	mg/L	-0.437	1.00	1000	1680	667	19.0	18.0 to 22.0	102	80.0 to 120	0.300	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13190	Fluoride	mg/L	0.0205	0.100	2.50	2.84	0.286	2.59	2.25 to 2.75	103	80.0 to 120	6.50	20.0
BB13190	Chloride	mg/L	-0.107	1.00	10.0	13.3	3.46	9.89	9.00 to 11.0	96.6	80.0 to 120	5.07	20.0
BB13190	Solids, Dissolved	mg/L	-2.00	25.0			1060	55.0	40.0 to 60.0			0.935	5.00

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-15

Location Code: WMWGORLF
Collected: 7/20/21 11:25
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13183

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 13:33	7/22/21 19:14		1.015	0.0514	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 13:40		10.15	274	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 13:33	7/27/21 15:52		10.15	17.8	mg/L	0.08120	0.406	
* Lithium, Total	7/21/21 13:33	7/22/21 19:14		1.015	0.0661	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 13:33	7/27/21 15:52		10.15	288	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 13:33	7/22/21 19:14		1.015	30.8	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 12:54		10.15	18.7	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:04		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:04		1.015	0.000286	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:04		1.015	0.0118	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:04		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 14:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 14:04		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 14:04		1.015	0.0721	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 14:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:04		1.015	0.0000691	mg/L	0.000068	0.000203	J
* Potassium, Total	7/23/21 13:00	7/26/21 14:04		1.015	5.61	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 22:42		92.365	14.1	mg/L	0.006188	0.018473	
* Selenium, Total	7/23/21 13:00	7/26/21 14:04		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 14:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 21:31		92.365	14.0	mg/L	0.006188	0.018473	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 19:25		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	182	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	2600	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-15

Location Code: WMWGORLF
Collected: 7/20/21 11:25
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13183

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	182	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.03	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:21	7/26/21 10:21		1	3.16	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:25	7/26/21 13:25		1	0.288	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 13:30	7/23/21 13:30		50	1700	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	7/20/21 11:21	7/20/21 11:21			2577.77	uS/cm			FA
pH	7/20/21 11:21	7/20/21 11:21			6.03	SU			FA
Temperature	7/20/21 11:21	7/20/21 11:21			20.18	C			FA
Turbidity	7/20/21 11:21	7/20/21 11:21			1.91	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/20/21 11:25
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-15

Laboratory ID Number: BB13183

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.107	0.109	0.106	0.0850 to 0.115	106	70.0 to 130	1.85	20.0
BB13191	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.15	2.11	0.197	0.170 to 0.230	95.0	70.0 to 130	1.88	20.0
BB13190	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0902	0.0876	0.0932	0.0850 to 0.115	89.2	70.0 to 130	2.92	20.0
BB13190	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.0963	0.0976	0.103	0.0850 to 0.115	95.3	70.0 to 130	1.34	20.0
BB13190	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0990	0.0993	0.0929	0.0850 to 0.115	99.0	70.0 to 130	0.303	20.0
BB13190	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.108	0.109	0.112	0.0850 to 0.115	108	70.0 to 130	0.922	20.0
BB13190	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.122	0.122	0.0990	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BB13190	Potassium, Total	mg/L	0.0209	0.367	10.0	16.3	16.2	10.5	8.50 to 11.5	105	70.0 to 130	0.615	20.0
BB13190	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00388	0.00388	0.00389	0.00340 to 0.00460	97.0	70.0 to 130	0.00	20.0
BB13190	Lithium, Total	mg/L	4.400E-06	0.0154	0.200	0.436	0.437	0.197	0.170 to 0.230	120	70.0 to 130	0.229	20.0
BB13190	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.0984	0.103	0.0998	0.0850 to 0.115	98.2	70.0 to 130	4.57	20.0
BB13190	Magnesium, Total	mg/L	0.0146	0.0462	5.00	78.6	78.8	5.02	4.25 to 5.75	46.0	70.0 to 130	0.254	20.0
BB13190	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.73	1.74	0.100	0.0850 to 0.115	100	70.0 to 130	0.576	20.0
BB13190	Boron, Total	mg/L	0.00843	0.0650	1.00	1.22	1.22	0.982	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BB13189	Calcium, Total	mg/L	0.00423	0.152	5.00	334	335	4.97	4.25 to 5.75	80.0	70.0 to 130	0.299	20.0
BB13190	Iron, Total	mg/L	0.00365	0.0176	0.2	8.54	8.58	0.201	0.170 to 0.230	-65.0	70.0 to 130	0.467	20.0
BB13190	Sodium, Total	mg/L	0.00987	0.0660	5.00	68.8	68.5	4.98	4.25 to 5.75	64.0	70.0 to 130	0.437	20.0
BB13190	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.111	0.114	0.101	0.0850 to 0.115	97.9	70.0 to 130	2.67	20.0
BB13190	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.0928	0.0941	0.0982	0.0850 to 0.115	92.7	70.0 to 130	1.39	20.0
BB13190	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.103	0.106	0.110	0.0850 to 0.115	103	70.0 to 130	2.87	20.0
BB13191	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	3.05	3.03	0.108	0.0850 to 0.115	10.0	70.0 to 130	0.658	20.0
BB13190	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0961	0.0967	0.0988	0.0850 to 0.115	96.0	70.0 to 130	0.622	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/20/21 11:25
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-15

Laboratory ID Number: BB13183

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Sulfate	mg/L	-0.437	1.00	1000	1680	667	19.0	18.0 to 22.0	102	80.0 to 120	0.300	20.0
BB13190	Chloride	mg/L	-0.107	1.00	10.0	13.3	3.46	9.89	9.00 to 11.0	96.6	80.0 to 120	5.07	20.0
BB13190	Solids, Dissolved	mg/L	-2.00	25.0			1060	55.0	40.0 to 60.0			0.935	5.00
BB13190	Fluoride	mg/L	0.0205	0.100	2.50	2.84	0.286	2.59	2.25 to 2.75	103	80.0 to 120	6.50	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-12V

Location Code: WMWGORLF
Collected: 7/20/21 12:32
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13184

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 13:33	7/22/21 19:18		1.015	0.149	mg/L	0.030000	0.1015	
* Calcium, Total	7/28/21 08:00	7/28/21 13:44		10.15	283	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 13:33	7/22/21 19:18		1.015	3.78	mg/L	0.008120	0.0406	
* Lithium, Total	7/21/21 13:33	7/22/21 19:18		1.015	0.330	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 13:33	7/27/21 15:55		10.15	186	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 13:33	7/27/21 15:55		10.15	124	mg/L	0.3045	4.06	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 10:40		1.015	3.65	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:07		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:07		1.015	0.00573	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:07		1.015	0.0186	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:07		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 14:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 14:07		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 14:07		1.015	0.000181	mg/L	0.000068	0.000203	J
* Lead, Total	7/23/21 13:00	7/26/21 14:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:07		1.015	0.00188	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 14:07		1.015	7.21	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 14:07		1.015	0.491	mg/L	0.000068	0.000203	
* Selenium, Total	7/23/21 13:00	7/26/21 14:07		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 14:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 12:21		1.015	0.499	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 19:29		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	293	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	2190	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-12V

Location Code: WMWGORLF
Collected: 7/20/21 12:32
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13184

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	293	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.28	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:30	7/26/21 10:30		8	59.2	mg/L	4.00	8	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:26	7/26/21 13:26		1	0.224	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 13:31	7/23/21 13:31		40	1220	mg/L	20.00	40	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	7/20/21 12:29	7/20/21 12:29			2516.11	uS/cm			FA
pH	7/20/21 12:29	7/20/21 12:29			6.84	SU			FA
Temperature	7/20/21 12:29	7/20/21 12:29			22.91	C			FA
Turbidity	7/20/21 12:29	7/20/21 12:29			1.48	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/20/21 12:32
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-12V

Laboratory ID Number: BB13184

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0990	0.0993	0.0929	0.0850 to 0.115	99.0	70.0 to 130	0.303	20.0
BB13190	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.108	0.109	0.112	0.0850 to 0.115	108	70.0 to 130	0.922	20.0
BB13190	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.0963	0.0976	0.103	0.0850 to 0.115	95.3	70.0 to 130	1.34	20.0
BB13190	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.107	0.109	0.106	0.0850 to 0.115	106	70.0 to 130	1.85	20.0
BB13191	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.15	2.11	0.197	0.170 to 0.230	95.0	70.0 to 130	1.88	20.0
BB13190	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0902	0.0876	0.0932	0.0850 to 0.115	89.2	70.0 to 130	2.92	20.0
BB13190	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.0928	0.0941	0.0982	0.0850 to 0.115	92.7	70.0 to 130	1.39	20.0
BB13190	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.103	0.106	0.110	0.0850 to 0.115	103	70.0 to 130	2.87	20.0
BB13191	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	3.05	3.03	0.108	0.0850 to 0.115	10.0	70.0 to 130	0.658	20.0
BB13190	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0961	0.0967	0.0988	0.0850 to 0.115	96.0	70.0 to 130	0.622	20.0
BB13190	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.73	1.74	0.100	0.0850 to 0.115	100	70.0 to 130	0.576	20.0
BB13190	Boron, Total	mg/L	0.00843	0.0650	1.00	1.22	1.22	0.982	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BB13189	Calcium, Total	mg/L	0.00423	0.152	5.00	334	335	4.97	4.25 to 5.75	80.0	70.0 to 130	0.299	20.0
BB13190	Iron, Total	mg/L	0.00365	0.0176	0.2	8.54	8.58	0.201	0.170 to 0.230	-65.0	70.0 to 130	0.467	20.0
BB13190	Sodium, Total	mg/L	0.00987	0.0660	5.00	68.8	68.5	4.98	4.25 to 5.75	64.0	70.0 to 130	0.437	20.0
BB13190	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.111	0.114	0.101	0.0850 to 0.115	97.9	70.0 to 130	2.67	20.0
BB13190	Lithium, Total	mg/L	4.400E-06	0.0154	0.200	0.436	0.437	0.197	0.170 to 0.230	120	70.0 to 130	0.229	20.0
BB13190	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.0984	0.103	0.0998	0.0850 to 0.115	98.2	70.0 to 130	4.57	20.0
BB13190	Magnesium, Total	mg/L	0.0146	0.0462	5.00	78.6	78.8	5.02	4.25 to 5.75	46.0	70.0 to 130	0.254	20.0
BB13190	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.122	0.122	0.0990	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BB13190	Potassium, Total	mg/L	0.0209	0.367	10.0	16.3	16.2	10.5	8.50 to 11.5	105	70.0 to 130	0.615	20.0
BB13190	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00388	0.00388	0.00389	0.00340 to 0.00460	97.0	70.0 to 130	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/20/21 12:32
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-12V

Laboratory ID Number: BB13184

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Sulfate	mg/L	-0.437	1.00	1000	1680	667	19.0	18.0 to 22.0	102	80.0 to 120	0.300	20.0
BB13190	Chloride	mg/L	-0.107	1.00	10.0	13.3	3.46	9.89	9.00 to 11.0	96.6	80.0 to 120	5.07	20.0
BB13190	Solids, Dissolved	mg/L	-2.00	25.0			1060	55.0	40.0 to 60.0			0.935	5.00
BB13190	Fluoride	mg/L	0.0205	0.100	2.50	2.84	0.286	2.59	2.25 to 2.75	103	80.0 to 120	6.50	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-6

Location Code: WMWGORLF
Collected: 7/20/21 13:57
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13185

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 13:33	7/22/21 19:21		1.015	0.0608	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 13:47		10.15	348	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 13:33	7/27/21 15:59		10.15	23.8	mg/L	0.08120	0.406	
* Lithium, Total	7/21/21 13:33	7/22/21 19:21		1.015	0.180	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 13:33	7/27/21 15:59		10.15	289	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 13:33	7/27/21 15:59		10.15	56.9	mg/L	0.3045	4.06	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 12:57		10.15	23.5	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:11		1.015	0.00475	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:11		1.015	0.0143	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:11		1.015	0.000480	mg/L	0.000406	0.001015	J
* Cadmium, Total	7/23/21 13:00	7/26/21 14:11		1.015	0.000576	mg/L	0.000068	0.000203	
* Chromium, Total	7/23/21 13:00	7/26/21 14:11		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 14:11		1.015	0.216	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 14:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:11		1.015	0.0000715	mg/L	0.000068	0.000203	J
* Potassium, Total	7/23/21 13:00	7/26/21 14:11		1.015	6.50	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 22:46		92.365	24.8	mg/L	0.006188	0.018473	
* Selenium, Total	7/23/21 13:00	7/26/21 14:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 14:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 21:34		92.365	26.0	mg/L	0.006188	0.018473	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 19:33		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	134	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	3090	mg/L		147.1	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-6

Location Code: WMWGORLF
Collected: 7/20/21 13:57
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13185

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	134	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.01	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:23	7/26/21 10:23		1	4.04	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:28	7/26/21 13:28		1	0.131	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 13:36	7/23/21 13:36		160	1930	mg/L	80.00	160	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	7/20/21 13:54	7/20/21 13:54			3020.13	uS/cm			FA
pH	7/20/21 13:54	7/20/21 13:54			5.99	SU			FA
Temperature	7/20/21 13:54	7/20/21 13:54			21.06	C			FA
Turbidity	7/20/21 13:54	7/20/21 13:54			1.09	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/20/21 13:57
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-6

Laboratory ID Number: BB13185

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0990	0.0993	0.0929	0.0850 to 0.115	99.0	70.0 to 130	0.303	20.0
BB13190	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.108	0.109	0.112	0.0850 to 0.115	108	70.0 to 130	0.922	20.0
BB13190	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.0963	0.0976	0.103	0.0850 to 0.115	95.3	70.0 to 130	1.34	20.0
BB13190	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.107	0.109	0.106	0.0850 to 0.115	106	70.0 to 130	1.85	20.0
BB13191	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.15	2.11	0.197	0.170 to 0.230	95.0	70.0 to 130	1.88	20.0
BB13190	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0902	0.0876	0.0932	0.0850 to 0.115	89.2	70.0 to 130	2.92	20.0
BB13190	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.73	1.74	0.100	0.0850 to 0.115	100	70.0 to 130	0.576	20.0
BB13190	Boron, Total	mg/L	0.00843	0.0650	1.00	1.22	1.22	0.982	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BB13189	Calcium, Total	mg/L	0.00423	0.152	5.00	334	335	4.97	4.25 to 5.75	80.0	70.0 to 130	0.299	20.0
BB13190	Iron, Total	mg/L	0.00365	0.0176	0.2	8.54	8.58	0.201	0.170 to 0.230	-65.0	70.0 to 130	0.467	20.0
BB13190	Sodium, Total	mg/L	0.00987	0.0660	5.00	68.8	68.5	4.98	4.25 to 5.75	64.0	70.0 to 130	0.437	20.0
BB13190	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.111	0.114	0.101	0.0850 to 0.115	97.9	70.0 to 130	2.67	20.0
BB13190	Lithium, Total	mg/L	4.400E-06	0.0154	0.200	0.436	0.437	0.197	0.170 to 0.230	120	70.0 to 130	0.229	20.0
BB13190	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.0984	0.103	0.0998	0.0850 to 0.115	98.2	70.0 to 130	4.57	20.0
BB13190	Magnesium, Total	mg/L	0.0146	0.0462	5.00	78.6	78.8	5.02	4.25 to 5.75	46.0	70.0 to 130	0.254	20.0
BB13190	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.122	0.122	0.0990	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BB13190	Potassium, Total	mg/L	0.0209	0.367	10.0	16.3	16.2	10.5	8.50 to 11.5	105	70.0 to 130	0.615	20.0
BB13190	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00388	0.00388	0.00389	0.00340 to 0.00460	97.0	70.0 to 130	0.00	20.0
BB13190	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.0928	0.0941	0.0982	0.0850 to 0.115	92.7	70.0 to 130	1.39	20.0
BB13190	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.103	0.106	0.110	0.0850 to 0.115	103	70.0 to 130	2.87	20.0
BB13191	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	3.05	3.03	0.108	0.0850 to 0.115	10.0	70.0 to 130	0.658	20.0
BB13190	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0961	0.0967	0.0988	0.0850 to 0.115	96.0	70.0 to 130	0.622	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/20/21 13:57
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-6

Laboratory ID Number: BB13185

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Sulfate	mg/L	-0.437	1.00	1000	1680	667	19.0	18.0 to 22.0	102	80.0 to 120	0.300	20.0
BB13190	Fluoride	mg/L	0.0205	0.100	2.50	2.84	0.286	2.59	2.25 to 2.75	103	80.0 to 120	6.50	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13190	Chloride	mg/L	-0.107	1.00	10.0	13.3	3.46	9.89	9.00 to 11.0	96.6	80.0 to 120	5.07	20.0
BB13190	Solids, Dissolved	mg/L	-2.00	25.0			1060	55.0	40.0 to 60.0			0.935	5.00

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-6 DUP

Location Code: WMWGORLF
Collected: 7/20/21 13:57
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13186

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 13:33	7/22/21 19:25		1.015	0.0631	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 13:50		10.15	351	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 13:33	7/27/21 16:02		10.15	23.7	mg/L	0.08120	0.406	
* Lithium, Total	7/21/21 13:33	7/22/21 19:25		1.015	0.180	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 13:33	7/27/21 16:02		10.15	291	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 13:33	7/27/21 16:02		10.15	57.2	mg/L	0.3045	4.06	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 13:01		10.15	23.3	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:14		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:14		1.015	0.00451	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:14		1.015	0.0137	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:14		1.015	0.000453	mg/L	0.000406	0.001015	J
* Cadmium, Total	7/23/21 13:00	7/26/21 14:14		1.015	0.000626	mg/L	0.000068	0.000203	
* Chromium, Total	7/23/21 13:00	7/26/21 14:14		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 14:14		1.015	0.216	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 14:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:14		1.015	0.0000827	mg/L	0.000068	0.000203	J
* Potassium, Total	7/23/21 13:00	7/26/21 14:14		1.015	6.38	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 22:49		92.365	25.9	mg/L	0.006188	0.018473	
* Selenium, Total	7/23/21 13:00	7/26/21 14:14		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 14:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 21:38		92.365	27.9	mg/L	0.006188	0.018473	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 19:37		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	135	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	2980	mg/L		147.1	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-6 DUP

Location Code: WMWGORLF
Collected: 7/20/21 13:57
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13186

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	135	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.01	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:24	7/26/21 10:24		1	4.05	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:29	7/26/21 13:29		1	0.138	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 13:37	7/23/21 13:37		160	2000	mg/L	80.00	160	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	7/20/21 13:54	7/20/21 13:54			3020.13	uS/cm			FA
pH	7/20/21 13:54	7/20/21 13:54			5.99	SU			FA
Temperature	7/20/21 13:54	7/20/21 13:54			21.06	C			FA
Turbidity	7/20/21 13:54	7/20/21 13:54			1.09	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/20/21 13:57
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-6 DUP

Laboratory ID Number: BB13186

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.0963	0.0976	0.103	0.0850 to 0.115	95.3	70.0 to 130	1.34	20.0
BB13190	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0990	0.0993	0.0929	0.0850 to 0.115	99.0	70.0 to 130	0.303	20.0
BB13190	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.108	0.109	0.112	0.0850 to 0.115	108	70.0 to 130	0.922	20.0
BB13190	Lithium, Total	mg/L	4.400E-06	0.0154	0.200	0.436	0.437	0.197	0.170 to 0.230	120	70.0 to 130	0.229	20.0
BB13190	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.0984	0.103	0.0998	0.0850 to 0.115	98.2	70.0 to 130	4.57	20.0
BB13190	Magnesium, Total	mg/L	0.0146	0.0462	5.00	78.6	78.8	5.02	4.25 to 5.75	46.0	70.0 to 130	0.254	20.0
BB13190	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.122	0.122	0.0990	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BB13190	Potassium, Total	mg/L	0.0209	0.367	10.0	16.3	16.2	10.5	8.50 to 11.5	105	70.0 to 130	0.615	20.0
BB13190	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00388	0.00388	0.00389	0.00340 to 0.00460	97.0	70.0 to 130	0.00	20.0
BB13190	Sodium, Total	mg/L	0.00987	0.0660	5.00	68.8	68.5	4.98	4.25 to 5.75	64.0	70.0 to 130	0.437	20.0
BB13190	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.111	0.114	0.101	0.0850 to 0.115	97.9	70.0 to 130	2.67	20.0
BB13190	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.73	1.74	0.100	0.0850 to 0.115	100	70.0 to 130	0.576	20.0
BB13190	Boron, Total	mg/L	0.00843	0.0650	1.00	1.22	1.22	0.982	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BB13189	Calcium, Total	mg/L	0.00423	0.152	5.00	334	335	4.97	4.25 to 5.75	80.0	70.0 to 130	0.299	20.0
BB13190	Iron, Total	mg/L	0.00365	0.0176	0.2	8.54	8.58	0.201	0.170 to 0.230	-65.0	70.0 to 130	0.467	20.0
BB13190	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.0928	0.0941	0.0982	0.0850 to 0.115	92.7	70.0 to 130	1.39	20.0
BB13190	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.103	0.106	0.110	0.0850 to 0.115	103	70.0 to 130	2.87	20.0
BB13191	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	3.05	3.03	0.108	0.0850 to 0.115	10.0	70.0 to 130	0.658	20.0
BB13190	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0961	0.0967	0.0988	0.0850 to 0.115	96.0	70.0 to 130	0.622	20.0
BB13190	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.107	0.109	0.106	0.0850 to 0.115	106	70.0 to 130	1.85	20.0
BB13191	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.15	2.11	0.197	0.170 to 0.230	95.0	70.0 to 130	1.88	20.0
BB13190	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0902	0.0876	0.0932	0.0850 to 0.115	89.2	70.0 to 130	2.92	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/20/21 13:57
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-6 DUP

Laboratory ID Number: BB13186

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Sulfate	mg/L	-0.437	1.00	1000	1680	667	19.0	18.0 to 22.0	102	80.0 to 120	0.300	20.0
BB13190	Fluoride	mg/L	0.0205	0.100	2.50	2.84	0.286	2.59	2.25 to 2.75	103	80.0 to 120	6.50	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13190	Chloride	mg/L	-0.107	1.00	10.0	13.3	3.46	9.89	9.00 to 11.0	96.6	80.0 to 120	5.07	20.0
BB13190	Solids, Dissolved	mg/L	-2.00	25.0			1060	55.0	40.0 to 60.0			0.935	5.00

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-8

Location Code: WMWGORLF
Collected: 7/20/21 15:25
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13187

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 13:33	7/22/21 19:28		1.015	0.0656	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 13:54		10.15	281	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 13:33	7/22/21 19:28		1.015	1.98	mg/L	0.008120	0.0406	
* Lithium, Total	7/21/21 13:33	7/22/21 19:28		1.015	0.151	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 13:33	7/27/21 16:05		10.15	274	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 13:33	7/27/21 16:05		10.15	38.0	mg/L	0.3045	4.06	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 10:50		1.015	1.29	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:18		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:18		1.015	0.00111	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:18		1.015	0.0141	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:18		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 14:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 14:18		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 14:18		1.015	0.00714	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 14:18		1.015	0.0000944	mg/L	0.000068	0.000203	J
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:18		1.015	0.000329	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 14:18		1.015	8.14	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 14:18		1.015	0.929	mg/L	0.000068	0.000203	
* Selenium, Total	7/23/21 13:00	7/26/21 14:18		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 14:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 12:31		1.015	0.917	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 19:40		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	321	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	2420	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-8

Location Code: WMWGORLF
Collected: 7/20/21 15:25
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13187

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	321	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.20	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:26	7/26/21 10:26		1	14.3	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:30	7/26/21 13:30		1	0.262	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 13:35	7/23/21 13:35		40	1500	mg/L	20.00	40	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	7/20/21 15:22	7/20/21 15:22			2503.35	uS/cm			FA
pH	7/20/21 15:22	7/20/21 15:22			6.64	SU			FA
Temperature	7/20/21 15:22	7/20/21 15:22			22.63	C			FA
Turbidity	7/20/21 15:22	7/20/21 15:22			6.59	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/20/21 15:25
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-8

Laboratory ID Number: BB13187

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0990	0.0993	0.0929	0.0850 to 0.115	99.0	70.0 to 130	0.303	20.0
BB13190	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.108	0.109	0.112	0.0850 to 0.115	108	70.0 to 130	0.922	20.0
BB13190	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.73	1.74	0.100	0.0850 to 0.115	100	70.0 to 130	0.576	20.0
BB13190	Boron, Total	mg/L	0.00843	0.0650	1.00	1.22	1.22	0.982	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BB13189	Calcium, Total	mg/L	0.00423	0.152	5.00	334	335	4.97	4.25 to 5.75	80.0	70.0 to 130	0.299	20.0
BB13190	Iron, Total	mg/L	0.00365	0.0176	0.2	8.54	8.58	0.201	0.170 to 0.230	-65.0	70.0 to 130	0.467	20.0
BB13190	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.0963	0.0976	0.103	0.0850 to 0.115	95.3	70.0 to 130	1.34	20.0
BB13190	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.0928	0.0941	0.0982	0.0850 to 0.115	92.7	70.0 to 130	1.39	20.0
BB13190	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.103	0.106	0.110	0.0850 to 0.115	103	70.0 to 130	2.87	20.0
BB13191	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	3.05	3.03	0.108	0.0850 to 0.115	10.0	70.0 to 130	0.658	20.0
BB13190	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0961	0.0967	0.0988	0.0850 to 0.115	96.0	70.0 to 130	0.622	20.0
BB13190	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.107	0.109	0.106	0.0850 to 0.115	106	70.0 to 130	1.85	20.0
BB13191	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.15	2.11	0.197	0.170 to 0.230	95.0	70.0 to 130	1.88	20.0
BB13190	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0902	0.0876	0.0932	0.0850 to 0.115	89.2	70.0 to 130	2.92	20.0
BB13190	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.122	0.122	0.0990	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BB13190	Potassium, Total	mg/L	0.0209	0.367	10.0	16.3	16.2	10.5	8.50 to 11.5	105	70.0 to 130	0.615	20.0
BB13190	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00388	0.00388	0.00389	0.00340 to 0.00460	97.0	70.0 to 130	0.00	20.0
BB13190	Sodium, Total	mg/L	0.00987	0.0660	5.00	68.8	68.5	4.98	4.25 to 5.75	64.0	70.0 to 130	0.437	20.0
BB13190	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.111	0.114	0.101	0.0850 to 0.115	97.9	70.0 to 130	2.67	20.0
BB13190	Lithium, Total	mg/L	4.400E-06	0.0154	0.200	0.436	0.437	0.197	0.170 to 0.230	120	70.0 to 130	0.229	20.0
BB13190	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.0984	0.103	0.0998	0.0850 to 0.115	98.2	70.0 to 130	4.57	20.0
BB13190	Magnesium, Total	mg/L	0.0146	0.0462	5.00	78.6	78.8	5.02	4.25 to 5.75	46.0	70.0 to 130	0.254	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/20/21 15:25
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-8

Laboratory ID Number: BB13187

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Sulfate	mg/L	-0.437	1.00	1000	1680	667	19.0	18.0 to 22.0	102	80.0 to 120	0.300	20.0
BB13190	Chloride	mg/L	-0.107	1.00	10.0	13.3	3.46	9.89	9.00 to 11.0	96.6	80.0 to 120	5.07	20.0
BB13190	Solids, Dissolved	mg/L	-2.00	25.0			1060	55.0	40.0 to 60.0			0.935	5.00
BB13190	Fluoride	mg/L	0.0205	0.100	2.50	2.84	0.286	2.59	2.25 to 2.75	103	80.0 to 120	6.50	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill Field Blank-2

Location Code: WMWGORLFFB
Collected: 7/20/21 16:05
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13188

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 13:33	7/22/21 19:31		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	7/28/21 08:00	7/28/21 13:57		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	7/21/21 13:33	7/22/21 19:31		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	7/21/21 13:33	7/22/21 19:31		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	7/21/21 13:33	7/22/21 19:31		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	7/21/21 13:33	7/22/21 19:31		1.015	Not Detected	mg/L	0.03045	0.406	U
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Beryllium, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	7/23/21 13:00	7/26/21 14:22		1.015	0.000115	mg/L	0.000068	0.000203	J
* Potassium, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 14:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 19:44		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:27	7/26/21 10:27		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:31	7/26/21 13:31		1	Not Detected	mg/L	0.06	0.1	U
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 13:39	7/23/21 13:39		1	Not Detected	mg/L	0.50	1	U

MDL's and RL's are adjusted for sample dilution, as applicable

Comments:

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLFFB
Sample Date: 7/20/21 16:05
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill Field Blank-2

Laboratory ID Number: BB13188

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0990	0.0993	0.0929	0.0850 to 0.115	99.0	70.0 to 130	0.303	20.0
BB13190	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.108	0.109	0.112	0.0850 to 0.115	108	70.0 to 130	0.922	20.0
BB13190	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.107	0.109	0.106	0.0850 to 0.115	106	70.0 to 130	1.85	20.0
BB13190	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0902	0.0876	0.0932	0.0850 to 0.115	89.2	70.0 to 130	2.92	20.0
BB13190	Sodium, Total	mg/L	0.00987	0.0660	5.00	68.8	68.5	4.98	4.25 to 5.75	64.0	70.0 to 130	0.437	20.0
BB13190	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.111	0.114	0.101	0.0850 to 0.115	97.9	70.0 to 130	2.67	20.0
BB13190	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.122	0.122	0.0990	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BB13190	Potassium, Total	mg/L	0.0209	0.367	10.0	16.3	16.2	10.5	8.50 to 11.5	105	70.0 to 130	0.615	20.0
BB13190	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00388	0.00388	0.00389	0.00340 to 0.00460	97.0	70.0 to 130	0.00	20.0
BB13190	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.0963	0.0976	0.103	0.0850 to 0.115	95.3	70.0 to 130	1.34	20.0
BB13190	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.0928	0.0941	0.0982	0.0850 to 0.115	92.7	70.0 to 130	1.39	20.0
BB13190	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.103	0.106	0.110	0.0850 to 0.115	103	70.0 to 130	2.87	20.0
BB13190	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0961	0.0967	0.0988	0.0850 to 0.115	96.0	70.0 to 130	0.622	20.0
BB13190	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.73	1.74	0.100	0.0850 to 0.115	100	70.0 to 130	0.576	20.0
BB13190	Boron, Total	mg/L	0.00843	0.0650	1.00	1.22	1.22	0.982	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BB13189	Calcium, Total	mg/L	0.00423	0.152	5.00	334	335	4.97	4.25 to 5.75	80.0	70.0 to 130	0.299	20.0
BB13190	Iron, Total	mg/L	0.00365	0.0176	0.2	8.54	8.58	0.201	0.170 to 0.230	-65.0	70.0 to 130	0.467	20.0
BB13190	Lithium, Total	mg/L	4.400E-06	0.0154	0.200	0.436	0.437	0.197	0.170 to 0.230	120	70.0 to 130	0.229	20.0
BB13190	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.0984	0.103	0.0998	0.0850 to 0.115	98.2	70.0 to 130	4.57	20.0
BB13190	Magnesium, Total	mg/L	0.0146	0.0462	5.00	78.6	78.8	5.02	4.25 to 5.75	46.0	70.0 to 130	0.254	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLFFB
Sample Date: 7/20/21 16:05
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill Field Blank-2

Laboratory ID Number: BB13188

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Sulfate	mg/L	-0.437	1.00	1000	1680	667	19.0	18.0 to 22.0	102	80.0 to 120	0.300	20.0
BB13190	Chloride	mg/L	-0.107	1.00	10.0	13.3	3.46	9.89	9.00 to 11.0	96.6	80.0 to 120	5.07	20.0
BB13190	Solids, Dissolved	mg/L	-2.00	25.0			1060	55.0	40.0 to 60.0			0.935	5.00
BB13190	Fluoride	mg/L	0.0205	0.100	2.50	2.84	0.286	2.59	2.25 to 2.75	103	80.0 to 120	6.50	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-12

Location Code: WMWGORLF
Collected: 7/20/21 11:53
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13189

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 13:33	7/22/21 19:35		1.015	0.227	mg/L	0.030000	0.1015	
* Calcium, Total	7/28/21 08:00	7/28/21 14:04		10.15	330	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 13:33	7/27/21 15:42		101.5	173	mg/L	0.8120	4.06	
* Lithium, Total	7/21/21 13:33	7/22/21 19:35		1.015	0.0769	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 13:33	7/27/21 16:09		10.15	360	mg/L	0.21315	4.06	
* Sodium, Total	7/21/21 13:33	7/27/21 16:09		10.15	46.0	mg/L	0.3045	4.06	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 13:04		101.5	181	mg/L	0.8120	4.06	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:25		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:25		1.015	0.0668	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:25		1.015	0.0120	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:25		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 14:25		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 14:25		1.015	0.000276	mg/L	0.000203	0.001015	J
* Cobalt, Total	7/23/21 13:00	7/26/21 14:25		1.015	0.0460	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 14:25		1.015	0.000231	mg/L	0.000068	0.000203	
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:25		1.015	0.000169	mg/L	0.000068	0.000203	J
* Potassium, Total	7/23/21 13:00	7/26/21 14:25		1.015	23.0	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 23:03		92.365	21.3	mg/L	0.006188	0.018473	
* Selenium, Total	7/23/21 13:00	7/26/21 14:25		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 14:25		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 21:41		92.365	20.6	mg/L	0.006188	0.018473	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 19:48		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	206	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	3680	mg/L		178.6	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-12

Location Code: WMWGORLF
Collected: 7/20/21 11:53
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13189

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	206	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.01	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:28	7/26/21 10:28		1	9.85	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:32	7/26/21 13:32		1	0.219	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 13:40	7/23/21 13:40		160	2500	mg/L	80.00	160	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/20/21 11:50	7/20/21 11:50			3168.03	uS/cm			FA
pH	7/20/21 11:50	7/20/21 11:50			5.53	SU			FA
Temperature	7/20/21 11:50	7/20/21 11:50			22.65	C			FA
Turbidity	7/20/21 11:50	7/20/21 11:50			4.23	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/20/21 11:53
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-12

Laboratory ID Number: BB13189

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.107	0.109	0.106	0.0850 to 0.115	106	70.0 to 130	1.85	20.0
BB13191	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.15	2.11	0.197	0.170 to 0.230	95.0	70.0 to 130	1.88	20.0
BB13190	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0902	0.0876	0.0932	0.0850 to 0.115	89.2	70.0 to 130	2.92	20.0
BB13190	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.73	1.74	0.100	0.0850 to 0.115	100	70.0 to 130	0.576	20.0
BB13190	Boron, Total	mg/L	0.00843	0.0650	1.00	1.22	1.22	0.982	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BB13189	Calcium, Total	mg/L	0.00423	0.152	5.00	334	335	4.97	4.25 to 5.75	80.0	70.0 to 130	0.299	20.0
BB13190	Iron, Total	mg/L	0.00365	0.0176	0.2	8.54	8.58	0.201	0.170 to 0.230	-65.0	70.0 to 130	0.467	20.0
BB13190	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0990	0.0993	0.0929	0.0850 to 0.115	99.0	70.0 to 130	0.303	20.0
BB13190	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.108	0.109	0.112	0.0850 to 0.115	108	70.0 to 130	0.922	20.0
BB13190	Sodium, Total	mg/L	0.00987	0.0660	5.00	68.8	68.5	4.98	4.25 to 5.75	64.0	70.0 to 130	0.437	20.0
BB13190	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.111	0.114	0.101	0.0850 to 0.115	97.9	70.0 to 130	2.67	20.0
BB13190	Lithium, Total	mg/L	4.400E-06	0.0154	0.200	0.436	0.437	0.197	0.170 to 0.230	120	70.0 to 130	0.229	20.0
BB13190	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.0984	0.103	0.0998	0.0850 to 0.115	98.2	70.0 to 130	4.57	20.0
BB13190	Magnesium, Total	mg/L	0.0146	0.0462	5.00	78.6	78.8	5.02	4.25 to 5.75	46.0	70.0 to 130	0.254	20.0
BB13190	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.0963	0.0976	0.103	0.0850 to 0.115	95.3	70.0 to 130	1.34	20.0
BB13190	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.122	0.122	0.0990	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BB13190	Potassium, Total	mg/L	0.0209	0.367	10.0	16.3	16.2	10.5	8.50 to 11.5	105	70.0 to 130	0.615	20.0
BB13190	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00388	0.00388	0.00389	0.00340 to 0.00460	97.0	70.0 to 130	0.00	20.0
BB13190	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.0928	0.0941	0.0982	0.0850 to 0.115	92.7	70.0 to 130	1.39	20.0
BB13190	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.103	0.106	0.110	0.0850 to 0.115	103	70.0 to 130	2.87	20.0
BB13191	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	3.05	3.03	0.108	0.0850 to 0.115	10.0	70.0 to 130	0.658	20.0
BB13190	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0961	0.0967	0.0988	0.0850 to 0.115	96.0	70.0 to 130	0.622	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/20/21 11:53
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-12

Laboratory ID Number: BB13189

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Sulfate	mg/L	-0.437	1.00	1000	1680	667	19.0	18.0 to 22.0	102	80.0 to 120	0.300	20.0
BB13190	Fluoride	mg/L	0.0205	0.100	2.50	2.84	0.286	2.59	2.25 to 2.75	103	80.0 to 120	6.50	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13190	Chloride	mg/L	-0.107	1.00	10.0	13.3	3.46	9.89	9.00 to 11.0	96.6	80.0 to 120	5.07	20.0
BB13190	Solids, Dissolved	mg/L	-2.00	25.0			1060	55.0	40.0 to 60.0			0.935	5.00

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-10

Location Code: WMWGORLF
Collected: 7/20/21 13:15
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13190

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/21/21 13:33	7/22/21 19:38		1.015	0.201	mg/L	0.030000	0.1015	
* Calcium, Total	7/28/21 08:00	7/28/21 14:01		10.15	149	mg/L	0.70035	4.06	
* Iron, Total	7/21/21 13:33	7/27/21 16:12		10.15	8.67	mg/L	0.08120	0.406	RA
* Lithium, Total	7/21/21 13:33	7/22/21 19:38		1.015	0.196	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/21/21 13:33	7/27/21 16:12		10.15	76.3	mg/L	0.21315	4.06	RA
* Sodium, Total	7/21/21 13:33	7/27/21 16:12		10.15	65.6	mg/L	0.3045	4.06	RA
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 13:08		10.15	10.1	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:29		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:29		1.015	0.00102	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:29		1.015	0.0208	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:29		1.015	0.000951	mg/L	0.000406	0.001015	J
* Cadmium, Total	7/23/21 13:00	7/26/21 14:29		1.015	0.0000807	mg/L	0.000068	0.000203	J
* Chromium, Total	7/23/21 13:00	7/26/21 14:29		1.015	0.000213	mg/L	0.000203	0.001015	J
* Cobalt, Total	7/23/21 13:00	7/26/21 14:29		1.015	0.0131	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 14:29		1.015	0.0000767	mg/L	0.000068	0.000203	J
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:29		1.015	0.0000769	mg/L	0.000068	0.000203	J
* Potassium, Total	7/23/21 13:00	7/26/21 14:29		1.015	5.81	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 23:07		5.075	1.63	mg/L	0.000340	0.001015	
* Selenium, Total	7/23/21 13:00	7/26/21 14:29		1.015	0.000982	mg/L	0.000508	0.001015	J
* Thallium, Total	7/23/21 13:00	7/26/21 14:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 21:45		5.075	1.87	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 19:52		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	123	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	1080	mg/L		75.8	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-10

Location Code: WMWGORLF
Collected: 7/20/21 13:15
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13190

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	123	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.04	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:29	7/26/21 10:29		1	3.64	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:34	7/26/21 13:34		1	0.268	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 13:41	7/23/21 13:41		50	665	mg/L	25.00	50	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/20/21 13:11	7/20/21 13:11			1257.92	uS/cm			FA
pH	7/20/21 13:11	7/20/21 13:11			6.46	SU			FA
Temperature	7/20/21 13:11	7/20/21 13:11			20.67	C			FA
Turbidity	7/20/21 13:11	7/20/21 13:11			5.42	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/20/21 13:15
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-10

Laboratory ID Number: BB13190

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.0963	0.0976	0.103	0.0850 to 0.115	95.3	70.0 to 130	1.34	20.0
BB13190	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.122	0.122	0.0990	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BB13190	Potassium, Total	mg/L	0.0209	0.367	10.0	16.3	16.2	10.5	8.50 to 11.5	105	70.0 to 130	0.615	20.0
BB13190	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00388	0.00388	0.00389	0.00340 to 0.00460	97.0	70.0 to 130	0.00	20.0
BB13190	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.107	0.109	0.106	0.0850 to 0.115	106	70.0 to 130	1.85	20.0
BB13191	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.15	2.11	0.197	0.170 to 0.230	95.0	70.0 to 130	1.88	20.0
BB13190	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0902	0.0876	0.0932	0.0850 to 0.115	89.2	70.0 to 130	2.92	20.0
BB13190	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.73	1.74	0.100	0.0850 to 0.115	100	70.0 to 130	0.576	20.0
BB13190	Boron, Total	mg/L	0.00843	0.0650	1.00	1.22	1.22	0.982	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BB13189	Calcium, Total	mg/L	0.00423	0.152	5.00	334	335	4.97	4.25 to 5.75	80.0	70.0 to 130	0.299	20.0
BB13190	Iron, Total	mg/L	0.00365	0.0176	0.2	8.54	8.58	0.201	0.170 to 0.230	-65.0	70.0 to 130	0.467	20.0
BB13190	Sodium, Total	mg/L	0.00987	0.0660	5.00	68.8	68.5	4.98	4.25 to 5.75	64.0	70.0 to 130	0.437	20.0
BB13190	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.111	0.114	0.101	0.0850 to 0.115	97.9	70.0 to 130	2.67	20.0
BB13190	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.0928	0.0941	0.0982	0.0850 to 0.115	92.7	70.0 to 130	1.39	20.0
BB13190	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.103	0.106	0.110	0.0850 to 0.115	103	70.0 to 130	2.87	20.0
BB13191	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	3.05	3.03	0.108	0.0850 to 0.115	10.0	70.0 to 130	0.658	20.0
BB13190	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0961	0.0967	0.0988	0.0850 to 0.115	96.0	70.0 to 130	0.622	20.0
BB13190	Lithium, Total	mg/L	4.400E-06	0.0154	0.200	0.436	0.437	0.197	0.170 to 0.230	120	70.0 to 130	0.229	20.0
BB13190	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.0984	0.103	0.0998	0.0850 to 0.115	98.2	70.0 to 130	4.57	20.0
BB13190	Magnesium, Total	mg/L	0.0146	0.0462	5.00	78.6	78.8	5.02	4.25 to 5.75	46.0	70.0 to 130	0.254	20.0
BB13190	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0990	0.0993	0.0929	0.0850 to 0.115	99.0	70.0 to 130	0.303	20.0
BB13190	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.108	0.109	0.112	0.0850 to 0.115	108	70.0 to 130	0.922	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/20/21 13:15
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-10

Laboratory ID Number: BB13190

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13190	Sulfate	mg/L	-0.437	1.00	1000	1680	667	19.0	18.0 to 22.0	102	80.0 to 120	0.300	20.0
BB13190	Fluoride	mg/L	0.0205	0.100	2.50	2.84	0.286	2.59	2.25 to 2.75	103	80.0 to 120	6.50	20.0
BB13190	Chloride	mg/L	-0.107	1.00	10.0	13.3	3.46	9.89	9.00 to 11.0	96.6	80.0 to 120	5.07	20.0
BB13190	Solids, Dissolved	mg/L	-2.00	25.0			1060	55.0	40.0 to 60.0			0.935	5.00
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-7

Location Code: WMWGORLF
Collected: 7/20/21 14:30
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13191

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 14:21		1.015	0.0721	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 15:41		10.15	254	mg/L	0.70035	4.06	
* Iron, Total	7/28/21 08:00	7/28/21 14:21		1.015	2.01	mg/L	0.008120	0.0406	
* Lithium, Total	7/28/21 08:00	7/28/21 14:21		1.015	0.0960	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/28/21 08:00	7/28/21 15:41		10.15	229	mg/L	0.21315	4.06	
* Sodium, Total	7/28/21 08:00	7/28/21 14:21		1.015	38.4	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 11:00		1.015	1.96	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:50		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:50		1.015	0.00164	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:50		1.015	0.0142	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:50		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 14:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 14:50		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 14:50		1.015	0.00561	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 14:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:50		1.015	0.000860	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 14:50		1.015	6.84	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 23:21		5.075	2.97	mg/L	0.000340	0.001015	
* Selenium, Total	7/23/21 13:00	7/26/21 14:50		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 14:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 21:48		5.075	3.04	mg/L	0.000340	0.001015	RA
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 20:20		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	275	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/22/21 12:06	8/2/21 08:20		1	2110	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-7

Location Code: WMWGORLF
Collected: 7/20/21 14:30
Customer ID:
Submittal Date: 7/21/21 09:49

Laboratory ID Number: BB13191

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	275	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.16	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:43	7/26/21 10:43		1	6.35	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:45	7/26/21 13:45		1	0.286	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:25	7/23/21 14:25		40	1170	mg/L	20.00	40	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/20/21 14:27	7/20/21 14:27			2199.04	uS/cm			FA
pH	7/20/21 14:27	7/20/21 14:27			6.58	SU			FA
Temperature	7/20/21 14:27	7/20/21 14:27			20.48	C			FA
Turbidity	7/20/21 14:27	7/20/21 14:27			1.57	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/20/21 14:30
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-7

Laboratory ID Number: BB13191

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.115	0.120	0.0990	0.0850 to 0.115	99.0	70.0 to 130	4.26	20.0
BB13191	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.15	2.11	0.197	0.170 to 0.230	95.0	70.0 to 130	1.88	20.0
BB13332	Boron, Total	mg/L	0.000162	0.0650	1.00	1.11	1.11	0.979	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB13332	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.102	0.102	0.103	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB13332	Sodium, Total	mg/L	-0.000208	0.0660	5.00	138	141	4.85	4.25 to 5.75	40.0	70.0 to 130	2.15	20.0
BB13332	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.100	0.0983	0.0998	0.0850 to 0.115	100	70.0 to 130	1.71	20.0
BB13332	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0866	0.0884	0.0932	0.0850 to 0.115	86.6	70.0 to 130	2.06	20.0
BB13332	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.110	0.110	0.112	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Iron, Total	mg/L	-0.000465	0.0176	0.2	6.85	7.00	0.197	0.170 to 0.230	20.0	70.0 to 130	2.17	20.0
BB13332	Calcium, Total	mg/L	0.00423	0.152	5.00	334	342	4.97	4.25 to 5.75	-40.0	70.0 to 130	2.37	20.0
BB13332	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.0996	0.0984	0.101	0.0850 to 0.115	99.4	70.0 to 130	1.21	20.0
BB13332	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.24	1.24	0.100	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.102	0.0992	0.0982	0.0850 to 0.115	101	70.0 to 130	2.78	20.0
BB13191	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	3.05	3.03	0.108	0.0850 to 0.115	10.0	70.0 to 130	0.658	20.0
BB13332	Magnesium, Total	mg/L	-0.00978	0.0462	5.00	174	177	4.88	4.25 to 5.75	20.0	70.0 to 130	1.71	20.0
BB13332	Lithium, Total	mg/L	-9.150E-05	0.0154	0.200	0.492	0.492	0.196	0.170 to 0.230	126	70.0 to 130	0.00	20.0
BB13332	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.0039	0.0039	0.00386	0.00340 to 0.00460	97.5	70.0 to 130	0.00	20.0
BB13332	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0986	0.0959	0.0988	0.0850 to 0.115	98.6	70.0 to 130	2.78	20.0
BB13332	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.108	0.106	0.110	0.0850 to 0.115	108	70.0 to 130	1.87	20.0
BB13332	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.108	0.107	0.106	0.0850 to 0.115	107	70.0 to 130	0.930	20.0
BB13332	Potassium, Total	mg/L	0.0209	0.367	10.0	16.5	16.1	10.5	8.50 to 11.5	104	70.0 to 130	2.45	20.0
BB13332	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0993	0.101	0.0929	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/20/21 14:30
Customer ID:
Delivery Date: 7/21/21 09:49

Description: Gorgas Landfill - MW-7

Laboratory ID Number: BB13191

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13191	Solids, Dissolved	mg/L	-2.00	25.0			2180	55.0	40.0 to 60.0			1.63	5.00
BB13332	Sulfate	mg/L	-0.454	1.00	1600	3090	1470	18.4	18.0 to 22.0	101	80.0 to 120	0.678	20.0
BB13332	Chloride	mg/L	-0.0654	1.00	160	232	68.5	9.92	9.00 to 11.0	103	80.0 to 120	0.880	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13332	Fluoride	mg/L	0.0225	0.100	2.50	2.79	0.149	2.63	2.25 to 2.75	106	80.0 to 120	4.11	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-5

Location Code: WMWGORLF
Collected: 7/21/21 10:53
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13324

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 14:24		1.015	0.0319	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 15:45		10.15	384	mg/L	0.70035	4.06	
* Iron, Total	7/28/21 08:00	7/28/21 14:24		1.015	2.62	mg/L	0.008120	0.0406	
* Lithium, Total	7/28/21 08:00	7/28/21 14:24		1.015	0.113	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/28/21 08:00	7/28/21 15:45		10.15	383	mg/L	0.21315	4.06	
* Sodium, Total	7/28/21 08:00	7/28/21 15:45		10.15	52.3	mg/L	0.3045	4.06	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 11:17		1.015	2.08	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:54		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:54		1.015	0.000461	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:54		1.015	0.0116	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:54		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 14:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 14:54		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 14:54		1.015	0.00127	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 14:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:54		1.015	0.00126	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 14:54		1.015	6.47	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 14:54		1.015	0.366	mg/L	0.000068	0.000203	
* Selenium, Total	7/23/21 13:00	7/26/21 14:54		1.015	0.00178	mg/L	0.000508	0.001015	
* Thallium, Total	7/23/21 13:00	7/26/21 14:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 13:03		1.015	0.416	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 20:24		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	318	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/23/21 10:25	7/27/21 10:25		1	3570	mg/L		178.6	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-5

Location Code: WMWGORLF
Collected: 7/21/21 10:53
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13324

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	318	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.13	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:44	7/26/21 10:44		1	6.73	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:46	7/26/21 13:46		1	0.331	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:27	7/23/21 14:27		100	2240	mg/L	50.00	100	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/21/21 10:49	7/21/21 10:49			3105.06	uS/cm			FA
pH	7/21/21 10:49	7/21/21 10:49			6.40	SU			FA
Temperature	7/21/21 10:49	7/21/21 10:49			22.24	C			FA
Turbidity	7/21/21 10:49	7/21/21 10:49			2.99	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/21/21 10:53
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-5

Laboratory ID Number: BB13324

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.100	0.0983	0.0998	0.0850 to 0.115	100	70.0 to 130	1.71	20.0
BB13332	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.115	0.120	0.0990	0.0850 to 0.115	99.0	70.0 to 130	4.26	20.0
BB13332	Boron, Total	mg/L	0.000162	0.0650	1.00	1.11	1.11	0.979	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB13332	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.102	0.102	0.103	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB13332	Sodium, Total	mg/L	-0.000208	0.0660	5.00	138	141	4.85	4.25 to 5.75	40.0	70.0 to 130	2.15	20.0
BB13332	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0866	0.0884	0.0932	0.0850 to 0.115	86.6	70.0 to 130	2.06	20.0
BB13332	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.110	0.110	0.112	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Iron, Total	mg/L	-0.000465	0.0176	0.2	6.85	7.00	0.197	0.170 to 0.230	20.0	70.0 to 130	2.17	20.0
BB13332	Calcium, Total	mg/L	0.00423	0.152	5.00	334	342	4.97	4.25 to 5.75	-40.0	70.0 to 130	2.37	20.0
BB13332	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.0996	0.0984	0.101	0.0850 to 0.115	99.4	70.0 to 130	1.21	20.0
BB13333	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.09	2.06	0.197	0.170 to 0.230	105	70.0 to 130	1.45	20.0
BB13333	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	1.61	1.60	0.108	0.0850 to 0.115	60.0	70.0 to 130	0.623	20.0
BB13332	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.0039	0.0039	0.00386	0.00340 to 0.00460	97.5	70.0 to 130	0.00	20.0
BB13332	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0986	0.0959	0.0988	0.0850 to 0.115	98.6	70.0 to 130	2.78	20.0
BB13332	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.108	0.106	0.110	0.0850 to 0.115	108	70.0 to 130	1.87	20.0
BB13332	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.108	0.107	0.106	0.0850 to 0.115	107	70.0 to 130	0.930	20.0
BB13332	Potassium, Total	mg/L	0.0209	0.367	10.0	16.5	16.1	10.5	8.50 to 11.5	104	70.0 to 130	2.45	20.0
BB13332	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0993	0.101	0.0929	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BB13332	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.24	1.24	0.100	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.102	0.0992	0.0982	0.0850 to 0.115	101	70.0 to 130	2.78	20.0
BB13332	Magnesium, Total	mg/L	-0.00978	0.0462	5.00	174	177	4.88	4.25 to 5.75	20.0	70.0 to 130	1.71	20.0
BB13332	Lithium, Total	mg/L	-9.150E-05	0.0154	0.200	0.492	0.492	0.196	0.170 to 0.230	126	70.0 to 130	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/21/21 10:53
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-5

Laboratory ID Number: BB13324

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Chloride	mg/L	-0.0654	1.00	160	232	68.5	9.92	9.00 to 11.0	103	80.0 to 120	0.880	20.0
BB13332	Sulfate	mg/L	-0.454	1.00	1600	3090	1470	18.4	18.0 to 22.0	101	80.0 to 120	0.678	20.0
BB13333	Solids, Dissolved	mg/L	1.00	25.0			3060	57.0	40.0 to 60.0			1.13	5.00
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13332	Fluoride	mg/L	0.0225	0.100	2.50	2.79	0.149	2.63	2.25 to 2.75	106	80.0 to 120	4.11	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-16

Location Code: WMWGORLF
Collected: 7/21/21 12:10
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13325

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 14:28		1.015	0.0437	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 15:48		10.15	295	mg/L	0.70035	4.06	
* Iron, Total	7/28/21 08:00	7/28/21 14:28		1.015	2.68	mg/L	0.008120	0.0406	
* Lithium, Total	7/28/21 08:00	7/28/21 14:28		1.015	0.0179	mg/L	0.007105	0.01999956	J
* Magnesium, Total	7/28/21 08:00	7/28/21 15:48		10.15	242	mg/L	0.21315	4.06	
* Sodium, Total	7/28/21 08:00	7/28/21 14:28		1.015	31.0	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 11:20		1.015	2.57	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 14:57		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 14:57		1.015	0.00269	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 14:57		1.015	0.0132	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 14:57		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 14:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 14:57		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 14:57		1.015	0.00887	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 14:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 14:57		1.015	0.000426	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 14:57		1.015	8.11	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 23:25		5.075	2.70	mg/L	0.000340	0.001015	
* Selenium, Total	7/23/21 13:00	7/26/21 14:57		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 14:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 22:10		5.075	2.60	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 20:28		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	357	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/23/21 10:25	7/27/21 10:25		1	2290	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-16

Location Code: WMWGORLF
Collected: 7/21/21 12:10
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13325

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	357	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.13	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:46	7/26/21 10:46		1	2.97	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:48	7/26/21 13:48		1	0.201	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:28	7/23/21 14:28		40	1370	mg/L	20.00	40	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/21/21 12:07	7/21/21 12:07			2259.08	uS/cm			FA
pH	7/21/21 12:07	7/21/21 12:07			6.24	SU			FA
Temperature	7/21/21 12:07	7/21/21 12:07			20.85	C			FA
Turbidity	7/21/21 12:07	7/21/21 12:07			0.1	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/21/21 12:10
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-16

Laboratory ID Number: BB13325

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.115	0.120	0.0990	0.0850 to 0.115	99.0	70.0 to 130	4.26	20.0
BB13332	Boron, Total	mg/L	0.000162	0.0650	1.00	1.11	1.11	0.979	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB13332	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.102	0.102	0.103	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB13332	Sodium, Total	mg/L	-0.000208	0.0660	5.00	138	141	4.85	4.25 to 5.75	40.0	70.0 to 130	2.15	20.0
BB13332	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0866	0.0884	0.0932	0.0850 to 0.115	86.6	70.0 to 130	2.06	20.0
BB13332	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.110	0.110	0.112	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.100	0.0983	0.0998	0.0850 to 0.115	100	70.0 to 130	1.71	20.0
BB13332	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.0039	0.0039	0.00386	0.00340 to 0.00460	97.5	70.0 to 130	0.00	20.0
BB13332	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0986	0.0959	0.0988	0.0850 to 0.115	98.6	70.0 to 130	2.78	20.0
BB13332	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.108	0.106	0.110	0.0850 to 0.115	108	70.0 to 130	1.87	20.0
BB13332	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.108	0.107	0.106	0.0850 to 0.115	107	70.0 to 130	0.930	20.0
BB13332	Potassium, Total	mg/L	0.0209	0.367	10.0	16.5	16.1	10.5	8.50 to 11.5	104	70.0 to 130	2.45	20.0
BB13332	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0993	0.101	0.0929	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BB13333	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	1.61	1.60	0.108	0.0850 to 0.115	60.0	70.0 to 130	0.623	20.0
BB13332	Iron, Total	mg/L	-0.000465	0.0176	0.2	6.85	7.00	0.197	0.170 to 0.230	20.0	70.0 to 130	2.17	20.0
BB13332	Calcium, Total	mg/L	0.00423	0.152	5.00	334	342	4.97	4.25 to 5.75	-40.0	70.0 to 130	2.37	20.0
BB13332	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.0996	0.0984	0.101	0.0850 to 0.115	99.4	70.0 to 130	1.21	20.0
BB13333	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.09	2.06	0.197	0.170 to 0.230	105	70.0 to 130	1.45	20.0
BB13332	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.24	1.24	0.100	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.102	0.0992	0.0982	0.0850 to 0.115	101	70.0 to 130	2.78	20.0
BB13332	Magnesium, Total	mg/L	-0.00978	0.0462	5.00	174	177	4.88	4.25 to 5.75	20.0	70.0 to 130	1.71	20.0
BB13332	Lithium, Total	mg/L	-9.150E-05	0.0154	0.200	0.492	0.492	0.196	0.170 to 0.230	126	70.0 to 130	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/21/21 12:10
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-16

Laboratory ID Number: BB13325

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Sulfate	mg/L	-0.454	1.00	1600	3090	1470	18.4	18.0 to 22.0	101	80.0 to 120	0.678	20.0
BB13332	Chloride	mg/L	-0.0654	1.00	160	232	68.5	9.92	9.00 to 11.0	103	80.0 to 120	0.880	20.0
BB13333	Solids, Dissolved	mg/L	1.00	25.0			3060	57.0	40.0 to 60.0			1.13	5.00
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13332	Fluoride	mg/L	0.0225	0.100	2.50	2.79	0.149	2.63	2.25 to 2.75	106	80.0 to 120	4.11	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-16 DUP

Location Code: WMWGORLF
Collected: 7/21/21 12:10
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13326

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 14:31		1.015	0.0433	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 15:51		10.15	295	mg/L	0.70035	4.06	
* Iron, Total	7/28/21 08:00	7/28/21 14:31		1.015	2.70	mg/L	0.008120	0.0406	
* Lithium, Total	7/28/21 08:00	7/28/21 14:31		1.015	0.0179	mg/L	0.007105	0.01999956	J
* Magnesium, Total	7/28/21 08:00	7/28/21 15:51		10.15	244	mg/L	0.21315	4.06	
* Sodium, Total	7/28/21 08:00	7/28/21 14:31		1.015	31.2	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 11:24		1.015	2.61	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 15:01		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 15:01		1.015	0.00257	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 15:01		1.015	0.0127	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 15:01		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 15:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 15:01		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 15:01		1.015	0.00887	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 15:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 15:01		1.015	0.000479	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 15:01		1.015	8.03	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 23:28		5.075	2.75	mg/L	0.000340	0.001015	
* Selenium, Total	7/23/21 13:00	7/26/21 15:01		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 15:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 22:13		5.075	2.63	mg/L	0.000340	0.001015	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 20:32		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	327	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/23/21 10:25	7/27/21 10:25		1	2340	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-16 DUP

Location Code: WMWGORLF
Collected: 7/21/21 12:10
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13326

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	327	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.13	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:47	7/26/21 10:47		1	2.95	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:49	7/26/21 13:49		1	0.202	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:32	7/23/21 14:32		40	1290	mg/L	20.00	40	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/21/21 12:07	7/21/21 12:07			2259.08	uS/cm			FA
pH	7/21/21 12:07	7/21/21 12:07			6.24	SU			FA
Temperature	7/21/21 12:07	7/21/21 12:07			20.85	C			FA
Turbidity	7/21/21 12:07	7/21/21 12:07			0.1	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/21/21 12:10
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-16 DUP

Laboratory ID Number: BB13326

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0866	0.0884	0.0932	0.0850 to 0.115	86.6	70.0 to 130	2.06	20.0
BB13332	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.110	0.110	0.112	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.100	0.0983	0.0998	0.0850 to 0.115	100	70.0 to 130	1.71	20.0
BB13333	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	1.61	1.60	0.108	0.0850 to 0.115	60.0	70.0 to 130	0.623	20.0
BB13332	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.0039	0.0039	0.00386	0.00340 to 0.00460	97.5	70.0 to 130	0.00	20.0
BB13332	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0986	0.0959	0.0988	0.0850 to 0.115	98.6	70.0 to 130	2.78	20.0
BB13332	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.108	0.106	0.110	0.0850 to 0.115	108	70.0 to 130	1.87	20.0
BB13332	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.108	0.107	0.106	0.0850 to 0.115	107	70.0 to 130	0.930	20.0
BB13332	Potassium, Total	mg/L	0.0209	0.367	10.0	16.5	16.1	10.5	8.50 to 11.5	104	70.0 to 130	2.45	20.0
BB13332	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0993	0.101	0.0929	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BB13332	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.24	1.24	0.100	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.102	0.0992	0.0982	0.0850 to 0.115	101	70.0 to 130	2.78	20.0
BB13332	Magnesium, Total	mg/L	-0.00978	0.0462	5.00	174	177	4.88	4.25 to 5.75	20.0	70.0 to 130	1.71	20.0
BB13332	Lithium, Total	mg/L	-9.150E-05	0.0154	0.200	0.492	0.492	0.196	0.170 to 0.230	126	70.0 to 130	0.00	20.0
BB13332	Iron, Total	mg/L	-0.000465	0.0176	0.2	6.85	7.00	0.197	0.170 to 0.230	20.0	70.0 to 130	2.17	20.0
BB13332	Calcium, Total	mg/L	0.00423	0.152	5.00	334	342	4.97	4.25 to 5.75	-40.0	70.0 to 130	2.37	20.0
BB13332	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.0996	0.0984	0.101	0.0850 to 0.115	99.4	70.0 to 130	1.21	20.0
BB13333	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.09	2.06	0.197	0.170 to 0.230	105	70.0 to 130	1.45	20.0
BB13332	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.115	0.120	0.0990	0.0850 to 0.115	99.0	70.0 to 130	4.26	20.0
BB13332	Boron, Total	mg/L	0.000162	0.0650	1.00	1.11	1.11	0.979	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB13332	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.102	0.102	0.103	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB13332	Sodium, Total	mg/L	-0.000208	0.0660	5.00	138	141	4.85	4.25 to 5.75	40.0	70.0 to 130	2.15	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/21/21 12:10
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-16 DUP

Laboratory ID Number: BB13326

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Sulfate	mg/L	-0.454	1.00	1600	3090	1470	18.4	18.0 to 22.0	101	80.0 to 120	0.678	20.0
BB13333	Solids, Dissolved	mg/L	1.00	25.0			3060	57.0	40.0 to 60.0			1.13	5.00
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13332	Fluoride	mg/L	0.0225	0.100	2.50	2.79	0.149	2.63	2.25 to 2.75	106	80.0 to 120	4.11	20.0
BB13332	Chloride	mg/L	-0.0654	1.00	160	232	68.5	9.92	9.00 to 11.0	103	80.0 to 120	0.880	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-17R

Location Code: WMWGORLF
Collected: 7/21/21 13:30
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13327

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 14:34		1.015	0.0549	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 15:55		10.15	380	mg/L	0.70035	4.06	
* Iron, Total	7/28/21 08:00	7/28/21 15:55		10.15	23.5	mg/L	0.08120	0.406	
* Lithium, Total	7/28/21 08:00	7/28/21 14:34		1.015	0.0504	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/28/21 08:00	7/28/21 15:38		101.5	405	mg/L	2.1315	40.6	
* Sodium, Total	7/28/21 08:00	7/28/21 15:55		10.15	36.4	mg/L	0.3045	4.06	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 13:11		10.15	20.3	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 15:04		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 15:04		1.015	0.00196	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 15:04		1.015	0.0140	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 15:04		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 15:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 15:04		1.015	0.000360	mg/L	0.000203	0.001015	J
* Cobalt, Total	7/23/21 13:00	7/26/21 15:04		1.015	0.329	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 15:04		1.015	0.0000922	mg/L	0.000068	0.000203	J
* Molybdenum, Total	7/23/21 13:00	7/26/21 15:04		1.015	0.000172	mg/L	0.000068	0.000203	J
* Potassium, Total	7/23/21 13:00	7/26/21 15:04		1.015	7.34	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 23:32		92.365	22.0	mg/L	0.006188	0.018473	
* Selenium, Total	7/23/21 13:00	7/26/21 15:04		1.015	0.000666	mg/L	0.000508	0.001015	J
* Thallium, Total	7/23/21 13:00	7/26/21 15:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 22:17		92.365	18.9	mg/L	0.006188	0.018473	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 20:36		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	157	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/23/21 10:25	7/27/21 10:25		1	3860	mg/L		178.6	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-17R

Location Code: WMWGORLF
Collected: 7/21/21 13:30
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13327

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	157	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.08	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:48	7/26/21 10:48		1	2.38	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:50	7/26/21 13:50		1	0.183	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:30	7/23/21 14:30		100	2450	mg/L	50.00	100	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/21/21 13:26	7/21/21 13:26			3081.80	uS/cm			FA
pH	7/21/21 13:26	7/21/21 13:26			5.79	SU			FA
Temperature	7/21/21 13:26	7/21/21 13:26			22.47	C			FA
Turbidity	7/21/21 13:26	7/21/21 13:26			0.27	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/21/21 13:30
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: BB13327

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.100	0.0983	0.0998	0.0850 to 0.115	100	70.0 to 130	1.71	20.0
BB13332	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0866	0.0884	0.0932	0.0850 to 0.115	86.6	70.0 to 130	2.06	20.0
BB13332	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.110	0.110	0.112	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.115	0.120	0.0990	0.0850 to 0.115	99.0	70.0 to 130	4.26	20.0
BB13332	Boron, Total	mg/L	0.000162	0.0650	1.00	1.11	1.11	0.979	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB13332	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.102	0.102	0.103	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB13332	Sodium, Total	mg/L	-0.000208	0.0660	5.00	138	141	4.85	4.25 to 5.75	40.0	70.0 to 130	2.15	20.0
BB13333	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	1.61	1.60	0.108	0.0850 to 0.115	60.0	70.0 to 130	0.623	20.0
BB13332	Iron, Total	mg/L	-0.000465	0.0176	0.2	6.85	7.00	0.197	0.170 to 0.230	20.0	70.0 to 130	2.17	20.0
BB13332	Calcium, Total	mg/L	0.00423	0.152	5.00	334	342	4.97	4.25 to 5.75	-40.0	70.0 to 130	2.37	20.0
BB13332	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.0996	0.0984	0.101	0.0850 to 0.115	99.4	70.0 to 130	1.21	20.0
BB13333	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.09	2.06	0.197	0.170 to 0.230	105	70.0 to 130	1.45	20.0
BB13332	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.24	1.24	0.100	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.102	0.0992	0.0982	0.0850 to 0.115	101	70.0 to 130	2.78	20.0
BB13332	Magnesium, Total	mg/L	-0.00978	0.0462	5.00	174	177	4.88	4.25 to 5.75	20.0	70.0 to 130	1.71	20.0
BB13332	Lithium, Total	mg/L	-9.150E-05	0.0154	0.200	0.492	0.492	0.196	0.170 to 0.230	126	70.0 to 130	0.00	20.0
BB13332	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.0039	0.0039	0.00386	0.00340 to 0.00460	97.5	70.0 to 130	0.00	20.0
BB13332	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0986	0.0959	0.0988	0.0850 to 0.115	98.6	70.0 to 130	2.78	20.0
BB13332	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.108	0.106	0.110	0.0850 to 0.115	108	70.0 to 130	1.87	20.0
BB13332	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.108	0.107	0.106	0.0850 to 0.115	107	70.0 to 130	0.930	20.0
BB13332	Potassium, Total	mg/L	0.0209	0.367	10.0	16.5	16.1	10.5	8.50 to 11.5	104	70.0 to 130	2.45	20.0
BB13332	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0993	0.101	0.0929	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/21/21 13:30
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: BB13327

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Sulfate	mg/L	-0.454	1.00	1600	3090	1470	18.4	18.0 to 22.0	101	80.0 to 120	0.678	20.0
BB13332	Chloride	mg/L	-0.0654	1.00	160	232	68.5	9.92	9.00 to 11.0	103	80.0 to 120	0.880	20.0
BB13333	Solids, Dissolved	mg/L	1.00	25.0			3060	57.0	40.0 to 60.0			1.13	5.00
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13332	Fluoride	mg/L	0.0225	0.100	2.50	2.79	0.149	2.63	2.25 to 2.75	106	80.0 to 120	4.11	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-18

Location Code: WMWGORLF
Collected: 7/21/21 14:28
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13328

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 14:38		1.015	0.0318	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 15:58		10.15	289	mg/L	0.70035	4.06	
* Iron, Total	7/28/21 08:00	7/28/21 14:38		1.015	0.0676	mg/L	0.008120	0.0406	
* Lithium, Total	7/28/21 08:00	7/28/21 14:38		1.015	0.0574	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/28/21 08:00	7/28/21 15:58		10.15	292	mg/L	0.21315	4.06	
* Sodium, Total	7/28/21 08:00	7/28/21 14:38		1.015	32.1	mg/L	0.03045	0.406	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 11:30		1.015	Not Detected	mg/L	0.008120	0.0406	U
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 15:08		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 15:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	7/23/21 13:00	7/26/21 15:08		1.015	0.0105	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 15:08		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 15:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 15:08		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 15:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	7/23/21 13:00	7/26/21 15:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 15:08		1.015	0.000103	mg/L	0.000068	0.000203	J
* Potassium, Total	7/23/21 13:00	7/26/21 15:08		1.015	6.91	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 15:08		1.015	0.00122	mg/L	0.000068	0.000203	
* Selenium, Total	7/23/21 13:00	7/26/21 15:08		1.015	0.00294	mg/L	0.000508	0.001015	
* Thallium, Total	7/23/21 13:00	7/26/21 15:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 13:18		1.015	0.000340	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 20:40		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	151	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/23/21 10:25	7/27/21 10:25		1	2620	mg/L		125	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-18

Location Code: WMWGORLF
Collected: 7/21/21 14:28
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13328

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	151	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.10	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:49	7/26/21 10:49		1	1.40	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:51	7/26/21 13:51		1	0.348	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:33	7/23/21 14:33		80	1650	mg/L	40.00	80	
Analytical Method: Field Measurements	***Analyst: TJD***								
Conductivity	7/21/21 14:24	7/21/21 14:24			2357.17	uS/cm			FA
pH	7/21/21 14:24	7/21/21 14:24			6.33	SU			FA
Temperature	7/21/21 14:24	7/21/21 14:24			22.33	C			FA
Turbidity	7/21/21 14:24	7/21/21 14:24			0.23	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/21/21 14:28
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-18

Laboratory ID Number: BB13328

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0866	0.0884	0.0932	0.0850 to 0.115	86.6	70.0 to 130	2.06	20.0
BB13332	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.110	0.110	0.112	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.100	0.0983	0.0998	0.0850 to 0.115	100	70.0 to 130	1.71	20.0
BB13332	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.0039	0.0039	0.00386	0.00340 to 0.00460	97.5	70.0 to 130	0.00	20.0
BB13332	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0986	0.0959	0.0988	0.0850 to 0.115	98.6	70.0 to 130	2.78	20.0
BB13332	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.108	0.106	0.110	0.0850 to 0.115	108	70.0 to 130	1.87	20.0
BB13332	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.108	0.107	0.106	0.0850 to 0.115	107	70.0 to 130	0.930	20.0
BB13332	Potassium, Total	mg/L	0.0209	0.367	10.0	16.5	16.1	10.5	8.50 to 11.5	104	70.0 to 130	2.45	20.0
BB13332	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0993	0.101	0.0929	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BB13333	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	1.61	1.60	0.108	0.0850 to 0.115	60.0	70.0 to 130	0.623	20.0
BB13332	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.24	1.24	0.100	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.102	0.0992	0.0982	0.0850 to 0.115	101	70.0 to 130	2.78	20.0
BB13332	Magnesium, Total	mg/L	-0.00978	0.0462	5.00	174	177	4.88	4.25 to 5.75	20.0	70.0 to 130	1.71	20.0
BB13332	Lithium, Total	mg/L	-9.150E-05	0.0154	0.200	0.492	0.492	0.196	0.170 to 0.230	126	70.0 to 130	0.00	20.0
BB13332	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.115	0.120	0.0990	0.0850 to 0.115	99.0	70.0 to 130	4.26	20.0
BB13332	Boron, Total	mg/L	0.000162	0.0650	1.00	1.11	1.11	0.979	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB13332	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.102	0.102	0.103	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB13332	Sodium, Total	mg/L	-0.000208	0.0660	5.00	138	141	4.85	4.25 to 5.75	40.0	70.0 to 130	2.15	20.0
BB13332	Iron, Total	mg/L	-0.000465	0.0176	0.2	6.85	7.00	0.197	0.170 to 0.230	20.0	70.0 to 130	2.17	20.0
BB13332	Calcium, Total	mg/L	0.00423	0.152	5.00	334	342	4.97	4.25 to 5.75	-40.0	70.0 to 130	2.37	20.0
BB13332	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.0996	0.0984	0.101	0.0850 to 0.115	99.4	70.0 to 130	1.21	20.0
BB13333	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.09	2.06	0.197	0.170 to 0.230	105	70.0 to 130	1.45	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/21/21 14:28
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-18

Laboratory ID Number: BB13328

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13333	Solids, Dissolved	mg/L	1.00	25.0			3060	57.0	40.0 to 60.0			1.13	5.00
BB13332	Sulfate	mg/L	-0.454	1.00	1600	3090	1470	18.4	18.0 to 22.0	101	80.0 to 120	0.678	20.0
BB13332	Chloride	mg/L	-0.0654	1.00	160	232	68.5	9.92	9.00 to 11.0	103	80.0 to 120	0.880	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13332	Fluoride	mg/L	0.0225	0.100	2.50	2.79	0.149	2.63	2.25 to 2.75	106	80.0 to 120	4.11	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill Field Blank-1

Location Code: WMWGORLFFB
Collected: 7/21/21 15:00
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13329

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 14:41		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	7/28/21 08:00	7/28/21 14:41		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	7/28/21 08:00	7/28/21 14:41		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	7/28/21 08:00	7/28/21 14:41		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	7/28/21 08:00	7/28/21 14:41		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	7/28/21 08:00	7/28/21 14:41		1.015	Not Detected	mg/L	0.03045	0.406	U
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Beryllium, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	7/23/21 13:00	7/26/21 15:11		1.015	0.000102	mg/L	0.000068	0.000203	J
* Potassium, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 15:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 20:44		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/23/21 10:25	7/27/21 10:25		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:50	7/26/21 10:50		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:52	7/26/21 13:52		1	Not Detected	mg/L	0.06	0.1	U
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:34	7/23/21 14:34		1	Not Detected	mg/L	0.50	1	U

MDL's and RL's are adjusted for sample dilution, as applicable

Comments:

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLFFB
Sample Date: 7/21/21 15:00
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill Field Blank-1

Laboratory ID Number: BB13329

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0866	0.0884	0.0932	0.0850 to 0.115	86.6	70.0 to 130	2.06	20.0
BB13332	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.110	0.110	0.112	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.115	0.120	0.0990	0.0850 to 0.115	99.0	70.0 to 130	4.26	20.0
BB13332	Boron, Total	mg/L	0.000162	0.0650	1.00	1.11	1.11	0.979	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB13332	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.102	0.102	0.103	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB13332	Sodium, Total	mg/L	-0.000208	0.0660	5.00	138	141	4.85	4.25 to 5.75	40.0	70.0 to 130	2.15	20.0
BB13332	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.100	0.0983	0.0998	0.0850 to 0.115	100	70.0 to 130	1.71	20.0
BB13332	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.24	1.24	0.100	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.102	0.0992	0.0982	0.0850 to 0.115	101	70.0 to 130	2.78	20.0
BB13332	Magnesium, Total	mg/L	-0.00978	0.0462	5.00	174	177	4.88	4.25 to 5.75	20.0	70.0 to 130	1.71	20.0
BB13332	Lithium, Total	mg/L	-9.150E-05	0.0154	0.200	0.492	0.492	0.196	0.170 to 0.230	126	70.0 to 130	0.00	20.0
BB13332	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.0039	0.0039	0.00386	0.00340 to 0.00460	97.5	70.0 to 130	0.00	20.0
BB13332	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0986	0.0959	0.0988	0.0850 to 0.115	98.6	70.0 to 130	2.78	20.0
BB13332	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.108	0.106	0.110	0.0850 to 0.115	108	70.0 to 130	1.87	20.0
BB13332	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.108	0.107	0.106	0.0850 to 0.115	107	70.0 to 130	0.930	20.0
BB13332	Potassium, Total	mg/L	0.0209	0.367	10.0	16.5	16.1	10.5	8.50 to 11.5	104	70.0 to 130	2.45	20.0
BB13332	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0993	0.101	0.0929	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BB13332	Iron, Total	mg/L	-0.000465	0.0176	0.2	6.85	7.00	0.197	0.170 to 0.230	20.0	70.0 to 130	2.17	20.0
BB13332	Calcium, Total	mg/L	0.00423	0.152	5.00	334	342	4.97	4.25 to 5.75	-40.0	70.0 to 130	2.37	20.0
BB13332	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.0996	0.0984	0.101	0.0850 to 0.115	99.4	70.0 to 130	1.21	20.0

Comments:

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLFFB
Sample Date: 7/21/21 15:00
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill Field Blank-1

Laboratory ID Number: BB13329

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Sulfate	mg/L	-0.454	1.00	1600	3090	1470	18.4	18.0 to 22.0	101	80.0 to 120	0.678	20.0
BB13333	Solids, Dissolved	mg/L	1.00	25.0			3060	57.0	40.0 to 60.0			1.13	5.00
BB13332	Fluoride	mg/L	0.0225	0.100	2.50	2.79	0.149	2.63	2.25 to 2.75	106	80.0 to 120	4.11	20.0
BB13332	Chloride	mg/L	-0.0654	1.00	160	232	68.5	9.92	9.00 to 11.0	103	80.0 to 120	0.880	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill Equipment Blank-1

Location Code: WMWGORLFEB
Collected: 7/21/21 15:10
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13330

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 14:45		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	7/28/21 08:00	7/28/21 14:45		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	7/28/21 08:00	7/28/21 14:45		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	7/28/21 08:00	7/28/21 14:45		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	7/28/21 08:00	7/28/21 14:45		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	7/28/21 08:00	7/28/21 14:45		1.015	Not Detected	mg/L	0.03045	0.406	U
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 15:15		1.015	0.0000837	mg/L	0.000068	0.000203	J
* Barium, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Beryllium, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 15:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 20:48		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/23/21 10:25	7/27/21 10:25		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 10:52	7/26/21 10:52		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:54	7/26/21 13:54		1	Not Detected	mg/L	0.06	0.1	U
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:35	7/23/21 14:35		1	Not Detected	mg/L	0.50	1	U

MDL's and RL's are adjusted for sample dilution, as applicable

Comments:

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLFEB
Sample Date: 7/21/21 15:10
Customer ID:
Delivery Date: 7/22/21 10:16

Description:Gorgas Landfill Equipment Blank-1

Laboratory ID Number: BB13330

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0866	0.0884	0.0932	0.0850 to 0.115	86.6	70.0 to 130	2.06	20.0
BB13332	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.110	0.110	0.112	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.100	0.0983	0.0998	0.0850 to 0.115	100	70.0 to 130	1.71	20.0
BB13332	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.115	0.120	0.0990	0.0850 to 0.115	99.0	70.0 to 130	4.26	20.0
BB13332	Boron, Total	mg/L	0.000162	0.0650	1.00	1.11	1.11	0.979	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB13332	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.102	0.102	0.103	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB13332	Sodium, Total	mg/L	-0.000208	0.0660	5.00	138	141	4.85	4.25 to 5.75	40.0	70.0 to 130	2.15	20.0
BB13332	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.0039	0.0039	0.00386	0.00340 to 0.00460	97.5	70.0 to 130	0.00	20.0
BB13332	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0986	0.0959	0.0988	0.0850 to 0.115	98.6	70.0 to 130	2.78	20.0
BB13332	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.108	0.106	0.110	0.0850 to 0.115	108	70.0 to 130	1.87	20.0
BB13332	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.108	0.107	0.106	0.0850 to 0.115	107	70.0 to 130	0.930	20.0
BB13332	Potassium, Total	mg/L	0.0209	0.367	10.0	16.5	16.1	10.5	8.50 to 11.5	104	70.0 to 130	2.45	20.0
BB13332	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0993	0.101	0.0929	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BB13332	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.24	1.24	0.100	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.102	0.0992	0.0982	0.0850 to 0.115	101	70.0 to 130	2.78	20.0
BB13332	Magnesium, Total	mg/L	-0.00978	0.0462	5.00	174	177	4.88	4.25 to 5.75	20.0	70.0 to 130	1.71	20.0
BB13332	Lithium, Total	mg/L	-9.150E-05	0.0154	0.200	0.492	0.492	0.196	0.170 to 0.230	126	70.0 to 130	0.00	20.0
BB13332	Iron, Total	mg/L	-0.000465	0.0176	0.2	6.85	7.00	0.197	0.170 to 0.230	20.0	70.0 to 130	2.17	20.0
BB13332	Calcium, Total	mg/L	0.00423	0.152	5.00	334	342	4.97	4.25 to 5.75	-40.0	70.0 to 130	2.37	20.0
BB13332	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.0996	0.0984	0.101	0.0850 to 0.115	99.4	70.0 to 130	1.21	20.0

Comments:

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLFEB
Sample Date: 7/21/21 15:10
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill Equipment Blank-1

Laboratory ID Number: BB13330

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Sulfate	mg/L	-0.454	1.00	1600	3090	1470	18.4	18.0 to 22.0	101	80.0 to 120	0.678	20.0
BB13333	Solids, Dissolved	mg/L	1.00	25.0			3060	57.0	40.0 to 60.0			1.13	5.00
BB13332	Fluoride	mg/L	0.0225	0.100	2.50	2.79	0.149	2.63	2.25 to 2.75	106	80.0 to 120	4.11	20.0
BB13332	Chloride	mg/L	-0.0654	1.00	160	232	68.5	9.92	9.00 to 11.0	103	80.0 to 120	0.880	20.0

Comments:

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-11

Location Code: WMWGORLF
Collected: 7/21/21 11:34
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13331

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 14:48		1.015	0.104	mg/L	0.030000	0.1015	
* Calcium, Total	7/28/21 08:00	7/28/21 16:01		10.15	322	mg/L	0.70035	4.06	
* Iron, Total	7/28/21 08:00	7/28/21 14:48		1.015	3.97	mg/L	0.008120	0.0406	
* Lithium, Total	7/28/21 08:00	7/28/21 14:48		1.015	0.271	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/28/21 08:00	7/28/21 16:01		10.15	164	mg/L	0.21315	4.06	
* Sodium, Total	7/28/21 08:00	7/28/21 16:01		10.15	143	mg/L	0.3045	4.06	
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 11:34		1.015	4.05	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 15:19		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 15:19		1.015	0.000901	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 15:19		1.015	0.0159	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 15:19		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 15:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 15:19		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 15:19		1.015	0.000254	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 15:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 15:19		1.015	0.00130	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 15:19		1.015	6.51	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 15:19		1.015	1.15	mg/L	0.000068	0.000203	
* Selenium, Total	7/23/21 13:00	7/26/21 15:19		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 15:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 13:21		1.015	1.16	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 20:51		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	276	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/23/21 10:25	7/27/21 10:25		1	2210	mg/L		147.1	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-11

Location Code: WMWGORLF
Collected: 7/21/21 11:34
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13331

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	276	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.14	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 11:11	7/26/21 11:11		10	73.8	mg/L	5.00	10	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:55	7/26/21 13:55		1	0.160	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:36	7/23/21 14:36		40	1420	mg/L	20.00	40	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	7/21/21 11:31	7/21/21 11:31			2560.30	uS/cm			FA
pH	7/21/21 11:31	7/21/21 11:31			6.74	SU			FA
Temperature	7/21/21 11:31	7/21/21 11:31			22.57	C			FA
Turbidity	7/21/21 11:31	7/21/21 11:31			0.68	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/21/21 11:34
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: BB13331

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.115	0.120	0.0990	0.0850 to 0.115	99.0	70.0 to 130	4.26	20.0
BB13332	Boron, Total	mg/L	0.000162	0.0650	1.00	1.11	1.11	0.979	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB13332	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.102	0.102	0.103	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB13332	Sodium, Total	mg/L	-0.000208	0.0660	5.00	138	141	4.85	4.25 to 5.75	40.0	70.0 to 130	2.15	20.0
BB13332	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0866	0.0884	0.0932	0.0850 to 0.115	86.6	70.0 to 130	2.06	20.0
BB13332	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.110	0.110	0.112	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.100	0.0983	0.0998	0.0850 to 0.115	100	70.0 to 130	1.71	20.0
BB13333	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	1.61	1.60	0.108	0.0850 to 0.115	60.0	70.0 to 130	0.623	20.0
BB13332	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.0039	0.0039	0.00386	0.00340 to 0.00460	97.5	70.0 to 130	0.00	20.0
BB13332	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0986	0.0959	0.0988	0.0850 to 0.115	98.6	70.0 to 130	2.78	20.0
BB13332	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.108	0.106	0.110	0.0850 to 0.115	108	70.0 to 130	1.87	20.0
BB13332	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.108	0.107	0.106	0.0850 to 0.115	107	70.0 to 130	0.930	20.0
BB13332	Potassium, Total	mg/L	0.0209	0.367	10.0	16.5	16.1	10.5	8.50 to 11.5	104	70.0 to 130	2.45	20.0
BB13332	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0993	0.101	0.0929	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BB13332	Iron, Total	mg/L	-0.000465	0.0176	0.2	6.85	7.00	0.197	0.170 to 0.230	20.0	70.0 to 130	2.17	20.0
BB13332	Calcium, Total	mg/L	0.00423	0.152	5.00	334	342	4.97	4.25 to 5.75	-40.0	70.0 to 130	2.37	20.0
BB13332	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.0996	0.0984	0.101	0.0850 to 0.115	99.4	70.0 to 130	1.21	20.0
BB13333	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.09	2.06	0.197	0.170 to 0.230	105	70.0 to 130	1.45	20.0
BB13332	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.24	1.24	0.100	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.102	0.0992	0.0982	0.0850 to 0.115	101	70.0 to 130	2.78	20.0
BB13332	Magnesium, Total	mg/L	-0.00978	0.0462	5.00	174	177	4.88	4.25 to 5.75	20.0	70.0 to 130	1.71	20.0
BB13332	Lithium, Total	mg/L	-9.150E-05	0.0154	0.200	0.492	0.492	0.196	0.170 to 0.230	126	70.0 to 130	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/21/21 11:34
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-11

Laboratory ID Number: BB13331

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Sulfate	mg/L	-0.454	1.00	1600	3090	1470	18.4	18.0 to 22.0	101	80.0 to 120	0.678	20.0
BB13333	Solids, Dissolved	mg/L	1.00	25.0			3060	57.0	40.0 to 60.0			1.13	5.00
BB13332	Chloride	mg/L	-0.0654	1.00	160	232	68.5	9.92	9.00 to 11.0	103	80.0 to 120	0.880	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13332	Fluoride	mg/L	0.0225	0.100	2.50	2.79	0.149	2.63	2.25 to 2.75	106	80.0 to 120	4.11	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-20

Location Code: WMWGORLF
Collected: 7/21/21 12:47
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13332

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 14:51		1.015	0.0999	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 16:05		10.15	336	mg/L	0.70035	4.06	RA
* Iron, Total	7/28/21 08:00	7/28/21 16:05		10.15	6.81	mg/L	0.08120	0.406	RA
* Lithium, Total	7/28/21 08:00	7/28/21 14:51		1.015	0.239	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/28/21 08:00	7/28/21 16:05		10.15	173	mg/L	0.21315	4.06	RA
* Sodium, Total	7/28/21 08:00	7/28/21 16:05		10.15	136	mg/L	0.3045	4.06	RA
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 13:14		10.15	6.83	mg/L	0.08120	0.406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 15:22		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 15:22		1.015	0.000835	mg/L	0.000068	0.000203	
* Barium, Total	7/23/21 13:00	7/26/21 15:22		1.015	0.0160	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 15:22		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 15:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 15:22		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 15:22		1.015	0.000231	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 15:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 15:22		1.015	0.00101	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 15:22		1.015	6.13	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 15:22		1.015	1.13	mg/L	0.000068	0.000203	
* Selenium, Total	7/23/21 13:00	7/26/21 15:22		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 15:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 13:25		1.015	1.17	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 20:55		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	288	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/23/21 10:25	7/27/21 10:25		1	2320	mg/L		147.1	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-20

Location Code: WMWGORLF
Collected: 7/21/21 12:47
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13332

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	288	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.19	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 11:12	7/26/21 11:12		16	67.9	mg/L	8.00	16	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 13:56	7/26/21 13:56		1	0.143	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:38	7/23/21 14:38		80	1480	mg/L	40.00	80	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	7/21/21 12:43	7/21/21 12:43			2648.64	uS/cm			FA
pH	7/21/21 12:43	7/21/21 12:43			6.60	SU			FA
Temperature	7/21/21 12:43	7/21/21 12:43			20.65	C			FA
Turbidity	7/21/21 12:43	7/21/21 12:43			0.81	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/21/21 12:47
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-20

Laboratory ID Number: BB13332

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13332	Beryllium, Total	mg/L	0.0000379	0.000880	0.100	0.0866	0.0884	0.0932	0.0850 to 0.115	86.6	70.0 to 130	2.06	20.0
BB13332	Thallium, Total	mg/L	-0.000149	0.000147	0.100	0.110	0.110	0.112	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Barium, Total	mg/L	0.0000005	0.000200	0.100	0.115	0.120	0.0990	0.0850 to 0.115	99.0	70.0 to 130	4.26	20.0
BB13332	Boron, Total	mg/L	0.000162	0.0650	1.00	1.11	1.11	0.979	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB13332	Selenium, Total	mg/L	-0.0000428	0.00100	0.100	0.102	0.102	0.103	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB13332	Sodium, Total	mg/L	-0.000208	0.0660	5.00	138	141	4.85	4.25 to 5.75	40.0	70.0 to 130	2.15	20.0
BB13332	Chromium, Total	mg/L	-0.000126	0.000440	0.100	0.100	0.0983	0.0998	0.0850 to 0.115	100	70.0 to 130	1.71	20.0
BB13333	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	1.61	1.60	0.108	0.0850 to 0.115	60.0	70.0 to 130	0.623	20.0
BB13332	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.0039	0.0039	0.00386	0.00340 to 0.00460	97.5	70.0 to 130	0.00	20.0
BB13332	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0986	0.0959	0.0988	0.0850 to 0.115	98.6	70.0 to 130	2.78	20.0
BB13332	Lead, Total	mg/L	0.0000005	0.000147	0.100	0.108	0.106	0.110	0.0850 to 0.115	108	70.0 to 130	1.87	20.0
BB13332	Arsenic, Total	mg/L	0.0000404	0.000147	0.100	0.108	0.107	0.106	0.0850 to 0.115	107	70.0 to 130	0.930	20.0
BB13332	Potassium, Total	mg/L	0.0209	0.367	10.0	16.5	16.1	10.5	8.50 to 11.5	104	70.0 to 130	2.45	20.0
BB13332	Antimony, Total	mg/L	0.000065	0.00100	0.100	0.0993	0.101	0.0929	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BB13332	Iron, Total	mg/L	-0.000465	0.0176	0.2	6.85	7.00	0.197	0.170 to 0.230	20.0	70.0 to 130	2.17	20.0
BB13332	Calcium, Total	mg/L	0.00423	0.152	5.00	334	342	4.97	4.25 to 5.75	-40.0	70.0 to 130	2.37	20.0
BB13332	Cobalt, Total	mg/L	-0.000110	0.000147	0.100	0.0996	0.0984	0.101	0.0850 to 0.115	99.4	70.0 to 130	1.21	20.0
BB13333	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.09	2.06	0.197	0.170 to 0.230	105	70.0 to 130	1.45	20.0
BB13332	Manganese, Total	mg/L	0.0000072	0.000147	0.100	1.24	1.24	0.100	0.0850 to 0.115	110	70.0 to 130	0.00	20.0
BB13332	Molybdenum, Total	mg/L	0.0000058	0.000147	0.100	0.102	0.0992	0.0982	0.0850 to 0.115	101	70.0 to 130	2.78	20.0
BB13332	Magnesium, Total	mg/L	-0.00978	0.0462	5.00	174	177	4.88	4.25 to 5.75	20.0	70.0 to 130	1.71	20.0
BB13332	Lithium, Total	mg/L	-9.150E-05	0.0154	0.200	0.492	0.492	0.196	0.170 to 0.230	126	70.0 to 130	0.00	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/21/21 12:47
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-20

Laboratory ID Number: BB13332

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13333	Solids, Dissolved	mg/L	1.00	25.0			3060	57.0	40.0 to 60.0			1.13	5.00
BB13332	Chloride	mg/L	-0.0654	1.00	160	232	68.5	9.92	9.00 to 11.0	103	80.0 to 120	0.880	20.0
BB13332	Sulfate	mg/L	-0.454	1.00	1600	3090	1470	18.4	18.0 to 22.0	101	80.0 to 120	0.678	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13332	Fluoride	mg/L	0.0225	0.100	2.50	2.79	0.149	2.63	2.25 to 2.75	106	80.0 to 120	4.11	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-19

Location Code: WMWGORLF
Collected: 7/21/21 14:01
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13333

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Boron, Total	7/28/21 08:00	7/28/21 15:15		1.015	0.0350	mg/L	0.030000	0.1015	J
* Calcium, Total	7/28/21 08:00	7/28/21 16:22		10.15	332	mg/L	0.70035	4.06	RA
* Iron, Total	7/28/21 08:00	7/28/21 15:15		1.015	2.55	mg/L	0.008120	0.0406	
* Lithium, Total	7/28/21 08:00	7/28/21 15:15		1.015	0.0617	mg/L	0.007105	0.01999956	
* Magnesium, Total	7/28/21 08:00	7/28/21 16:22		10.15	344	mg/L	0.21315	4.06	RA
* Sodium, Total	7/28/21 08:00	7/28/21 15:15		1.015	35.3	mg/L	0.03045	0.406	RA
Analytical Method: EPA 200.7	***Analyst: ABB***								
* Iron, Dissolved	7/28/21 09:25	7/28/21 11:40		1.015	1.88	mg/L	0.008120	0.0406	
Analytical Method: EPA 200.8	***Analyst: ABB***				***Preparation Method: EPA 1638***				
* Antimony, Total	7/23/21 13:00	7/26/21 15:51		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	7/23/21 13:00	7/26/21 15:51		1.015	0.000176	mg/L	0.000068	0.000203	J
* Barium, Total	7/23/21 13:00	7/26/21 15:51		1.015	0.0100	mg/L	0.000102	0.000203	
* Beryllium, Total	7/23/21 13:00	7/26/21 15:51		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	7/23/21 13:00	7/26/21 15:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	7/23/21 13:00	7/26/21 15:51		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	7/23/21 13:00	7/26/21 15:51		1.015	0.0293	mg/L	0.000068	0.000203	
* Lead, Total	7/23/21 13:00	7/26/21 15:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	7/23/21 13:00	7/26/21 15:51		1.015	0.000214	mg/L	0.000068	0.000203	
* Potassium, Total	7/23/21 13:00	7/26/21 15:51		1.015	6.12	mg/L	0.169505	0.5075	
* Manganese, Total	7/23/21 13:00	7/26/21 23:35		5.075	1.52	mg/L	0.000340	0.001015	RA
* Selenium, Total	7/23/21 13:00	7/26/21 15:51		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	7/23/21 13:00	7/26/21 15:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8	***Analyst: DLJ***								
* Manganese, Dissolved	7/23/21 13:21	7/26/21 22:21		5.075	1.55	mg/L	0.000340	0.001015	RA
Analytical Method: EPA 245.1	***Analyst: ABB***								
* Mercury, Total by CVAA	7/22/21 15:11	7/22/21 21:23		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2320 B	***Analyst: JAG***								
Alkalinity, Total as CaCO3	7/30/21 10:55	7/30/21 11:58		1	164	mg/L		0.1	
Analytical Method: SM 2540C	***Analyst: CNJ***								
* Solids, Dissolved	7/23/21 10:25	7/27/21 10:25		1	3130	mg/L		147.1	

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Certificate Of Analysis

Alabama Power

Description: Gorgas Landfill - MW-19

Location Code: WMWGORLF
Collected: 7/21/21 14:01
Customer ID:
Submittal Date: 7/22/21 10:16

Laboratory ID Number: BB13333

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 4500CO2 D	***Analyst: JAG***								
Bicarbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	164	mg/L			
Carbonate Alkalinity, (calc.)	7/30/21 10:55	7/30/21 11:58		1	0.04	mg/L			
Analytical Method: SM4500Cl E	***Analyst: JCC***								
* Chloride	7/26/21 11:10	7/26/21 11:10		1	1.74	mg/L	0.50	1	
Analytical Method: SM4500F G 2017	***Analyst: JCC***								
* Fluoride	7/26/21 14:07	7/26/21 14:07		1	0.429	mg/L	0.06	0.1	
Analytical Method: SM4500SO4 E 2011	***Analyst: JCC***								
* Sulfate	7/23/21 14:49	7/23/21 14:49		160	1990	mg/L	80.00	160	
Analytical Method: Field Measurements	***Analyst: DKG***								
Conductivity	7/21/21 13:58	7/21/21 13:58			2916.25	uS/cm			FA
pH	7/21/21 13:58	7/21/21 13:58			6.23	SU			FA
Temperature	7/21/21 13:58	7/21/21 13:58			21.11	C			FA
Turbidity	7/21/21 13:58	7/21/21 13:58			4.91	NTU			FA

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Batch QC Summary

Alabama Power

Customer Account: WMWGORLF
Sample Date: 7/21/21 14:01
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-19

Laboratory ID Number: BB13333

Sample	Analysis	Units	MB	MB Limit	Spike	MS	MSD	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13333	Thallium, Total	mg/L	-0.000148	0.000147	0.100	0.109	0.109	0.108	0.0850 to 0.115	109	70.0 to 130	0.00	20.0
BB13333	Manganese, Total	mg/L	0.0000239	0.000147	0.100	1.57	1.62	0.102	0.0850 to 0.115	50.0	70.0 to 130	3.13	20.0
BB13333	Cadmium, Total	mg/L	0.00000	0.000147	0.100	0.0976	0.0956	0.0986	0.0850 to 0.115	97.6	70.0 to 130	2.07	20.0
BB13333	Arsenic, Total	mg/L	0.0000231	0.000147	0.100	0.109	0.108	0.108	0.0850 to 0.115	109	70.0 to 130	0.922	20.0
BB13333	Selenium, Total	mg/L	-0.0000159	0.00100	0.100	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB13333	Molybdenum, Total	mg/L	0.000003	0.000147	0.100	0.0972	0.0996	0.102	0.0850 to 0.115	97.0	70.0 to 130	2.44	20.0
BB13333	Chromium, Total	mg/L	-0.000159	0.000440	0.100	0.0978	0.0982	0.101	0.0850 to 0.115	97.8	70.0 to 130	0.408	20.0
BB13333	Iron, Total	mg/L	-0.000799	0.0176	0.2	2.72	2.69	0.197	0.170 to 0.230	85.0	70.0 to 130	1.11	20.0
BB13333	Iron, Dissolved	mg/L	-0.000913	0.0176	0.2	2.09	2.06	0.197	0.170 to 0.230	105	70.0 to 130	1.45	20.0
BB13333	Magnesium, Total	mg/L	-0.0111	0.0462	5.00	345	341	4.90	4.25 to 5.75	20.0	70.0 to 130	1.17	20.0
BB13333	Mercury, Total by CVAA	mg/L	3.000E-05	0.000500	0.004	0.00383	0.00389	0.00389	0.00340 to 0.00460	95.8	70.0 to 130	1.55	20.0
BB13333	Calcium, Total	mg/L	0.000974	0.152	5.00	332	328	5.00	4.25 to 5.75	0.00	70.0 to 130	1.21	20.0
BB13333	Manganese, Dissolved	mg/L	0.0000146	0.000147	0.100	1.61	1.60	0.108	0.0850 to 0.115	60.0	70.0 to 130	0.623	20.0
BB13333	Cobalt, Total	mg/L	-0.000114	0.000147	0.100	0.128	0.127	0.102	0.0850 to 0.115	98.7	70.0 to 130	0.784	20.0
BB13333	Boron, Total	mg/L	0.000446	0.0650	1.00	1.05	1.03	0.974	0.850 to 1.15	102	70.0 to 130	1.92	20.0
BB13333	Antimony, Total	mg/L	0.0000727	0.00100	0.100	0.0995	0.0997	0.0964	0.0850 to 0.115	99.5	70.0 to 130	0.201	20.0
BB13333	Beryllium, Total	mg/L	0.0000557	0.000880	0.100	0.0853	0.0832	0.0955	0.0850 to 0.115	85.3	70.0 to 130	2.49	20.0
BB13333	Sodium, Total	mg/L	0.000485	0.0660	5.00	34.3	34.2	4.82	4.25 to 5.75	-20.0	70.0 to 130	0.292	20.0
BB13333	Barium, Total	mg/L	0.0000368	0.000200	0.100	0.112	0.113	0.101	0.0850 to 0.115	102	70.0 to 130	0.889	20.0
BB13333	Potassium, Total	mg/L	0.00889	0.367	10.0	16.5	16.3	10.5	8.50 to 11.5	104	70.0 to 130	1.22	20.0
BB13333	Lead, Total	mg/L	0.000003	0.000147	0.100	0.109	0.108	0.107	0.0850 to 0.115	109	70.0 to 130	0.922	20.0
BB13333	Lithium, Total	mg/L	-4.900E-05	0.0154	0.200	0.318	0.312	0.194	0.170 to 0.230	128	70.0 to 130	1.90	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040

Alabama Power

Batch QC Summary

Customer Account: WMWGORLF
Sample Date: 7/21/21 14:01
Customer ID:
Delivery Date: 7/22/21 10:16

Description: Gorgas Landfill - MW-19

Laboratory ID Number: BB13333

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB13333	Chloride	mg/L	-0.0645	1.00	10.0	11.5	1.83	9.87	9.00 to 11.0	97.6	80.0 to 120	5.04	20.0
BB13333	Solids, Dissolved	mg/L	1.00	25.0			3060	57.0	40.0 to 60.0			1.13	5.00
BB13333	Sulfate	mg/L	-0.598	1.00	3200	5610	1990	18.7	18.0 to 22.0	113	80.0 to 120	0.00	20.0
BB13333	Alkalinity, Total as CaCO3	mg/L					163	53.4	45.0 to 55.0			0.612	10.0
BB13333	Fluoride	mg/L	0.0271	0.100	2.50	3.05	0.402	2.59	2.25 to 2.75	105	80.0 to 120	6.50	20.0

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

Reported: 8/23/2021
Version: 3.4
COA_CCR

Alabama Power
General Test Laboratory
744 County Road 87, GSC #8
Calera, AL 35040
(205) 664-6001

Definitions

Alabama Power

Project Number: WMWGORLF_1330

Abbreviation	Description
DF	Dilution Factor
LCS	Lab Control Sample
LFM	Lab Fortified Matrix
MB	Method Blank
MDL	Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Prec	Precision (% RPD)
Q	Qualifier; comment used to note deviations or additional information associated with analytical results.
QC	Quality Control
Rec	Recovery of Matrix Spike
RL	Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.
Vio Spec	Violation Specification; regulatory limit which has been exceeded by the sample analyzed.

Qualifier	Description
FA	Field results were reviewed by the Water Field Group. Refer to APC Field Case Narrative.
J	Reported value is an estimate because concentration is less than reporting limit.
RA	Matrix spike is invalid due to sample concentration.
U	Compound was analyzed, but not detected.

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☐ Outside Lab
☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	Dallas Gentry	Location	Gorgas Landfill

Bottles												
	1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
	2	Dissolved Meta	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	07/20/2021	09:13	6	Groundwater		BB13181
MW-14	07/20/2021	10:16	6	Groundwater		BB13182
MW-15	07/20/2021	11:25	6	Groundwater		BB13183
MW-12V	07/20/2021	12:32	6	Groundwater		BB13184
MW-6	07/20/2021	13:57	6	Groundwater		BB13185
MW-6 dup	07/20/2021	13:57	6	Sample Duplicate		BB13186
MW-8	07/20/2021	15:25	6	Groundwater		BB13187
FB-2	07/20/2021	16:05	4	Field Blank		BB13188

Relinquished By	Received By	Date/Time
		07/21/2021 08:08

SmarTroll ID	7586-41442-5-1	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20010-2-2	Cooler Temp	0.1 degrees C
Sample Event	1330	Thermometer ID	5408-27568-2-2
		pH Strip ID	8206-45805-10-9

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☐ Outside Lab
☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Landfill

Bottles

1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
2	Diss metals	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-12	07/20/2021	11:53	6	Groundwater		BB13189
MW-10	07/20/2021	13:15	6	Groundwater		BB13190
MW-7	07/20/2021	14:30	6	Groundwater		BB13191

Relinquished By	Received By	Date/Time
		07/21/2021 08:08

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20010-2-2	Cooler Temp	0.0 degrees C
Sample Event	1330	Thermometer ID	5408-27568-2-2
		pH Strip ID	8206-45805-10-9

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☐ Outside Lab
☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Landfill

Bottles

1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
2	Diss Metals	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	07/21/2021	10:53	6	Groundwater		BB13324
MW-16	07/21/2021	12:10	6	Groundwater		BB13325
MW-16 Dup	07/21/2021	12:10	6	Sample Duplicate		BB13326
MW-17R	07/21/2021	13:30	6	Groundwater		BB13327
MW-18	07/21/2021	14:28	6	Groundwater		BB13328
FB-1	07/21/2021	15:00	4	Field Blank		BB13329
EB-1	07/21/2021	15:10	4	Equipment Blank		BB13330

Relinquished By	Received By	Date/Time
		07/22/2021 09:28

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2	☑
Turbidity ID	4677-23342-1-1	Cooler Temp	0.1 degrees C
Sample Event	1330	Thermometer ID	5408-27568-2-2
		pH Strip ID	8206-45805-10-9

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☐ Outside Lab
☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	Dallas Gentry	Location	Gorgas Landfill

Bottles													
	1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
	2	Dissolved Meta	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-11	07/21/2021	11:34	6	Groundwater		BB13331
MW-20	07/21/2021	12:47	6	Groundwater		BB13332
MW-19	07/21/2021	14:01	6	Groundwater		BB13333

Relinquished By	Received By	Date/Time
Dallas Gentry	Laura Milby	07/22/2021 09:28

SmarTroll ID	7586-41442-5-1	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20010-2-2	Cooler Temp	0.0 degrees C
Sample Event	1330	Thermometer ID	5408-27568-2-2
		pH Strip ID	8206-45805-10-9

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☑ Outside Lab
☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	Dallas Gentry	Location	Gorgas Landfill

Bottles												
1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
2	N/A	N/A	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments: Radium MS/MSD collected at MW-14

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	07/20/2021	09:13	1	Groundwater		BB13192
MW-14	07/20/2021	10:16	3	Groundwater		BB13193
MW-15	07/20/2021	11:25	1	Groundwater		BB13194
MW-12V	07/20/2021	12:32	1	Groundwater		BB13195
MW-6	07/20/2021	13:57	1	Groundwater		BB13196
MW-6 dup	07/20/2021	13:57	1	Sample Duplicate		BB13197
MW-8	07/20/2021	15:25	1	Groundwater		BB13198
FB-2	07/20/2021	16:05	1	Field Blank		BB13199

Relinquished By	Received By	Date/Time
Dallas Gentry	Laura Melly	07/21/2021 08:08

SmarTroll ID	7586-41442-5-1	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20010-2-2	Cooler Temp	N/A
Sample Event	1330	Thermometer ID	N/A
		pH Strip ID	8206-45805-10-9

Bottles/Pre-Preserved Bottles are provided by the GTL

7.1

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☑ Lab Complete ☑ Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Landfill

Bottles												
1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
2	N/A	N/A	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments: Rad MS/MSD @ MW-7
MW-7 MSD bottle leaked in transit. Collecting Rad MS/MSD set at another well. LBM 7/21/21

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-12	07/20/2021	11:53	1	Groundwater		BB13200
MW-10	07/20/2021	13:15	1	Groundwater		BB13201
MW-7	07/20/2021	14:30	3	Groundwater		BB13202

Relinquished By	Received By	Date/Time
		07/21/2021 08:08

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20010-2-2	Cooler Temp	N/A
Sample Event	1330	Thermometer ID	N/A
		pH Strip ID	8206-45805-10-9

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☑ Outside Lab
☑ Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Landfill

Bottles

1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
2	N/A	N/A	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-5	07/21/2021	10:53	1	Groundwater		BB13334
MW-16	07/21/2021	12:10	1	Groundwater		BB13335
MW-16 Dup	07/21/2021	12:10	1	Sample Duplicate		BB13336
MW-17R	07/21/2021	13:30	1	Groundwater		BB13337
MW-18	07/21/2021	14:28	1	Groundwater		BB13338
FB-1	07/21/2021	15:00	1	Field Blank		BB13339
EB-1	07/21/2021	15:10	1	Equipment Blank		BB13340

Relinquished By	Received By	Date/Time
		07/22/2021 09:28

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2	☑
Turbidity ID	4677-23342-1-1	Cooler Temp	N/A
Sample Event	1330	Thermometer ID	N/A
		pH Strip ID	8206-45805-10-9

Bottles/Pre-Preserved Bottles are provided by the GTL

Chain of Custody
Groundwater
APC General Testing Laboratory

☑ Field Complete ☑ Lab Complete ☑ Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	John Pate	Requested By	Greg Dyer
Collector	Dallas Gentry	Location	Gorgas Landfill

Bottles															
	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	N/A	N/A	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments: Radium MS/MSD collected at MW-20

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-11	07/21/2021	11:34	1	Groundwater		BB13341
MW-20	07/21/2021	12:47	3	Groundwater		BB13342
MW-19	07/21/2021	14:01	1	Groundwater		BB13343

Relinquished By	Received By	Date/Time
Dallas Gentry	Laura Molly	07/22/2021 09:28

SmarTroll ID	7586-41442-5-1	All metals and radiological bottles have pH < 2	☑
Turbidity ID	3901-20010-2-2	Cooler Temp	N/A
Sample Event	1330	Thermometer ID	N/A
		pH Strip ID	8206-45805-10-9

Bottles/Pre-Preserved Bottles are provided by the GTL

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

September 07, 2021

Laura Midkiff
Alabama Power
744 Highway 87
GSC #8
Calera, AL 35040

RE: Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on July 26, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

Revision 1 - This report replaces the August, 31, 2021 report. This project was revised on September, 7, 2021 to update the COC. (Greensburg, PA)

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

Sincerely,

Nicole D'Oleo

Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Brooke Caton, Alabama Power
Renee Jernigan, Alabama Power

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92551765001	**BB13192 MW-13**	Water	07/20/21 09:13	07/26/21 08:40
92551765002	**BB13193 MW-14**	Water	07/20/21 10:16	07/26/21 08:40
92551765003	**BB13193 MW-14 MS**	Water	07/20/21 10:16	07/26/21 08:40
92551765004	**BB13193 MW-14 MSD**	Water	07/20/21 10:16	07/26/21 08:40
92551765005	**BB13194 MW-15**	Water	07/20/21 11:25	07/26/21 08:40
92551765006	**BB13195 MW-12V**	Water	07/20/21 12:32	07/26/21 08:40
92551765007	**BB13196 MW-6**	Water	07/20/21 13:57	07/26/21 08:40
92551765008	**BB13197 MW-6 DUP**	Water	07/20/21 13:57	07/26/21 08:40
92551765009	**BB13198 MW-8**	Water	07/20/21 15:25	07/26/21 08:40
92551765010	**BB13199 FB-2**	Water	07/20/21 16:05	07/26/21 08:40
92551765011	**BB13200 MW-12**	Water	07/20/21 11:53	07/26/21 08:40
92551765012	**BB13201 MW-10**	Water	07/20/21 13:15	07/26/21 08:40
92551765013	**BB13202 MW-7**	Water	07/20/21 14:30	07/26/21 08:40
92551765014	**BB13334 MW-5**	Water	07/21/21 10:53	07/26/21 08:40
92551765015	**BB13335 MW-16**	Water	07/21/21 12:10	07/26/21 08:40
92551765016	**BB13336 MW-16 DUP**	Water	07/21/21 12:10	07/26/21 08:40
92551765017	**BB13337 MW-17R**	Water	07/21/21 13:30	07/26/21 08:40
92551765018	**BB13338 MW-18**	Water	07/21/21 14:28	07/26/21 08:40
92551765019	**BB13339 FB-1**	Water	07/21/21 15:00	07/26/21 08:40
92551765020	**BB13340 EB-1**	Water	07/21/21 15:10	07/26/21 08:40
92551765021	**BB13341 MW-11**	Water	07/21/21 11:34	07/26/21 08:40
92551765022	**BB13342 MW-20**	Water	07/21/21 12:47	07/26/21 08:40
92551765023	**BB13342 MW-20 MS**	Water	07/21/21 12:47	07/26/21 08:40
92551765024	**BB13342 MW-20 MSD**	Water	07/21/21 12:47	07/26/21 08:40
92551765025	**BB13343 MW-19**	Water	07/21/21 14:01	07/26/21 08:40

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92551765001	**BB13192 MW-13**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765002	**BB13193 MW-14**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765003	**BB13193 MW-14 MS**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92551765004	**BB13193 MW-14 MSD**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92551765005	**BB13194 MW-15**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765006	**BB13195 MW-12V**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765007	**BB13196 MW-6**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765008	**BB13197 MW-6 DUP**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765009	**BB13198 MW-8**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765010	**BB13199 FB-2**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765011	**BB13200 MW-12**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765012	**BB13201 MW-10**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765013	**BB13202 MW-7**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92551765014	**BB13334 MW-5**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765015	**BB13335 MW-16**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765016	**BB13336 MW-16 DUP**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765017	**BB13337 MW-17R**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765018	**BB13338 MW-18**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765019	**BB13339 FB-1**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765020	**BB13340 EB-1**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765021	**BB13341 MW-11**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765022	**BB13342 MW-20**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92551765023	**BB13342 MW-20 MS**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92551765024	**BB13342 MW-20 MSD**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92551765025	**BB13343 MW-19**	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Method: **EPA 9315**
Description: 9315 Total Radium
Client: Alabama Power
Date: September 07, 2021

General Information:
25 samples were analyzed for EPA 9315 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Method: **EPA 9320**
Description: 9320 Radium 228
Client: Alabama Power
Date: September 07, 2021

General Information:
25 samples were analyzed for EPA 9320 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Alabama Power
Date: September 07, 2021

General Information:
21 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13192 MW-13 **Lab ID: 92551765001** Collected: 07/20/21 09:13 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0567U ± 0.162 (0.401) C:91% T:NA**	pCi/L	08/26/21 09:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.517U ± 0.313 (0.570) C:85% T:76%**	pCi/L	08/17/21 11:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.574U ± 0.475 (0.971)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13193 MW-14 **Lab ID: 92551765002** Collected: 07/20/21 10:16 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.246U ± 0.221 (0.401) C:96% T:NA**	pCi/L	08/26/21 09:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.487 ± 0.248 (0.423) C:93% T:90%**	pCi/L	08/17/21 11:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.733U ± 0.469 (0.824)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13193 MW-14 MS **Lab ID: 92551765003** Collected: 07/20/21 10:16 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**102.86 %REC ± NA (NA) C:NA T:NA**	pCi/L	08/26/21 09:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**66.46 %REC ± NA (NA) C:NA T:NA**	pCi/L	08/17/21 11:21	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13193 MW-14 MSD **Lab ID: 92551765004** Collected: 07/20/21 10:16 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**94.00 %REC 9.00RPD ± NA (NA) C:NA T:NA**	pCi/L	08/26/21 09:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**72.55 %REC 8.76 RPD ± NA (NA) C:NA T:NA**	pCi/L	08/17/21 11:21	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13194 MW-15 **Lab ID: 92551765005** Collected: 07/20/21 11:25 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.495 ± 0.298 (0.467) C:95% T:NA**	pCi/L	08/26/21 09:03	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.382U ± 0.322 (0.645) C:79% T:83%**	pCi/L	08/17/21 11:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.877U ± 0.620 (1.11)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13195 MW-12V **Lab ID: 92551765006** Collected: 07/20/21 12:32 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.121U ± 0.206 (0.465) C:94% T:NA**	pCi/L	08/26/21 09:03	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.642 ± 0.285 (0.458) C:88% T:93%**	pCi/L	08/17/21 11:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.763U ± 0.491 (0.923)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13196 MW-6 **Lab ID: 92551765007** Collected: 07/20/21 13:57 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.767 ± 0.334 (0.375) C:97% T:NA**	pCi/L	08/26/21 09:05	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.550 ± 0.289 (0.513) C:83% T:99%**	pCi/L	08/17/21 11:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.32 ± 0.623 (0.888)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13197 MW-6 DUP **Lab ID: 92551765008** Collected: 07/20/21 13:57 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.537 ± 0.301 (0.450) C:96% T:NA**	pCi/L	08/26/21 09:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.270U ± 0.279 (0.578) C:86% T:83%**	pCi/L	08/17/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.807U ± 0.580 (1.03)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13198 MW-8 **Lab ID: 92551765009** Collected: 07/20/21 15:25 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.120U ± 0.183 (0.400) C:99% T:NA**	pCi/L	08/26/21 09:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.300U ± 0.304 (0.625) C:78% T:83%**	pCi/L	08/17/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.420U ± 0.487 (1.03)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13199 FB-2 **Lab ID: 92551765010** Collected: 07/20/21 16:05 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.261U ± 0.273 (0.558) C:96% T:NA**	pCi/L	08/26/21 09:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.217U ± 0.281 (0.597) C:78% T:89%**	pCi/L	08/17/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.478U ± 0.554 (1.16)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13200 MW-12 **Lab ID: 92551765011** Collected: 07/20/21 11:53 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.241U ± 0.247 (0.497) C:98% T:NA**	pCi/L	08/26/21 09:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.912 ± 0.407 (0.663) C:76% T:81%**	pCi/L	08/17/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.15U ± 0.654 (1.16)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13201 MW-10 **Lab ID: 92551765012** Collected: 07/20/21 13:15 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.160U ± 0.233 (0.511) C:91% T:NA**	pCi/L	08/26/21 09:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.184U ± 0.278 (0.600) C:81% T:92%**	pCi/L	08/17/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.344U ± 0.511 (1.11)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13202 MW-7 **Lab ID: 92551765013** Collected: 07/20/21 14:30 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0281U ± 0.174 (0.451) C:93% T:NA**	pCi/L	08/26/21 09:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.328U ± 0.297 (0.598) C:81% T:88%**	pCi/L	08/17/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.356U ± 0.471 (1.05)**	pCi/L	08/27/21 15:31	7440-14-4	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13334 MW-5 **Lab ID: 92551765014** Collected: 07/21/21 10:53 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.373U ± 0.251 (0.389) C:94% T:NA**	pCi/L	08/26/21 09:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.417U ± 0.301 (0.578) C:80% T:83%**	pCi/L	08/17/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.790U ± 0.552 (0.967)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13335 MW-16 **Lab ID: 92551765015** Collected: 07/21/21 12:10 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0383U ± 0.145 (0.370) C:97% T:NA**	pCi/L	08/26/21 09:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.447U ± 0.279 (0.515) C:86% T:87%**	pCi/L	08/17/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.485U ± 0.424 (0.885)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13336 MW-16 DUP **Lab ID: 92551765016** Collected: 07/21/21 12:10 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.489 ± 0.265 (0.329) C:97% T:NA**	pCi/L	08/26/21 09:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.196U ± 0.254 (0.539) C:83% T:90%**	pCi/L	08/17/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.685U ± 0.519 (0.868)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13337 MW-17R **Lab ID: 92551765017** Collected: 07/21/21 13:30 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.156U ± 0.184 (0.365) C:97% T:NA**	pCi/L	08/26/21 09:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.564U ± 0.344 (0.629) C:77% T:81%**	pCi/L	08/17/21 11:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.720U ± 0.528 (0.994)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13338 MW-18 **Lab ID: 92551765018** Collected: 07/21/21 14:28 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.203U ± 0.252 (0.535) C:99% T:NA**	pCi/L	08/26/21 09:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.186U ± 0.278 (0.600) C:78% T:90%**	pCi/L	08/17/21 11:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.389U ± 0.530 (1.14)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13339 FB-1 **Lab ID: 92551765019** Collected: 07/21/21 15:00 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0854U ± 0.150 (0.336) C:95% T:NA**	pCi/L	08/26/21 09:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.323U ± 0.289 (0.584) C:78% T:91%**	pCi/L	08/17/21 11:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.408U ± 0.439 (0.920)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13340 EB-1 **Lab ID: 92551765020** Collected: 07/21/21 15:10 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0386U ± 0.145 (0.373) C:95% T:NA**	pCi/L	08/26/21 09:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.411U ± 0.342 (0.682) C:78% T:85%**	pCi/L	08/17/21 11:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.450U ± 0.487 (1.06)**	pCi/L	08/27/21 15:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13341 MW-11 **Lab ID: 92551765021** Collected: 07/21/21 11:34 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.0437U ± 0.133 (0.335) C:94% T:NA**	pCi/L	08/26/21 09:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.907 ± 0.428 (0.726) C:69% T:86%**	pCi/L	08/18/21 14:14	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.951U ± 0.561 (1.06)**	pCi/L	08/27/21 15:30	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13342 MW-20 **Lab ID: 92551765022** Collected: 07/21/21 12:47 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.277U ± 0.250 (0.471) C:95% T:NA**	pCi/L	08/26/21 09:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**1.20 ± 0.507 (0.802) C:67% T:81%**	pCi/L	08/23/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.48 ± 0.757 (1.27)**	pCi/L	08/27/21 15:30	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13342 MW-20 MS **Lab ID: 92551765023** Collected: 07/21/21 12:47 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**100.50 %REC ± NA (NA) C:NA T:NA**	pCi/L	08/26/21 09:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**107.23 %REC ± NA (NA) C:NA T:NA**	pCi/L	08/23/21 11:25	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13342 MW-20 MSD **Lab ID: 92551765024** Collected: 07/21/21 12:47 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**100.76 %REC 0.26RPD ± NA (NA) C:NA T:NA**	pCi/L	08/26/21 09:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**98.83 %REC 8.15 RPD ± NA (NA) C:NA T:NA**	pCi/L	08/23/21 11:23	15262-20-1	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Sample: BB13343 MW-19 **Lab ID: 92551765025** Collected: 07/21/21 14:01 Received: 07/26/21 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	**0.223U ± 0.235 (0.462) C:93% T:NA**	pCi/L	08/26/21 09:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	**0.406U ± 0.323 (0.634) C:77% T:85%**	pCi/L	08/18/21 14:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.629U ± 0.558 (1.10)**	pCi/L	08/27/21 15:30	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

QC Batch: 458506
QC Batch Method: EPA 9315
Analysis Method: EPA 9315
Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92551765001, 92551765002, 92551765003, 92551765004, 92551765005, 92551765006, 92551765007, 92551765008, 92551765009, 92551765010, 92551765011, 92551765012, 92551765013, 92551765014, 92551765015, 92551765016, 92551765017, 92551765018, 92551765019, 92551765020

METHOD BLANK: 2213739
Matrix: Water
Associated Lab Samples: 92551765001, 92551765002, 92551765003, 92551765004, 92551765005, 92551765006, 92551765007, 92551765008, 92551765009, 92551765010, 92551765011, 92551765012, 92551765013, 92551765014, 92551765015, 92551765016, 92551765017, 92551765018, 92551765019, 92551765020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0616 ± 0.197 (0.563) C:99% T:NA	pCi/L	08/26/21 09:02	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

QC Batch: 459647 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92551765001, 92551765002, 92551765003, 92551765004, 92551765005, 92551765006, 92551765007, 92551765008, 92551765009, 92551765010, 92551765011, 92551765012, 92551765013, 92551765014, 92551765015, 92551765016, 92551765017, 92551765018, 92551765019, 92551765020

METHOD BLANK: 2218980 Matrix: Water

Associated Lab Samples: 92551765001, 92551765002, 92551765003, 92551765004, 92551765005, 92551765006, 92551765007, 92551765008, 92551765009, 92551765010, 92551765011, 92551765012, 92551765013, 92551765014, 92551765015, 92551765016, 92551765017, 92551765018, 92551765019, 92551765020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.837 ± 0.360 (0.572) C:86% T:84%	pCi/L	08/17/21 11:21	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

QC Batch: 459648 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92551765021, 92551765022, 92551765023, 92551765024, 92551765025

METHOD BLANK: 2218981 Matrix: Water
Associated Lab Samples: 92551765021, 92551765022, 92551765023, 92551765024, 92551765025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.563 ± 0.363 (0.691) C:78% T:96%	pCi/L	08/18/21 14:14	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

QC Batch: 458508 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92551765021, 92551765022, 92551765023, 92551765024, 92551765025

METHOD BLANK: 2213744 Matrix: Water
Associated Lab Samples: 92551765021, 92551765022, 92551765023, 92551765024, 92551765025

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00546 ± 0.186 (0.496) C:92% T:NA	pCi/L	08/26/21 09:10	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92551765001	**BB13192 MW-13**	EPA 9315	458506		
92551765002	**BB13193 MW-14**	EPA 9315	458506		
92551765003	**BB13193 MW-14 MS**	EPA 9315	458506		
92551765004	**BB13193 MW-14 MSD**	EPA 9315	458506		
92551765005	**BB13194 MW-15**	EPA 9315	458506		
92551765006	**BB13195 MW-12V**	EPA 9315	458506		
92551765007	**BB13196 MW-6**	EPA 9315	458506		
92551765008	**BB13197 MW-6 DUP**	EPA 9315	458506		
92551765009	**BB13198 MW-8**	EPA 9315	458506		
92551765010	**BB13199 FB-2**	EPA 9315	458506		
92551765011	**BB13200 MW-12**	EPA 9315	458506		
92551765012	**BB13201 MW-10**	EPA 9315	458506		
92551765013	**BB13202 MW-7**	EPA 9315	458506		
92551765014	**BB13334 MW-5**	EPA 9315	458506		
92551765015	**BB13335 MW-16**	EPA 9315	458506		
92551765016	**BB13336 MW-16 DUP**	EPA 9315	458506		
92551765017	**BB13337 MW-17R**	EPA 9315	458506		
92551765018	**BB13338 MW-18**	EPA 9315	458506		
92551765019	**BB13339 FB-1**	EPA 9315	458506		
92551765020	**BB13340 EB-1**	EPA 9315	458506		
92551765021	**BB13341 MW-11**	EPA 9315	458508		
92551765022	**BB13342 MW-20**	EPA 9315	458508		
92551765023	**BB13342 MW-20 MS**	EPA 9315	458508		
92551765024	**BB13342 MW-20 MSD**	EPA 9315	458508		
92551765025	**BB13343 MW-19**	EPA 9315	458508		
92551765001	**BB13192 MW-13**	EPA 9320	459647		
92551765002	**BB13193 MW-14**	EPA 9320	459647		
92551765003	**BB13193 MW-14 MS**	EPA 9320	459647		
92551765004	**BB13193 MW-14 MSD**	EPA 9320	459647		
92551765005	**BB13194 MW-15**	EPA 9320	459647		
92551765006	**BB13195 MW-12V**	EPA 9320	459647		
92551765007	**BB13196 MW-6**	EPA 9320	459647		
92551765008	**BB13197 MW-6 DUP**	EPA 9320	459647		
92551765009	**BB13198 MW-8**	EPA 9320	459647		
92551765010	**BB13199 FB-2**	EPA 9320	459647		
92551765011	**BB13200 MW-12**	EPA 9320	459647		
92551765012	**BB13201 MW-10**	EPA 9320	459647		
92551765013	**BB13202 MW-7**	EPA 9320	459647		
92551765014	**BB13334 MW-5**	EPA 9320	459647		
92551765015	**BB13335 MW-16**	EPA 9320	459647		
92551765016	**BB13336 MW-16 DUP**	EPA 9320	459647		
92551765017	**BB13337 MW-17R**	EPA 9320	459647		
92551765018	**BB13338 MW-18**	EPA 9320	459647		
92551765019	**BB13339 FB-1**	EPA 9320	459647		
92551765020	**BB13340 EB-1**	EPA 9320	459647		
92551765021	**BB13341 MW-11**	EPA 9320	459648		
92551765022	**BB13342 MW-20**	EPA 9320	459648		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS LANDFILL WMWGORLF_1330
Pace Project No.: 92551765

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92551765023	**BB13342 MW-20 MS**	EPA 9320	459648		
92551765024	**BB13342 MW-20 MSD**	EPA 9320	459648		
92551765025	**BB13343 MW-19**	EPA 9320	459648		
92551765001	**BB13192 MW-13**	Total Radium Calculation	462044		
92551765002	**BB13193 MW-14**	Total Radium Calculation	462044		
92551765005	**BB13194 MW-15**	Total Radium Calculation	462044		
92551765006	**BB13195 MW-12V**	Total Radium Calculation	462044		
92551765007	**BB13196 MW-6**	Total Radium Calculation	462044		
92551765008	**BB13197 MW-6 DUP**	Total Radium Calculation	462044		
92551765009	**BB13198 MW-8**	Total Radium Calculation	462044		
92551765010	**BB13199 FB-2**	Total Radium Calculation	462044		
92551765011	**BB13200 MW-12**	Total Radium Calculation	462044		
92551765012	**BB13201 MW-10**	Total Radium Calculation	462044		
92551765013	**BB13202 MW-7**	Total Radium Calculation	462044		
92551765014	**BB13334 MW-5**	Total Radium Calculation	462044		
92551765015	**BB13335 MW-16**	Total Radium Calculation	462044		
92551765016	**BB13336 MW-16 DUP**	Total Radium Calculation	462044		
92551765017	**BB13337 MW-17R**	Total Radium Calculation	462044		
92551765018	**BB13338 MW-18**	Total Radium Calculation	462044		
92551765019	**BB13339 FB-1**	Total Radium Calculation	462044		
92551765020	**BB13340 EB-1**	Total Radium Calculation	462044		
92551765021	**BB13341 MW-11**	Total Radium Calculation	462042		
92551765022	**BB13342 MW-20**	Total Radium Calculation	462042		
92551765025	**BB13343 MW-19**	Total Radium Calculation	462042		

Pittsburgh Lab Sample Condition Upon Receipt

WO# : 92551765

92551765

Pace Analytical

Client Name: Alabama Power Co

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

Tracking #: 5140 3411 6526

LIMS Login

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Thermometer Used _____ Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp ~ °C Correction Factor: ~ °C Final Temp: ~ °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# 10035201 / Date and Initials of person examining contents: AE 7/26/21
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:		X		4. no information
Sample Labels match COC: -Includes date/time/ID Matrix: WT	X			5.
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume: 7/26/21	X	X		9. 1 liter recieved for 226/228 marked LV
Correct Containers Used:	X			10.
-Pace Containers Used:	X			
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Hex.Cr Aqueous sample field filtered			X	13.
Organic Samples checked for dechlorination:			X	14.
Filtered volume received for Dissolved tests			X	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	X			16.
All containers meet method preservation requirements.	X			Initial when completed AE / Date/time of preservation / Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	17.
Trip Blank Present:			X	18.
Trip Blank Custody Seals Present			X	
Rad Samples Screened < 0.5 mrem/hr	X			Initial when completed: AE / Date: 7/26/21 / Survey Meter SN: 15103

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution:

page 2 missing sample "BB13202"

pages 3 & 4 no samples recieved

☐ **A check in this box indicates that additional information has been stored in ereports.**

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pittsburgh Lab Sample Condition Upon Receipt

PaceAnalytical

Client Name: PaceNC

Project # 30433379

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

Label RJM

LIMS Login RJM

Tracking #: TORN

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

Thermometer Used — Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot# 10D0481 Date and initials of person examining contents: RJM 9-7-21

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID Matrix: WT				
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. PH<2
All containers meet method preservation requirements.	✓			Initial when completed RJM Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: RJM Date: 9-7-21 Survey Meter SN: 1583

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: 2 cooler Scan for WO# 30433379

Add on Rcvd Missing Samples Rcvd 7/28/21

Pages 3+4 as well as (BB13202) page 2

☐ **A check in this box indicates that additional information has been stored in ereports.**

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 4

Section A — Required Client Information:

Company:	Alabama Power Company
Address:	744 Highway 87 GSC Bldg #8 Calera, AL 35040
Email To:	lbmidkif@southernco.com
Phone:	205-664-6197 Fax:
Requested Due Date:	28 days

Section B — Required Project Information:

Report To:	Laura Midkiff
Copy To:	Brooke Caton & Renee Jernigan
Purchase Order #:	APC10700668
Project Name:	Plant Gorgas Landfill
Project Number:	WMWGORLF_1330

Section C — Invoice Information:

Attention:	Laura Midkiff
Company Name:	Alabama Power Co.
Address:	744 Highway 87 GSC Bldg #8
Pace Quote:	CCR
Pace Project Manager:	Kevin.Herring@pacelabs.com
Pace Profile #:	13805

Regulatory Agency:

State / Location: AL

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike D.	Residual Chlorine (Y/N)	
1	BB13192	MW-13	GW	G			7/20/2021	9:13		1			X							X	X	X			001
2	BB13193	MW-14	GW	G			7/20/2021	10:16		3			X							X	X	X	X		002
3	BB13194	MW-15	GW	G			7/20/2021	11:25		1			X							X	X	X			003
4	BB13195	MW-12V	GW	G			7/20/2021	12:32		1			X							X	X	X			004
5	BB13196	MW-6	GW	G			7/20/2021	13:57		1			X							X	X	X			005
6	BB13197	MW-6 DUP	GW	G			7/20/2021	13:57		1			X							X	X	X			006
7	BB13198	MW-8	GW	G			7/20/2021	15:25		1			X							X	X	X			007
8	BB13199	FB-2	GW	G			7/20/2021	16:05		1			X							X	X	X			008
9																									
10																									
11																									
12																									

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Laura Midkiff/ APC GTL	7/22/2021	11:45	Amber O'Cain	7/26/21	0840	-	N	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 2 Of 4

Section A — Required Client Information:

Company:	Alabama Power Company
Address:	744 Highway 87 GSC Bldg #8 Calera, AL 35040
Email To:	lbmidkif@southernco.com
Phone:	205-664-6197 Fax:
Requested Due Date:	28 days

Section B — Required Project Information:

Report To:	Laura Midkiff
Copy To:	Brooke Caton & Renee Jernigan
Purchase Order #:	APC10700668
Project Name:	Plant Gorgas Landfill
Project Number:	WMWGORLF 1330

Section C — Invoice Information:

Attention:	Laura Midkiff
Company Name:	Alabama Power Co.
Address:	744 Highway 87 GSC Bldg #8
Pace Quote:	CCR
Pace Project Manager:	Kevin.Herring@pacelabs.com
Pace Profile #:	13805

Regulatory Agency:

State / Location: AL

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike D	Residual Chlorine (Y/N)	
1	BB13200	MW-12	GW	G			7/20/2021	11:53		1			X							X	X	X			001
2	BB13201	MW-10	GW	G			7/20/2021	13:15		1			X							X	X	X			002
3	BB13202	MW-7	GW	G			7/20/2021	14:30		1			X							X	X	X			003
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Laura Midkiff/ APC GTL	7/22/2021	11:45		7/21/21	0840

SAMPLE CONDITIONS

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 3 Of 4

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Alabama Power Company	Report To:	Laura Midkiff	Attention:	Laura Midkiff
Address:	744 Highway 87 GSC Bldg #8 Calera, AL 35040	Copy To:	Brooke Caton & Renee Jernigan	Company Name:	Alabama Power Co.
				Address:	744 Highway 87 GSC Bldg #8
Email To:	lbmidkif@southernco.com	Purchase Order #:	APC10700668	Pace Quote:	CCR
Phone:	205-664-6197 Fax:	Project Name:	Plant Gorgas Landfill	Pace Project Manager:	Kevin.Herring@pacelabs.com
Requested Due Date:	28 days	Project Number:	WMWGORLF 1330	Pace Profile #:	13805

Regulatory Agency

State / Location: AL

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike D	Residual Chlorine (Y/N)	
1	BB13334	MW-5	GW	G			7/21/2021	10:53		1			X							X	X	X			001
2	BB13335	MW-16	GW	G			7/21/2021	12:10		1			X							X	X	X			002
3	BB13336	MW-16 DUP	GW	G			7/21/2021	12:10		1			X							X	X	X			003
4	BB13337	MW-17R	GW	G			7/21/2021	13:30		1			X							X	X	X			004
5	BB13338	MW-18	GW	G			7/21/2021	14:28		1			X							X	X	X			005
6	BB13339	FB-1	GW	G			7/21/2021	15:00		1			X							X	X	X			006
7	BB13340	EB-1	GW	G			7/21/2021	15:10		1			X							X	X	X			007
8																									
9																									
10																									
11																									
12																									

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

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Laura Midkiff/ APC GTL	7/22/2021	11:45	[signature]	7/26/21	0840	- N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 4 Of 4

Section A — Required Client Information:

Company:	Alabama Power Company
Address:	744 Highway 87 GSC Bldg #8 Calera, AL 35040
Email To:	lbmidkif@southernco.com
Phone:	205-664-6197 Fax
Requested Due Date:	28 days

Section B — Required Project Information:

Report To:	Laura Midkiff
Copy To:	Brooke Caton & Renee Jernigan
Purchase Order #:	APC10700668
Project Name:	Plant Gorgas Landfill
Project Number:	WMWGORLF 1330

Section C — Invoice Information:

Attention:	Laura Midkiff
Company Name:	Alabama Power Co.
Address:	744 Highway 87 GSC Bldg #8
Pace Quote:	CCR
Pace Project Manager:	Kevin.Herring@pacelabs.com
Pace Profile #:	13805

Regulatory Agency:

State / Location: AL

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike Du	Residual Chlorine (Y/N)	
1	BB13341	MW-11	GW	G			7/21/2021	11:34		1			X						X	X	X				001
2	BB13342	MW-20	GW	G			7/21/2021	12:47		3			X						X	X	X	X			002
3	BB13343	MW-19	GW	G			7/21/2021	14:01		1			X						X	X	X				003
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Laura Midkiff/ APC GTL	7/22/2021	11:45		7/26/21	0840	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	8/13/2021
Worklist:	62095
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2218981
MB concentration:	0.563
M/B 2 Sigma CSU:	0.363
MB MDC:	0.691
MB Numerical Performance Indicator:	3.04
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS62095	LCSD62095
Count Date:	8/18/2021	
Spike I.D.:	21-003	
Decay Corrected Spike Concentration (pCi/mL):	36.527	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.816	
Target Conc. (pCi/L, g, F):	4.477	
Uncertainty (Calculated):	0.219	
Result (pCi/L, g, F):	2.696	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.722	
Numerical Performance Indicator:	-4.63	
Percent Recovery:	60.22%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	7/21/2021	7/27/2021
Sample I.D.	92551765022	92552796002
Sample MS I.D.	92551765023	92552796003
Sample MSD I.D.	92551765024	92552796004
Spike I.D.:	21-003	21-003
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	36.866	36.866
Spike Volume Used in MS (mL):	0.20	0.20
Spike Volume Used in MSD (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.886	0.900
MS Target Conc.(pCi/L, g, F):	8.320	8.191
MSD Aliquot (L, g, F):	0.896	0.930
MSD Target Conc. (pCi/L, g, F):	8.225	7.926
MS Spike Uncertainty (calculated):	0.408	0.401
MSD Spike Uncertainty (calculated):	0.403	0.388
Sample Result:	0.978	0.445
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.404	0.307
Sample Matrix Spike Result:	9.966	7.304
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.975	1.482
Sample Matrix Spike Duplicate Result:	5.491	8.246
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.172	1.663
MS Numerical Performance Indicator:	0.637	-1.668
MSD Numerical Performance Indicator:	-5.582	-0.141
MS Percent Recovery:	108.03%	83.74%
MSD Percent Recovery:	54.86%	98.43%
MS Status vs Numerical Indicator:	Pass	Pass
MSD Status vs Numerical Indicator:	Fail****	Pass
MS Status vs Recovery:	Pass	Pass
MSD Status vs Recovery:	MSD Low****	Pass
MS/MSD Upper % Recovery Limits:	135%	135%
MS/MSD Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment		
Sample I.D.:		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	92551765022	92552796002
Sample MS I.D.	92551765023	92552796003
Sample MSD I.D.	92551765024	92552796004
Sample Matrix Spike Result:	9.966	7.304
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.975	1.482
Sample Matrix Spike Duplicate Result:	5.491	8.246
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.172	1.663
Duplicate Numerical Performance Indicator:	3.820	-0.829
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	65.28%	16.13%
MS/ MSD Duplicate Status vs Numerical Indicator:	Fail***	Pass
MS/ MSD Duplicate Status vs RPD:	Fail***	Pass
% RPD Limit:	36%	36%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

MB < MDC, Pass

Comments:

~~*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable, otherwise this batch must be re-prepped.~~

~~**Batch must be re-prepped due to unacceptable precision.~~ RI and Reanalyze ROS set only. 8/24/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	JC2
Date:	8/13/2021
Worklist:	62094
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2218980
MB concentration:	0.837
M/B 2 Sigma CSU:	0.360
MB MDC:	0.572
MB Numerical Performance Indicator:	4.55
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS62094	LCSD62094
Count Date:	8/17/2021	
Spike I.D.:	21-003	
Decay Corrected Spike Concentration (pCi/mL):	36.540	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.831	
Target Conc. (pCi/L, g, F):	4.399	
Uncertainty (Calculated):	0.216	
Result (pCi/L, g, F):	3.038	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.805	
Numerical Performance Indicator:	-3.20	
Percent Recovery:	69.06%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	7/20/2021	
Sample I.D.	92551765002	
Sample MS I.D.	92551765003	
Sample MSD I.D.	92551765004	
Spike I.D.:	21-003	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	36.880	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.913	
MS Target Conc.(pCi/L, g, F):	8.077	
MSD Aliquot (L, g, F):	0.853	
MSD Target Conc. (pCi/L, g, F):	8.644	
MS Spike Uncertainty (calculated):	0.396	
MSD Spike Uncertainty (calculated):	0.424	
Sample Result:	0.487	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.248	
Sample Matrix Spike Result:	5.855	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.172	
Sample Matrix Spike Duplicate Result:	6.758	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.365	
MS Numerical Performance Indicator:	-4.209	
MSD Numerical Performance Indicator:	-3.206	
MS Percent Recovery:	66.46%	
MSD Percent Recovery:	72.55%	
MS Status vs Numerical Indicator:	Fail****	
MSD Status vs Numerical Indicator:	Fail****	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Duplicate Sample Assessment		
Sample I.D.:		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	92551765002	
Sample MS I.D.	92551765003	
Sample MSD I.D.	92551765004	
Sample Matrix Spike Result:	5.855	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.172	
Sample Matrix Spike Duplicate Result:	6.758	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.365	
Duplicate Numerical Performance Indicator:	-0.984	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	8.76%	
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	
MS/ MSD Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

8/18/21

MS passes % REC criteria

****If all other QC criteria pass, this batch is acceptable. The matrix spike duplicate result indicates a possible bias for this sample only and may not be applicable to any other samples in this analytical batch.

8/23/21

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-226
Analyst:	CLA
Date:	8/4/2021
Worklist:	61909
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2213739
MB concentration:	-0.062
M/B Counting Uncertainty:	0.197
MB MDC:	0.563
MB Numerical Performance Indicator:	-0.61
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS61909	LCSD61909
Count Date:	8/26/2021	8/26/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.035	24.035
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.202	0.207
Target Conc. (pCi/L, g, F):	11.882	11.586
Uncertainty (Calculated):	0.143	0.139
Result (pCi/L, g, F):	12.299	12.766
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.198	1.195
Numerical Performance Indicator:	0.68	1.92
Percent Recovery:	103.51%	110.18%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	7/20/2021	
Sample I.D.	92551765002	
Sample MS I.D.	92551765003	
Sample MSD I.D.	92551765004	
Spike I.D.:	19-033	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.036	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.202	
MS Target Conc.(pCi/L, g, F):	23.784	
MSD Aliquot (L, g, F):	0.203	
MSD Target Conc. (pCi/L, g, F):	23.727	
MS Spike Uncertainty (calculated):	0.285	
MSD Spike Uncertainty (calculated):	0.285	
Sample Result:	0.246	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.218	
Sample Matrix Spike Result:	24.711	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.634	
Sample Matrix Spike Duplicate Result:	22.551	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.557	
MS Numerical Performance Indicator:	0.798	
MSD Numerical Performance Indicator:	-1.746	
MS Percent Recovery:	102.86%	
MSD Percent Recovery:	94.00%	
MS Status vs Numerical Indicator:	N/A	
MSD Status vs Numerical Indicator:	N/A	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	125%	
MS/MSD Lower % Recovery Limits:	75%	

Duplicate Sample Assessment		
Sample I.D.:	LCS61909	
Duplicate Sample I.D.	LCSD61909	
Sample Result (pCi/L, g, F):	12.299	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.198	
Sample Duplicate Result (pCi/L, g, F):	12.766	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.195	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.540	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	6.24%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	92551765002	
Sample MS I.D.	92551765003	
Sample MSD I.D.	92551765004	
Sample Matrix Spike Result:	24.711	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.634	
Sample Matrix Spike Duplicate Result:	22.551	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.557	
Duplicate Numerical Performance Indicator:	1.876	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	9.00%	
MS/ MSD Duplicate Status vs Numerical Indicator:	N/A	
MS/ MSD Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

CLA 8/26/2021

LAM 8/26/21

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	CLA
Date:	8/4/2021
Worklist:	61910
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2213744
MB concentration:	0.005
M/B Counting Uncertainty:	0.186
MB MDC:	0.496
MB Numerical Performance Indicator:	0.06
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS61910	LCSD61910
Count Date:	8/26/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.035	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.210	
Target Conc. (pCi/L, g, F):	11.451	
Uncertainty (Calculated):	0.137	
Result (pCi/L, g, F):	11.208	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.114	
Numerical Performance Indicator:	-0.42	
Percent Recovery:	97.88%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	7/21/2021	
Sample I.D.	92551765022	
Sample MS I.D.	92551765023	
Sample MSD I.D.	92551765024	
Spike I.D.:	19-033	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.036	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.205	
MS Target Conc.(pCi/L, g, F):	23.464	
MSD Aliquot (L, g, F):	0.204	
MSD Target Conc. (pCi/L, g, F):	23.564	
MS Spike Uncertainty (calculated):	0.282	
MSD Spike Uncertainty (calculated):	0.283	
Sample Result:	0.277	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.246	
Sample Matrix Spike Result:	23.858	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.626	
Sample Matrix Spike Duplicate Result:	24.021	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.643	
MS Numerical Performance Indicator:	0.137	
MSD Numerical Performance Indicator:	0.209	
MS Percent Recovery:	100.50%	
MSD Percent Recovery:	100.76%	
MS Status vs Numerical Indicator:	N/A	
MSD Status vs Numerical Indicator:	N/A	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	125%	
MS/MSD Lower % Recovery Limits:	75%	

Duplicate Sample Assessment		
Sample I.D.:		
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Result Counting Uncertainty (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	92551765022	
Sample MS I.D.	92551765023	
Sample MSD I.D.	92551765024	
Sample Matrix Spike Result:	23.858	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.626	
Sample Matrix Spike Duplicate Result:	24.021	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.643	
Duplicate Numerical Performance Indicator:	-0.139	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	0.26%	
MS/ MSD Duplicate Status vs Numerical Indicator:	N/A	
MS/ MSD Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

CMM 8/26/21

LAM 8/26/21

Alabama Power General Test Laboratory
744 County Road 87, GSC#8
Calera, AL 35040
(205) 664-6032 or 6171
FAX (205) 257-1654

Field Case Narrative

Plant Gorgas Landfill

2021 Compliance Event 2

All samples were collected using methods defined in Alabama Power's Water Field Group Low-Flow Groundwater Sampling Procedure and the associated site-specific Sampling and Analysis Plan (SAP).

Rainy conditions were present when sampling wells MW-12V, MW-6 and MW-10.

Suspected iron bacteria appeared to be present during initial pumping of wells MW-8 and MW-19.

Field quality control procedures were performed as follows:

- Blanks and Sample Duplicates were collected as described in the SAP.
- Calibration verifications for all required field parameters were performed daily, before and after sample collection.

Field Data

Parameter	Value	Units
Comment	Sampled @ 1045	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-12 10:16:44	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Pooled Upgradient	
Initial Depth to Water	90.71	ft
Flow Cell Volume	130	ml
Final Draw Down	2.6	ft
Estimated Total Volume Pumped	12500	ml
Tubing Inner Diameter	0.25	in
Tubing Length	108	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	500	ml/min
Final Flow Rate	500	ml/min
Pump Intake From TOC	103	ft
Location Name	Gorgas Pooled Upgradient MW-1	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	108.13	ft
Time Offset	-05:00:00	
Top of Screen	98.13	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/12/2021 10:21:00 AM	5.16		125.24		2085.65		1.59		19.88		0.4		93.03
7/12/2021 10:26:00 AM	5.14		131.56		2216.54		1.20		19.84		0.38		93.18
7/12/2021 10:31:00 AM	5.14		129.67		2255.92		0.89		19.86		0.1		93.31
7/12/2021 10:36:00 AM	5.13		129.53		2263.63		0.83		19.82		0.5		93.31
7/12/2021 10:41:00 AM	5.13		128.99		2271.93		0.79		19.83		0.22		93.31

Field Data

Parameter	Value	Units
Comment	Sampled @ 1148	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-12 11:25:09	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Pooled Upgradient	
Initial Depth to Water	84.37	ft
Flow Cell Volume	130	ml
Final Draw Down	0.05	ft
Estimated Total Volume Pumped	10000	ml
Tubing Inner Diameter	0.25	in
Tubing Length	95	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	500	ml/min
Final Flow Rate	500	ml/min
Pump Intake From TOC	89	ft
Location Name	Gorgas Pooled Upgradient MW-2	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	94.25	ft
Time Offset	-05:00:00	
Top of Screen	84.25	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/12/2021 11:30:00 AM	6.11		80.17		1694.47		0.29		19.43		12.2		84.42
7/12/2021 11:35:00 AM	6.15		75.96		1672.37		0.16		19.42		2.61		84.42
7/12/2021 11:40:00 AM	6.16		71.05		1678.19		0.13		19.36		2.48		84.42
7/12/2021 11:45:00 AM	6.16		67.46		1676.05		0.12		19.38		1.43		84.42

Field Data

Parameter	Value	Units
Comment	Sampled @ 1253	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-12 12:24:51	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Pooled Upgradient	
Initial Depth to Water	104.36	ft
Flow Cell Volume	130	ml
Final Draw Down	5.84	ft
Estimated Total Volume Pumped	2500	ml
Tubing Inner Diameter	0.25	in
Tubing Length	119	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	100	ml/min
Final Flow Rate	100	ml/min
Pump Intake From TOC	114	ft
Location Name	Gorgas Pooled Upgradient MW-3	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	118.92	ft
Time Offset	-05:00:00	
Top of Screen	108.92	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/12/2021 12:29:00 PM	6.44		83.07		4025.30		8.31		25.29		1.02		109.81
7/12/2021 12:34:00 PM	5.93		95.79		3615.17		7.19		25.38		1.53		109.91
7/12/2021 12:39:00 PM	5.86		99.55		3340.75		6.78		25.50		2.25		109.99
7/12/2021 12:44:00 PM	5.86		101.49		3302.36		6.84		25.57		1.49		110.11
7/12/2021 12:49:00 PM	5.86		103.13		3288.64		6.87		25.58		1.31		110.2

Field Data

Parameter	Value	Units
Comment	Sampled @ 1435	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-12 14:06:13	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Pooled Upgradient	
Initial Depth to Water	116.33	ft
Flow Cell Volume	130	ml
Final Draw Down	0.03	ft
Estimated Total Volume Pumped	10000	ml
Tubing Inner Diameter	0.25	in
Tubing Length	129	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	400	ml/min
Final Flow Rate	400	ml/min
Pump Intake From TOC	124	ft
Location Name	Gorgas Pooled Upgradient MW-4	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	128.75	ft
Time Offset	-05:00:00	
Top of Screen	118.75	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/12/2021 2:11:00 PM	5.97		122.05		3017.04		1.87		21.48		3.16		116.36
7/12/2021 2:16:00 PM	5.96		119.22		2996.30		1.97		20.91		2.43		116.36
7/12/2021 2:21:00 PM	5.99		118.37		2987.14		2.20		20.79		1.87		116.36
7/12/2021 2:26:00 PM	6.04		116.26		2984.85		2.28		21.19		0.85		116.36
7/12/2021 2:31:00 PM	6.06		114.08		2977.13		2.28		21.22		0.66		116.36

Field Data

Parameter	Value	Units
Comment	Sampled @ 1053	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-21 10:29:02	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	125.87	ft
Flow Cell Volume	130	ml
Final Draw Down	0.29	ft
Estimated Total Volume Pumped	3200	ml
Tubing Inner Diameter	0.17	in
Tubing Length	137	ft
Pump Type	QED Bladder	
Pump Volume	130	ml
Flow Rate	160	ml/min
Final Flow Rate	160	ml/min
Pump Intake From TOC	132.5	ft
Location Name	Gorgas Landfill MW-5	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	137.2	ft
Time Offset	-05:00:00	
Top of Screen	127.2	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/21/2021 10:34:00 AM	6.46		130.21		3101.85		1.35		22.61		7.55		125.94
7/21/2021 10:39:00 AM	6.42		118.86		3083.70		0.85		22.82		5.43		126.04
7/21/2021 10:44:00 AM	6.40		111.02		3099.52		0.74		22.37		5.26		126.13
7/21/2021 10:49:00 AM	6.40		105.22		3105.06		0.70		22.24		2.99		126.16

Field Data

Parameter	Value	Units
Comment	Sampled @ 1357	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-20 13:34:01	
Operator Name	Dallas Gentry	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	99.13	ft
Flow Cell Volume	130	ml
Final Draw Down	0.41	ft
Estimated Total Volume Pumped	10000	ml
Tubing Inner Diameter	0.25	in
Tubing Length	130	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	500	ml/min
Final Flow Rate	500	ml/min
Pump Intake From TOC	125	ft
Location Name	Gorgas Landfill MW-6	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	128.81	ft
Time Offset	-05:00:00	
Top of Screen	118.81	ft
Device Model	Aqua TROLL 600	
Device SN	678400	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/20/2021 1:39:00 PM	6.06		11.54		3085.93		0.16		20.81		2.76		99.54
7/20/2021 1:44:00 PM	6.05		10.38		3079.5		0.13		21.02		1.69		99.54
7/20/2021 1:49:00 PM	6.05		12.77		3042.22		0.12		21.02		1.56		99.54
7/20/2021 1:54:00 PM	5.99		19.00		3020.13		0.11		21.06		1.09		99.54

Field Data

Parameter	Value	Units
Comment	Sampled @ 1430	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-20 14:07:08	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	56.64	ft
Flow Cell Volume	130	ml
Final Draw Down	0.26	ft
Estimated Total Volume Pumped	10000	ml
Tubing Inner Diameter	0.25	in
Tubing Length	73.5	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	500	ml/min
Final Flow Rate	500	ml/min
Pump Intake From TOC	68.5	ft
Location Name	Gorgas Landfill MW-7	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	73.63	ft
Time Offset	-05:00:00	
Top of Screen	63.63	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/20/2021 2:12:00 PM	6.59		15.47		2333.02		1.11		20.67		0.94		56.9
7/20/2021 2:17:00 PM	6.59		12.20		2274.92		0.99		20.63		1.71		56.9
7/20/2021 2:22:00 PM	6.59		10.09		2233.43		0.97		20.53		1.33		56.9
7/20/2021 2:27:00 PM	6.58		8.92		2199.04		0.98		20.48		1.57		56.9

Field Data

Parameter	Value	Units
Comment	Sampled @ 1525	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-20 14:42:02	
Operator Name	Dallas Gentry	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	62.84	ft
Flow Cell Volume	130	ml
Final Draw Down	2.35	ft
Estimated Total Volume Pumped	4000	ml
Tubing Inner Diameter	0.25	in
Tubing Length	72	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	100	ml/min
Final Flow Rate	100	ml/min
Pump Intake From TOC	67	ft
Location Name	Gorgas Landfill MW-8	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	72.24	ft
Time Offset	-05:00:00	
Top of Screen	62.24	ft
Device Model	Aqua TROLL 600	
Device SN	678400	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/20/2021 2:47:00 PM	6.87		30.79		2512.83		6.25		24.29		0.48		63.64
7/20/2021 2:52:00 PM	6.62		17.11		2534.76		1.83		23.45		1.04		64.03
7/20/2021 2:57:00 PM	6.60		14.89		2532.07		0.94		23.30		6.95		64.29
7/20/2021 3:02:00 PM	6.60		15.23		2521.81		0.71		23.27		10.36		64.5
7/20/2021 3:07:00 PM	6.61		14.45		2511.83		0.58		23.14		11.7		64.75
7/20/2021 3:12:00 PM	6.62		13.29		2506.52		0.51		22.99		11.23		64.95
7/20/2021 3:17:00 PM	6.63		12.50		2502.96		0.47		22.70		7.26		65.09
7/20/2021 3:22:00 PM	6.64		11.72		2503.35		0.44		22.63		6.59		65.19

Field Data

Parameter	Value	Units
Comment	Sampled @ 1315	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-20 12:46:34	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	84.46	ft
Flow Cell Volume	130	ml
Final Draw Down	3.18	ft
Estimated Total Volume Pumped	5000	ml
Tubing Inner Diameter	0.25	in
Tubing Length	104	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	200	ml/min
Final Flow Rate	200	ml/min
Pump Intake From TOC	98.8	ft
Location Name	Gorgas Landfill MW-10	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	20	ft
Total Depth	108.75	ft
Time Offset	-05:00:00	
Top of Screen	88.75	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/20/2021 12:51:00 PM	6.51		-1.64		1219.39		0.93		20.88		9.75		86.29
7/20/2021 12:56:00 PM	6.50		-4.88		1218.35		0.64		20.79		11.7		86.84
7/20/2021 1:01:00 PM	6.49		-6.00		1225.99		0.56		20.80		9.44		87.36
7/20/2021 1:06:00 PM	6.48		-5.73		1241.94		0.60		20.60		9.65		87.51
7/20/2021 1:11:00 PM	6.46		-4.57		1257.92		0.64		20.67		5.42		87.64

Field Data

Parameter	Value	Units
Comment	Sampled @ 1134	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-21 10:46:21	
Operator Name	Dallas Gentry	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	101.48	ft
Flow Cell Volume	130	ml
Final Draw Down	7.77	ft
Estimated Total Volume Pumped	9000	ml
Tubing Inner Diameter	0.25	in
Tubing Length	135.5	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	400	ml/min
Final Flow Rate	100	ml/min
Pump Intake From TOC	130.5	ft
Location Name	Gorgas Landfill MW-11	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	135.74	ft
Time Offset	-05:00:00	
Top of Screen	125.74	ft
Device Model	Aqua TROLL 600	
Device SN	678400	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/21/2021 10:51:00 AM	6.70		-67.32		2638.74		0.30		21.32		0.79		104.97
7/21/2021 10:56:00 AM	6.71		-67.18		2597.02		0.20		21.36		0.57		108.02
7/21/2021 11:01:00 AM	6.73		-69.90		2588.14		0.31		22.73		0.52		108.28
7/21/2021 11:06:00 AM	6.74		-71.12		2583.23		0.41		23.02		0.56		108.47
7/21/2021 11:11:00 AM	6.75		-70.63		2574.79		0.44		23.22		0.64		108.66
7/21/2021 11:16:00 AM	6.75		-70.34		2572.29		0.43		23.37		0.81		108.82
7/21/2021 11:21:00 AM	6.75		-70.98		2568.03		0.41		23.11		0.83		108.98
7/21/2021 11:26:00 AM	6.74		-72.78		2560.61		0.40		22.68		0.64		109.13
7/21/2021 11:31:00 AM	6.74		-76.30		2560.30		0.39		22.57		0.68		109.25

Field Data

Parameter	Value	Units
Comment	Sampled @ 1153	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-20 11:30:16	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	154.82	ft
Flow Cell Volume	130	ml
Final Draw Down	0.09	ft
Estimated Total Volume Pumped	4500	ml
Tubing Inner Diameter	0.17	in
Tubing Length	169.5	ft
Pump Type	QED Bladder	
Pump Volume	130	ml
Flow Rate	225	ml/min
Final Flow Rate	225	ml/min
Pump Intake From TOC	164.5	ft
Location Name	Gorgas Landfill MW-12	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	169.47	ft
Time Offset	-05:00:00	
Top of Screen	159.47	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/20/2021 11:35:00 AM	5.48		24.26		3190.77		1.10		22.92		7.98		154.91
7/20/2021 11:40:00 AM	5.49		24.86		3171.25		0.97		22.96		7.41		154.91
7/20/2021 11:45:00 AM	5.50		25.37		3173.09		0.93		22.78		4.88		154.91
7/20/2021 11:50:00 AM	5.53		25.95		3168.03		0.90		22.65		4.23		154.91

Field Data

Parameter	Value	Units
Comment	Sampled @ 1232	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-20 12:04:07	
Operator Name	Dallas Gentry	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	155.32	ft
Flow Cell Volume	130	ml
Final Draw Down	1.86	ft
Estimated Total Volume Pumped	5250	ml
Tubing Inner Diameter	0.17	in
Tubing Length	207	ft
Pump Type	QED Bladder	
Pump Volume	130	ml
Flow Rate	210	ml/min
Final Flow Rate	210	ml/min
Pump Intake From TOC	202	ft
Location Name	Gorgas Landfill MW-12V	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	207	ft
Time Offset	-05:00:00	
Top of Screen	197	ft
Device Model	Aqua TROLL 600	
Device SN	678400	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/20/2021 12:09:00 PM	6.84		-141.80		2537.18		0.80		22.45		6.36		156.26
7/20/2021 12:14:00 PM	6.81		-117.64		2533.59		0.38		22.29		1.66		156.64
7/20/2021 12:19:00 PM	6.82		-110.68		2532.41		0.33		22.13		1.56		156.9
7/20/2021 12:24:00 PM	6.83		-102.81		2519.32		0.71		23.00		1.72		157.08
7/20/2021 12:29:00 PM	6.84		-99.89		2516.11		0.47		22.91		1.48		157.18

Field Data

Parameter	Value	Units
Comment	Sampled @ 0913	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-20 08:50:09	
Operator Name	Dallas Gentry	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	93.67	ft
Flow Cell Volume	130	ml
Final Draw Down	0.5	ft
Estimated Total Volume Pumped	4400	ml
Tubing Inner Diameter	0.25	in
Tubing Length	109	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	220	ml/min
Final Flow Rate	220	ml/min
Pump Intake From TOC	104	ft
Location Name	Gorgas Landfill MW-13	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	109.25	ft
Time Offset	-05:00:00	
Top of Screen	99.25	ft
Device Model	Aqua TROLL 600	
Device SN	678400	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/20/2021 8:55:00 AM	6.52		72.95		2633.28		0.70		20.74		1.27		94.17
7/20/2021 9:00:00 AM	6.57		67.77		2636.18		0.40		20.59		1.42		94.17
7/20/2021 9:05:00 AM	6.59		60.62		2633.40		0.33		20.51		0.54		94.17
7/20/2021 9:10:00 AM	6.59		60.17		2629.85		0.30		20.50		0.57		94.17

Field Data

Parameter	Value	Units
Comment	Sampled @ 1016	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-20 09:52:58	
Operator Name	Dallas Gentry	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	88.91	ft
Flow Cell Volume	130	ml
Final Draw Down	0.13	ft
Estimated Total Volume Pumped	7600	ml
Tubing Inner Diameter	0.25	in
Tubing Length	103.5	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	380	ml/min
Final Flow Rate	380	ml/min
Pump Intake From TOC	98.5	ft
Location Name	Gorgas Landfill MW-14	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	103.65	ft
Time Offset	-05:00:00	
Top of Screen	93.65	ft
Device Model	Aqua TROLL 600	
Device SN	678400	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/20/2021 9:57:00 AM	6.37		50.75		2994.03		0.29		20.30		58.3		89.04
7/20/2021 10:02:00 AM	6.37		37.52		2978.03		0.19		20.29		8.15		89.04
7/20/2021 10:07:00 AM	6.38		33.32		2972.60		0.16		20.12		3.23		89.04
7/20/2021 10:12:00 AM	6.38		31.75		2964.18		0.16		20.10		2.44		89.04

Field Data

Parameter	Value	Units
Comment	Sampled @ 1125	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-20 11:01:56	
Operator Name	Dallas Gentry	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	66.35	ft
Flow Cell Volume	130	ml
Final Draw Down	0.99	ft
Estimated Total Volume Pumped	6600	ml
Tubing Inner Diameter	0.25	in
Tubing Length	87	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	330	ml/min
Final Flow Rate	330	ml/min
Pump Intake From TOC	82	ft
Location Name	Gorgas Landfill MW-15	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	86.96	ft
Time Offset	-05:00:00	
Top of Screen	76.96	ft
Device Model	Aqua TROLL 600	
Device SN	678400	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/20/2021 11:06:00 AM	6.04		25.67		2616.49		0.26		20.33		1.82		67.23
7/20/2021 11:11:00 AM	6.02		25.14		2602.47		0.19		20.25		2.82		67.34
7/20/2021 11:16:00 AM	6.02		26.05		2579.34		0.25		20.30		2.2		67.34
7/20/2021 11:21:00 AM	6.03		24.59		2577.77		0.26		20.18		1.91		67.34

Field Data

Parameter	Value	Units
Comment	Sampled @ 1210	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-21 11:47:27	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	90.05	ft
Flow Cell Volume	130	ml
Final Draw Down	0.03	ft
Estimated Total Volume Pumped	8800	ml
Tubing Inner Diameter	0.25	in
Tubing Length	110.5	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	440	ml/min
Final Flow Rate	440	ml/min
Pump Intake From TOC	105.5	ft
Location Name	Gorgas Landfill MW-16	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	110.56	ft
Time Offset	-05:00:00	
Top of Screen	100.56	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/21/2021 11:52:00 AM	6.19		79.19		2295.37		0.94		20.68		0.27		90.08
7/21/2021 11:57:00 AM	6.20		77.24		2282.41		0.83		20.56		0.24		90.08
7/21/2021 12:02:00 PM	6.22		73.80		2274.14		0.82		20.83		0.1		90.08
7/21/2021 12:07:00 PM	6.24		69.94		2259.08		0.78		20.85		0.1		90.08

Field Data

Parameter	Value	Units
Comment	Sampled @ 1330	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-21 13:01:44	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	125.98	ft
Flow Cell Volume	130	ml
Final Draw Down	0.63	ft
Estimated Total Volume Pumped	6000	ml
Tubing Inner Diameter	0.17	in
Tubing Length	139	ft
Pump Type	QED Bladder	
Pump Volume	130	ml
Flow Rate	240	ml/min
Final Flow Rate	240	ml/min
Pump Intake From TOC	133.67	ft
Location Name	Gorgas Landfill MW-17R	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	138.05	ft
Time Offset	-05:00:00	
Top of Screen	128.05	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/21/2021 1:06:00 PM	5.36		93.43		3154.10		0.83		22.42		0.92		126.54
7/21/2021 1:11:00 PM	5.43		85.91		3138.19		0.49		22.46		0.59		126.61
7/21/2021 1:16:00 PM	5.60		75.55		3106.67		0.41		22.46		0.42		126.61
7/21/2021 1:21:00 PM	5.73		67.78		3087.79		0.38		22.46		0.41		126.61
7/21/2021 1:26:00 PM	5.79		63.86		3081.80		0.36		22.47		0.27		126.61

Field Data

Parameter	Value	Units
Comment	Sampled @ 1428	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-21 14:04:45	
Operator Name	TJ Daugherty	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	111.49	ft
Flow Cell Volume	130	ml
Final Draw Down	0.12	ft
Estimated Total Volume Pumped	3200	ml
Tubing Inner Diameter	0.17	in
Tubing Length	120	ft
Pump Type	QED Bladder	
Pump Volume	130	ml
Flow Rate	160	ml/min
Final Flow Rate	160	ml/min
Pump Intake From TOC	117.74	ft
Location Name	Gorgas Landfill MW-18	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	118.48	ft
Time Offset	-05:00:00	
Top of Screen	108.48	ft
Device Model	Aqua TROLL 600	
Device SN	678330	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/21/2021 2:09:00 PM	6.34		51.54		2373.3		4.28		23.43		0.31		111.56
7/21/2021 2:14:00 PM	6.31		52.02		2368.29		4.01		23.22		0.51		111.59
7/21/2021 2:19:00 PM	6.31		53.80		2360.97		3.96		22.73		0.28		111.61
7/21/2021 2:24:00 PM	6.33		55.25		2357.17		3.95		22.33		0.23		111.61

Field Data

Parameter	Value	Units
Comment	Sampled @ 1401	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-21 13:33:18	
Operator Name	Dallas Gentry	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	79.03	ft
Flow Cell Volume	130	ml
Final Draw Down	0.07	ft
Estimated Total Volume Pumped	8500	ml
Tubing Inner Diameter	0.25	in
Tubing Length	98	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	340	ml/min
Final Flow Rate	340	ml/min
Pump Intake From TOC	93	ft
Location Name	Gorgas Landfill MW-19	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	97.85	ft
Time Offset	-05:00:00	
Top of Screen	87.85	ft
Device Model	Aqua TROLL 600	
Device SN	678400	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/21/2021 1:38:00 PM	6.22		65.34		2931.00		0.41		21.23		16.4		79.1
7/21/2021 1:43:00 PM	6.18		66.93		2922.66		0.19		20.82		33.8		79.1
7/21/2021 1:48:00 PM	6.19		64.61		2920.80		0.16		20.80		12.55		79.1
7/21/2021 1:53:00 PM	6.21		63.42		2921.17		0.15		20.96		10.87		79.1
7/21/2021 1:58:00 PM	6.23		61.95		2916.25		0.14		21.11		4.91		79.1

Field Data

Parameter	Value	Units
Comment	Sampled @ 1247	
Test Type	Low-Flow Test	
Test Date / Time	2021-07-21 12:23:40	
Operator Name	Dallas Gentry	
Tubing Type	PE	
Project	Gorgas Landfill	
Initial Depth to Water	19.78	ft
Flow Cell Volume	130	ml
Final Draw Down	1.32	ft
Estimated Total Volume Pumped	6000	ml
Tubing Inner Diameter	0.25	in
Tubing Length	74	ft
Pump Type	Geotech Bladder	
Pump Volume	105	ml
Flow Rate	300	ml/min
Final Flow Rate	300	ml/min
Pump Intake From TOC	69	ft
Location Name	Gorgas Landfill MW-20	
Well Diameter	2	in
Casing Type	PVC	
Screen Length	10	ft
Total Depth	74.1	ft
Time Offset	-05:00:00	
Top of Screen	64.1	ft
Device Model	Aqua TROLL 600	
Device SN	678400	

Data Time	PH	Q	ORP	Q	Cond	Q	DO	Q	Temp	Q	Turb	Q	DTW
7/21/2021 12:28:00 PM	6.55		-56.28		2645.96		0.16		20.36		1.59		21.05
7/21/2021 12:33:00 PM	6.56		-53.54		2625.65		0.11		20.39		0.77		21.1
7/21/2021 12:38:00 PM	6.58		-52.76		2612.28		0.10		20.46		0.4		21.1
7/21/2021 12:43:00 PM	6.60		-52.71		2648.64		0.09		20.65		0.81		21.1

Appendix D

Appendix D. - Horizontal Groundwater Flow Velocity Calculations

Plant Gorgas Gypsum Landfill

2021 Semi-Annual Monitoring Events								
Source	**MW-2**	**MW-20**	**Distance**	**Hydraulic Gradient**	**Hydraulic Conductivity**	**Effective Porosity**	**Calculated Groundwater Flow Velocity**	**Calculated Groundwater Flow Velocity**
	h_1 (ft)	**h_2 (ft)**	**Δl (ft)**	**$\Delta h/\Delta l$ (ft/ft)**	**K**	**n**	**(ft/d)**	**(ft/yr)**
2/22/2021	418.50	313.60	3507.0	0.030	8.01	0.15	1.60	583.01
7/12/2021	417.75	312.81	3507.0	0.030	8.01	0.15	1.60	583.23
Source	**MW-3**	**MW-6**	**Distance**	**Hydraulic Gradient**	**Hydraulic Conductivity**	**Effective Porosity**	**Calculated Groundwater Flow Velocity**	**Calculated Groundwater Flow Velocity**
	h_1 (ft)	**h_2 (ft)**	**Δl (ft)**	**$\Delta h/\Delta l$ (ft/ft)**	**K**	**n**	**(ft/d)**	**(ft/yr)**
2/22/2021	419.94	311.83	2970.0	0.036	8.01	0.15	1.94	709.49
7/12/2021	421.54	314.66	2970.0	0.036	8.01	0.15	1.92	701.41
Source	**MW-14**	**MW-19**	**Distance**	**Hydraulic Gradient**	**Hydraulic Conductivity**	**Effective Porosity**	**Calculated Groundwater Flow Velocity**	**Calculated Groundwater Flow Velocity**
	h_1 (ft)	**h_2 (ft)**	**Δl (ft)**	**$\Delta h/\Delta l$ (ft/ft)**	**K**	**n**	**(ft/d)**	**(ft/yr)**
2/22/2021	340.86	298.70	1890.0	0.022	8.01	0.15	1.19	434.78
7/12/2021	340.84	298.00	1890.0	0.023	8.01	0.15	1.21	441.80

Notes:
ft=feet
ft/d = feet/day
ft/ft = feet per foot
ft/yr = feet per year

Appendix E

1st
Semi-Annual
Monitoring Event

GROUNDWATER STATS CONSULTING

May 26, 2021

Southern Company Services
Attn: Mr. Greg Dyer
3535 Colonnade Parkway
Birmingham, AL 35243

Re: Plant Gorgas Bottom Ash Landfill
1st Semi-Annual Analysis – February 2021

Dear Mr. Dyer,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the statistical analysis of groundwater data for the February 2021 1st semi-annual sample event for Alabama Power Company's Plant Gorgas Bottom Ash Landfill. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began at site for the CCR program in 2016. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** MW-1, MW-2, MW-3, and MW-4
- **Downgradient wells:** MW-7, MW-8, MW-10, MW-11, and MW-12
- **Delineation well:** MW-12V

Data from delineation well MW-12V are included on time series and box plots but does not require formal statistics.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was prepared according to the Statistical Analysis Plan approved by Dr. Kirk Cameron, PhD Statistician with MacStat Consulting, primary author of the USEPA Unified Guidance, and Senior Advisor to Groundwater Stats Consulting. The analysis was reviewed by Andrew Collins, Project Manager of Groundwater Stats Consulting.

The CCR program consists of the following constituents:

> **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
> **Appendix IV** (Assessment Monitoring) - antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of Appendix IV downgradient well/constituent pairs with 100% non-detects follows this letter.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). A substitution of the most recent reporting limit is used for non-detect data. Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells.

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on analysis of the spatial variability of groundwater quality data among wells upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves are provided in this report to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests that the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations. Power curves are based on the following statistical methods and site/data characteristics:

- Semi-Annual Sampling
- Intrawell Prediction Limits with 1-of-2 resample plan
- Interwell Prediction Limits with 1-of-2 resample plan
- # Background Samples (Intrawell): 12
- # Background Samples (Interwell): 92
- # Constituents: 7
- # Downgradient wells: 5

Summary of Statistical Methods – Appendix III Parameters

Based on the earlier evaluation described above, the following statistical methods were selected:

- Intrawell prediction limits, combined with a 1-of-2 resample plan for calcium, fluoride, sulfate, and TDS
- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, chloride, and pH

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the annual false positive rate associated with parametric limits is fixed at 10% as recommended by the EPA Unified Guidance (2009), the false positive rate associated with nonparametric limits is not fixed and depends upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits as appropriate.

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the intrawell case, data for all wells and constituents may be re-evaluated when a minimum of 4 new data points are available to determine whether earlier concentrations are representative of present-day groundwater

quality. In the interwell case, prediction limits are updated with upgradient well data following each sampling event after careful screening for any new outliers. While not required for this report, in some cases, deselecting the earlier portion of data may be necessary prior to construction of limits so that resulting statistical limits are conservative (lower) from a regulatory perspective and capable of rapidly detecting changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

Background Update Summary – Conducted in September 2019

Intrawell prediction limits, which compare the most recent compliance sample from a given well to historical data from the same well, are updated by testing for the appropriateness of consolidating new sampling observations with the screened background data. This process is described below and requires a minimum of four new data points. Historical data were evaluated for updating with newer data through May 2019 through the use of time series graphs to identify potential outliers when necessary, as well as the Mann Whitney test for equality of medians. As discussed in the Statistical Analysis Plan (August 2020), intrawell prediction limits are used to evaluate calcium, fluoride, sulfate, and TDS at all wells due to natural spatial variation for these parameters.

Interwell prediction limits are used to compare the most recent sample from each downgradient well to statistical limits constructed from pooled upgradient well data for boron, chloride, and pH. As mentioned above, these limits are updated following each sampling event after careful screening for new outliers. Data from upgradient wells are also periodically re-screened for newly developing trends, which may require adjustment of the background period to eliminate the trend. No adjustments were required in upgradient wells for constituents evaluated using interwell prediction limits.

Prior to performing prediction limits, proposed background data through May 2019 were reviewed to identify any newly suspected outliers at all wells for calcium, fluoride, sulfate, and TDS and at upgradient wells for boron, chloride, and pH. Both Tukey's test and visual screening are used to identify potential outliers. When identified as outliers, values were flagged with "o" and excluded to reduce variation, better represent background conditions, and provide limits that are conservative from a regulatory perspective. Potential outliers that are identified by Tukey's test but are not greatly different from the rest of the data are not flagged. Also, outliers that are not identified as significant by Tukey's test may be identified visually. As mentioned above, flagged data are displayed in a lighter font and as a disconnected symbol on the time series reports, as well as in a lighter font on the accompanying data pages. A summary of Tukey's test results for Appendix III parameters was included with the September 2019 screening.

For constituents requiring intrawell prediction limits, the Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through May 2017 to compliance data through May 2019. When no statistically significant difference in medians between the two groups is found at a 99% confidence level, background data may be updated with newer compliance data. Statistically significant differences were found between the two groups for calcium in well MW-1; fluoride in wells MW-2 and MW-4; and TDS in well MW-1.

Typically, when the test concludes that the medians of the two groups are significantly different, particularly in the downgradient wells, the background data are not updated to include the newer data but will be reconsidered in the future. Because the differences for calcium, fluoride and TDS occurred in upgradient wells, and more recent data are fairly similar to background and better represent the groundwater quality upgradient of the facility, these background data sets were updated. A summary of these results was included with the Mann Whitney test section in the September 2019 screening.

The Sen's Slope/Mann Kendall trend test was used to evaluate the entire record of data from upgradient wells for parameters utilizing interwell prediction limits. When statistically significant increasing trends are identified in upgradient wells, the earlier portion of data is deselected prior to construction of interwell statistical limits if the trending data would result in statistical limits that are not conservative from a regulatory perspective. No statistically significant trends were noted in upgradient wells, and a summary of the results was included with the September 2019 screening.

Evaluation of Appendix III Parameters – February 2021

Intrawell prediction limits were constructed for calcium, fluoride, sulfate, and TDS using screened background data through May 2019 at each well. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

Intrawell limits constructed from carefully screened background data from within each well serve to provide statistical limits that are representative of the background data population, and that will rapidly identify a change in more recent compliance data from within a given well. The most recent sample from the same well is compared to its respective background. This statistical method removes the element of variation from across wells and eliminates the chance of mistaking natural spatial variation for a release from the facility. Intrawell prediction limits combined with a 1-of-2 verification strategy were constructed for calcium, fluoride, sulfate, and TDS (Figure D). Background data will

be re-evaluated when a minimum of 4 compliance samples are available. This was last performed in September 2019, and the report was submitted at that time.

Interwell prediction limits combined with a 1-of-2 verification strategy were constructed for boron, chloride, and pH (Figure E). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are statistically significant increases (SSIs). Note that during this analysis, the reporting limit for boron increased from <0.1 mg/L to <0.1015 mg/L, but this increase did not result in any change to statistical limits.

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified, and further research is required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If a resample falls within the statistical limit, the initial exceedance is considered to be a false positive result; therefore, no further action is necessary.

Summaries of the prediction limits results may be found in the Prediction Limit Summary tables following this letter. The following prediction limit exceedances were identified:

Interwell:

- Boron: MW-10, MW-11, and MW-12
- Chloride: MW-7, MW-8, MW-11, and MW-12
- pH: MW-7, MW-8, MW-10, and MW-11

Intrawell:

- No Exceedances

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure F). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. The existence of similar trends in both upgradient and downgradient wells is an indication of natural variability in groundwater that is unrelated to practices at the site. A summary of the trend test results follows this letter. No statistically significant decreasing trends were identified. The following statistically significant increasing trends were identified for the following well/constituent pairs:

- Boron: MW-2 (upgradient) and MW-11
- Chloride: MW-11 and MW-12
- pH: MW-8 and MW-11

Evaluation of Appendix IV Parameters – February 2021

Data from all wells for Appendix IV parameters were assessed for outliers during previous analyses. A previously flagged outlier of 0.00473 mg/L for cadmium at upgradient well MW-3 was unflagged as it appears to represent natural groundwater concentrations. Additionally, the most recent (second highest) value of 0.00885 mg/L for cadmium at this well was flagged because the value did not appear to represent the population. A summary of flagged outliers follows this report (Figure C).

In accordance with Alabama Department of Environmental Management, the Groundwater Protections Standards (GWPS) utilized during the 2019 2nd semi-annual report were used in the confidence interval analysis for this 2021 1st semi-annual report. The GWPS will be updated during the 2021 2nd semi-annual statistical analysis. The methodology used to create these GWPS is described below.

First, background limits were determined using tolerance limits constructed from pooled upgradient well data. The tolerance limits contain a known fraction (coverage) of the background population with a known level of confidence. When data followed a normal or transformed-normal distribution, parametric tolerance limits were used to calculate background limits for Appendix IV parameters using pooled upgradient well data through October 2019 with a target of 95% confidence and 95% coverage (Figure G).

Nonparametric tolerance limits, which use the highest value in background as the statistical limit, were constructed when data did not follow a normal or transformed-normal distribution or when there were greater than 50% non-detects. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. These background limits were then compared to the Maximum Contaminant Levels (MCLs) for each parameter, and the higher of the two was used as the GWPS (Figure H) in the confidence interval comparisons described below. Exceptions are noted in Figure H for beryllium and cadmium. For these two parameters, the MCL's were used as the GWPS rather than the higher background UTLs to maintain the more conservative standard. Note that none of the parametric tolerance limits resulted in higher limits than the established MCLs or CCR-Rule Specified Limits. In future UTL calculations, nonparametric tolerance limits will be used exclusively, as requested by ADEM, to eliminate variation among upgradient well data.

Confidence intervals were then constructed on downgradient wells using a maximum of the most recent 8 samples through February 2021 for each of the Appendix IV parameters. These intervals were constructed as either parametric or nonparametric confidence intervals depending on the data distribution and percentage of non-detects. As mentioned above, well/constituent pairs with 100% non-detects for the most recent 8 samples did not require statistics; therefore, they were deselected prior to construction of confidence intervals. A list of deselected well/constituent pairs also follows this report. The decision logic, with respect to the use of a parametric or nonparametric confidence intervals, is similar to that used to construct tolerance limits as discussed above. Each confidence interval was compared with the corresponding GWPS. Only when the entire confidence interval is above the GWPS is the well/constituent pair considered to exceed its respective standard.

Note the following reporting limits changed from the previous analysis to this analysis:

- Antimony: <0.003 mg/L to <0.001015 mg/L
- Beryllium: <0.003 mg/L to <0.001015 mg/L
- Cadmium: <0.001 mg/L to <0.000203 mg/L
- Chromium: <0.01 mg/L to <0.001015 mg/L
- Cobalt: <0.005 mg/L to <0.000203 mg/L
- Lead: <0.005 mg/L to <0.000203 mg/L
- Molybdenum: <0.01 mg/L to <0.000203 mg/L
- Selenium: <0.01 mg/L to <0.001015 mg/L
- Thallium: <0.001 mg/L to <0.000203 mg/L

While this resulted in slight changes to the upper and lower confidence limits in some cases, the confidence interval exceedances were consistent with those from the Fall 2020 analysis. Both a tabular summary and graphical presentation of the confidence interval results follow this letter (Figure I). The only exceedance identified was for arsenic in well MW-12.

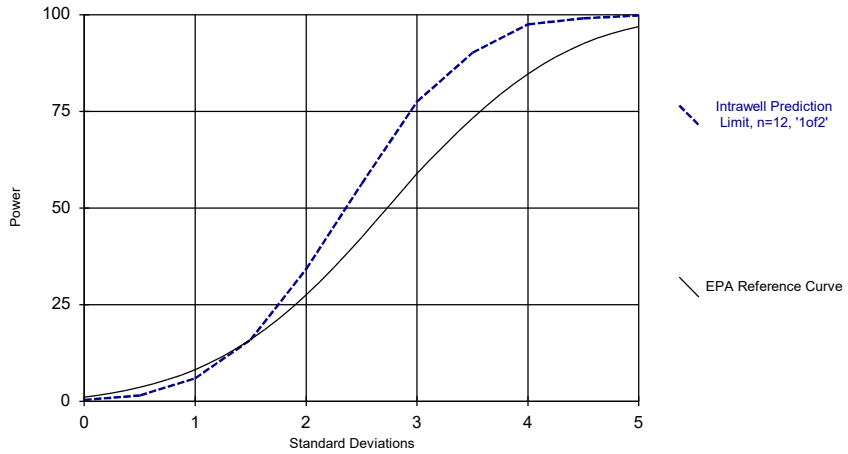
Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Gorgas Bottom Ash Landfill. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

Abdul Diane
Groundwater Analyst

Andrew T. Collins
Project Manager

Intrawell Power Curve



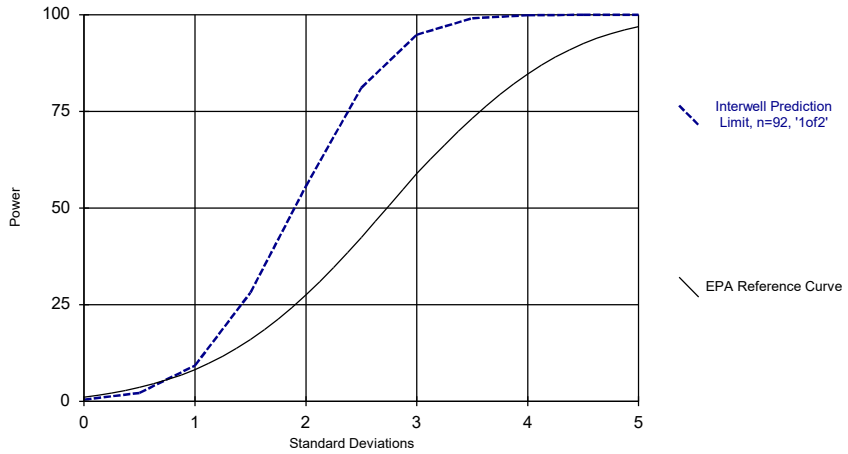
Kappa = 2.322, based on 5 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 5/18/2021 7:17 PM View: Appendix III

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Interwell Power Curve



Kappa = 1.808, based on 5 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 5/18/2021 7:18 PM View: Appendix III

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

100% Non-Detects: Appendix IV Downgradient

Analysis Run 5/20/2021 11:15 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Antimony (mg/L)
MW-11, MW-7, MW-8

Beryllium (mg/L)
MW-11, MW-12, MW-7, MW-8

Cadmium (mg/L)
MW-11, MW-12, MW-7, MW-8

Chromium (mg/L)
MW-10, MW-11, MW-12, MW-7, MW-8

Lead (mg/L)
MW-10, MW-7, MW-8

Mercury (mg/L)
MW-10, MW-11, MW-12, MW-7, MW-8

Molybdenum (mg/L)
MW-10

Selenium (mg/L)
MW-11, MW-12, MW-7, MW-8

Thallium (mg/L)
MW-10, MW-11, MW-12, MW-7, MW-8

Appendix III - Interwell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 7:48 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**MW-10**	**0.0596**	**n/a**	**2/23/2021**	**0.205**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-11**	**0.0596**	**n/a**	**2/24/2021**	**0.108**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-12**	**0.0596**	**n/a**	**2/24/2021**	**0.193**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-11**	**3.879**	**n/a**	**2/24/2021**	**113**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-12**	**3.879**	**n/a**	**2/24/2021**	**11.2**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-7**	**3.879**	**n/a**	**2/23/2021**	**7.85**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-8**	**3.879**	**n/a**	**2/23/2021**	**17.9**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
pH (SU)	**MW-10**	**6.35**	**3.77**	**2/23/2021**	**6.45**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-11**	**6.35**	**3.77**	**2/24/2021**	**6.67**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-7**	**6.35**	**3.77**	**2/23/2021**	**6.7**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-8**	**6.35**	**3.77**	**2/23/2021**	**6.73**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**

Appendix III - Interwell Prediction Limits - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 7:48 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**MW-10**	**0.0596**	**n/a**	**2/23/2021**	**0.205**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-11**	**0.0596**	**n/a**	**2/24/2021**	**0.108**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-12**	**0.0596**	**n/a**	**2/24/2021**	**0.193**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	MW-7	0.0596	n/a	2/23/2021	0.0803J	No	92	n/a	n/a	18.48	n/a	n/a	0.0002288	NP Inter (normality) 1 of 2
Boron (mg/L)	MW-8	0.0596	n/a	2/23/2021	0.0731J	No	92	n/a	n/a	18.48	n/a	n/a	0.0002288	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-10	3.879	n/a	2/23/2021	3.63	No	92	1.292	0.1543	3.261	None	x^(1/3)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	**MW-11**	**3.879**	**n/a**	**2/24/2021**	**113**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-12**	**3.879**	**n/a**	**2/24/2021**	**11.2**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-7**	**3.879**	**n/a**	**2/23/2021**	**7.85**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-8**	**3.879**	**n/a**	**2/23/2021**	**17.9**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
pH (SU)	**MW-10**	**6.35**	**3.77**	**2/23/2021**	**6.45**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-11**	**6.35**	**3.77**	**2/24/2021**	**6.67**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	MW-12	6.35	3.77	2/24/2021	5.83	No	94	n/a	n/a	0	n/a	n/a	0.0004399	NP Inter (normality) 1 of 2
pH (SU)	**MW-7**	**6.35**	**3.77**	**2/23/2021**	**6.7**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-8**	**6.35**	**3.77**	**2/23/2021**	**6.73**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**

Appendix III - Intrawell Prediction Limits - All Results (No Significant)

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 7:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-1	243	n/a	2/22/2021	151	No	18	n/a	n/a	0	n/a	n/a	0.005373	NP Intra (normality) 1 of 2
Calcium (mg/L)	MW-10	303.2	n/a	2/23/2021	151	No	12	190.5	48.52	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-11	420	n/a	2/24/2021	325	No	12	381.8	16.45	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-12	406.2	n/a	2/24/2021	346	No	12	353.2	22.85	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-2	220.2	n/a	2/22/2021	178	No	18	173.9	22.02	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-3	420.4	n/a	2/22/2021	312	No	18	301.6	56.48	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-4	391.5	n/a	2/22/2021	271	No	18	311.2	38.16	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-7	348.5	n/a	2/23/2021	292	No	12	2.6e7	6944823	0	None	x^3	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-8	342.9	n/a	2/23/2021	306	No	12	304.5	16.53	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-1	0.2001	n/a	2/22/2021	0.082J	No	19	0.1261	0.03556	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-10	0.3673	n/a	2/23/2021	0.202	No	13	0.1782	0.08298	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-11	0.1538	n/a	2/24/2021	0.107	No	13	0.09315	0.02661	7.692	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-12	0.2219	n/a	2/24/2021	0.172	No	13	0.1188	0.04526	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.2613	n/a	2/22/2021	0.209	No	19	0.1404	0.05808	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-3	0.6621	n/a	2/22/2021	0.246	No	19	-1.063	0.3126	0	None	ln(x)	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-4	0.4354	n/a	2/22/2021	0.357	No	19	0.1114	0.03754	0	None	x^2	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-7	0.215	n/a	2/23/2021	0.2	No	13	0.1855	0.01295	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-8	0.235	n/a	2/23/2021	0.208	No	13	0.2142	0.009112	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-1	2100	n/a	2/22/2021	1400	No	18	n/a	n/a	0	n/a	n/a	0.005373	NP Intra (normality) 1 of 2
Sulfate (mg/L)	MW-10	1288	n/a	2/23/2021	747	No	12	826.3	198.7	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-11	2179	n/a	2/24/2021	1330	No	12	1728	194.2	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-12	2781	n/a	2/24/2021	2280	No	12	2252	227.8	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-2	1269	n/a	2/22/2021	864	No	18	1003	126.2	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	3230	n/a	2/22/2021	3040	No	18	2431	379.6	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3057	n/a	2/22/2021	2040	No	18	2566	233.5	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-7	1852	n/a	2/23/2021	1320	No	12	1356	213.5	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-8	2100	n/a	2/23/2021	1420	No	12	n/a	n/a	0	n/a	n/a	0.01077	NP Intra (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-1	2557	n/a	2/22/2021	2230	No	18	2183	178	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-10	2019	n/a	2/23/2021	1110	No	12	1392	270.1	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-11	3062	n/a	2/24/2021	2370	No	12	2728	144	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-12	4100	n/a	2/24/2021	3810	No	12	3428	289.1	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-2	2067	n/a	2/22/2021	1620	No	18	1640	202.8	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	4983	n/a	2/22/2021	4670	No	18	3661	628.6	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-4	4622	n/a	2/22/2021	3190	No	18	1.6e7	2719774	0	None	x^2	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-7	2658	n/a	2/23/2021	2320	No	12	6.3e16	3.0e16	0	None	x^5	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-8	2872	n/a	2/23/2021	2550	No	12	2593	120.2	0	None	No	0.001504	Param Intra 1 of 2

Trend Tests Summary Table - Prediction Limit Exceedances - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 8:39 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**MW-11**	**0.003801**	**77**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**MW-2 (bg)**	**0.004693**	**109**	**98**	**Yes**	**23**	**21.74**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-11**	**23.09**	**111**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-12**	**1.364**	**74**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**MW-11**	**0.05238**	**75**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**MW-8**	**0.05948**	**96**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Trend Tests Summary Table - Prediction Limit Exceedances - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 8:39 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW-1 (bg)	0.002566	76	98	No	23	26.09	n/a	n/a	0.01	NP
Boron (mg/L)	MW-10	-0.002309	-15	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-11**	**0.003801**	**77**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-12	0.01606	56	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-2 (bg)**	**0.004693**	**109**	**98**	**Yes**	**23**	**21.74**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-3 (bg)	0.002522	59	98	No	23	21.74	n/a	n/a	0.01	NP
Boron (mg/L)	MW-4 (bg)	0.0002715	11	98	No	23	4.348	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-1 (bg)	-0.01333	-10	-98	No	23	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**MW-11**	**23.09**	**111**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-12**	**1.364**	**74**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	MW-2 (bg)	0.01347	2	98	No	23	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-3 (bg)	0.04257	44	98	No	23	8.696	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-4 (bg)	-0.06663	-59	-98	No	23	4.348	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-7	-6.069	-21	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-8	-32.54	-46	-58	No	16	0	n/a	n/a	0.01	NP
pH (SU)	MW-1 (bg)	-0.01537	-79	-98	No	23	0	n/a	n/a	0.01	NP
pH (SU)	MW-10	0.01041	17	63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	**MW-11**	**0.05238**	**75**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	MW-2 (bg)	0.03796	83	98	No	23	0	n/a	n/a	0.01	NP
pH (SU)	MW-3 (bg)	-0.06383	-38	-105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-4 (bg)	0.0165	81	105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-7	0	-8	-63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	**MW-8**	**0.05948**	**96**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Upper Tolerance Limits - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 7/22/2020, 10:58 AM

Constituent	Upper Lim.	Lower Lim.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	80	n/a	n/a	92.5	n/a	n/a	0.01652	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	80	n/a	n/a	91.25	n/a	n/a	0.01652	NP Inter(NDs)
Barium (mg/L)	0.01527	n/a	80	-4.517	0.1705	0	None	ln(x)	0.05	Inter
Beryllium (mg/L)	0.0121	n/a	78	n/a	n/a	82.05	n/a	n/a	0.0183	NP Inter(NDs)
Cadmium (mg/L)	0.00598	n/a	78	n/a	n/a	50	n/a	n/a	0.0183	NP Inter(normal...
Chromium (mg/L)	0.0105	n/a	80	n/a	n/a	95	n/a	n/a	0.01652	NP Inter(NDs)
Cobalt (mg/L)	1.07	n/a	80	n/a	n/a	25	n/a	n/a	0.01652	NP Inter(normal...
Combined Radium 226 + 228 (pCi/L)	1.098	n/a	76	0.4542	0.3266	0	None	No	0.05	Inter
Fluoride (mg/L)	0.5302	n/a	84	0.4636	0.1353	0	None	sqrt(x)	0.05	Inter
Lead (mg/L)	0.00692	n/a	80	n/a	n/a	96.25	n/a	n/a	0.01652	NP Inter(NDs)
Lithium (mg/L)	0.419	n/a	80	n/a	n/a	0	n/a	n/a	0.01652	NP Inter(normal...
Mercury (mg/L)	0.0005	n/a	80	n/a	n/a	100	n/a	n/a	0.01652	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	80	n/a	n/a	100	n/a	n/a	0.01652	NP Inter(NDs)
Selenium (mg/L)	0.0158	n/a	79	n/a	n/a	67.09	n/a	n/a	0.01738	NP Inter(normal...
Thallium (mg/L)	0.001	n/a	80	n/a	n/a	96.25	n/a	n/a	0.01652	NP Inter(NDs)

GORGAS BOTTOM ASH LF GWPS			
Analyte	**Units**	**Background**	**GWPS**
Antimony	mg/L	0.003	0.006
Arsenic	mg/L	0.005	0.01
Barium	mg/L	0.01527	2
Beryllium	mg/L	0.0121	0.004
Cadmium	mg/L	0.00598	0.005
Chromium	mg/L	0.0105	0.1
Cobalt	mg/L	1.07	1.07
Combined Radium-226/228	pCi/L	1.098	5
Fluoride	mg/L	0.5302	4
Lead	mg/L	0.00692	0.015
Lithium	mg/L	0.419	0.419
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.01	0.1
Selenium	mg/L	0.0158	0.05
Thallium	mg/L	0.001	0.002

Notes:

1. mg/L - Milligrams per liter

2. pCi/L - Picocuries per liter

3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.

4. GWPS established during second semi-annual sampling event in 2019.

Appendix IV Confidence Intervals - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/20/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	**MW-12**	**0.05912**	**0.0402**	**0.01**	**Yes**	**8**	**0.04966**	**0.008923**	**0**	**None**	**No**	**0.01**	**Param.**

Appendix IV Confidence Intervals - All Results

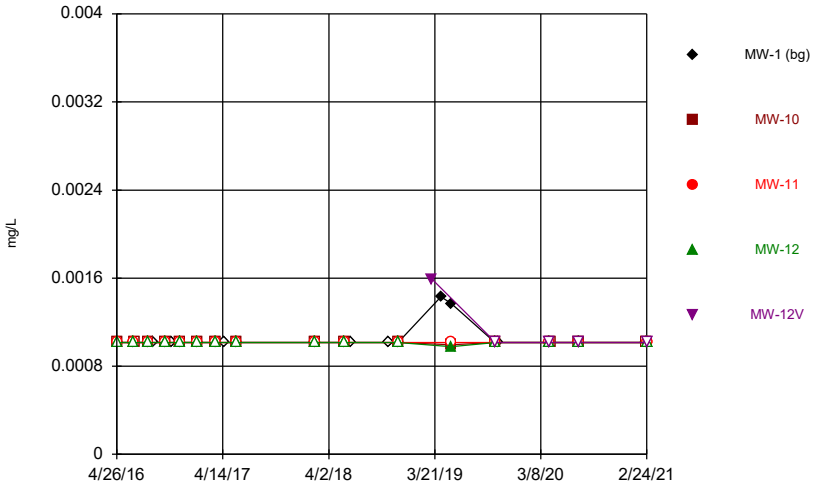
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/20/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha		Method
Antimony (mg/L)	MW-10	0.001015	0.000996	0.006	No	8	0.001013	0.000006718	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-12	0.001015	0.000977	0.006	No	8	0.00101	0.00001344	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-10	0.005	0.0013	0.01	No	8	0.00327	0.001852	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	MW-11	0.005	0.000834	0.01	No	8	0.003653	0.001878	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	**MW-12**	**0.05912**	**0.0402**	**0.01**	**Yes**	**8**	**0.04966**	**0.008923**	**0**	**None**	**No**	**0.01**	**Param.**
Arsenic (mg/L)	MW-7	0.001492	0.001323	0.01	No	8	0.001408	0.00007978	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-8	0.001915	0.001145	0.01	No	8	0.00153	0.0003631	0	None	No	0.01	Param.
Barium (mg/L)	MW-10	0.0245	0.0187	2	No	8	0.0203	0.001799	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-11	0.01534	0.01331	2	No	8	0.01433	0.0009558	0	None	No	0.01	Param.
Barium (mg/L)	MW-12	0.01273	0.01119	2	No	8	0.01196	0.0007269	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.01447	0.01163	2	No	8	0.01305	0.001338	0	None	No	0.01	Param.
Barium (mg/L)	MW-8	0.01418	0.01245	2	No	8	0.01331	0.0008167	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-10	0.002038	0.0008718	0.004	No	8	0.001455	0.0005502	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-10	0.001	0.000148	0.005	No	8	0.0008935	0.0003012	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-10	0.02234	0.01102	1.07	No	8	0.01668	0.005342	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-11	0.005	0.00026	1.07	No	8	0.004407	0.001676	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-12	0.0568	0.03885	1.07	No	8	0.04783	0.008472	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-7	0.005248	0.002382	1.07	No	8	0.004111	0.001367	25	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	MW-8	0.008443	0.004917	1.07	No	8	0.00668	0.001663	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-10	0.6002	0.1998	5	No	8	0.4	0.1889	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-11	1.375	0.4627	5	No	8	0.9188	0.4302	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-12	1.212	0.7273	5	No	8	0.9695	0.2285	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-7	0.7035	0.1893	5	No	8	0.4464	0.2426	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-8	0.9437	0.2933	5	No	8	0.6083	0.349	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-10	0.2694	0.1574	4	No	8	0.2134	0.05283	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-11	0.1114	0.09471	4	No	8	0.1031	0.007876	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-12	0.221	0.1333	4	No	8	0.1771	0.04138	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-7	0.1966	0.1654	4	No	8	0.181	0.01474	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-8	0.21	0.189	4	No	8	0.2009	0.009433	0	None	No	0.004	NP (normality)
Lead (mg/L)	MW-11	0.00145	0.000203	0.015	No	8	0.0003589	0.0004409	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-12	0.000203	0.000178	0.015	No	8	0.0001999	0.000008839	87.5	None	No	0.004	NP (NDs)
Lithium (mg/L)	MW-10	0.2424	0.2008	0.419	No	8	0.2216	0.01965	0	None	No	0.01	Param.
Lithium (mg/L)	MW-11	0.2882	0.2383	0.419	No	8	0.2633	0.02351	0	None	No	0.01	Param.
Lithium (mg/L)	MW-12	0.09516	0.07404	0.419	No	8	0.0846	0.009963	0	None	No	0.01	Param.
Lithium (mg/L)	MW-7	0.131	0.103	0.419	No	8	0.1236	0.009899	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-8	0.1854	0.1516	0.419	No	8	0.1685	0.01594	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-11	0.01	0.00148	0.1	No	8	0.008935	0.003012	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-12	0.01	0.000088	0.1	No	8	0.008761	0.003504	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-7	0.01	0.00107	0.1	No	8	0.008884	0.003157	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-8	0.0129	0.01	0.1	No	8	0.01036	0.001025	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-10	0.01	0.00217	0.05	No	8	0.006314	0.003946	50	None	No	0.004	NP (normality)

FIGURE A.

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

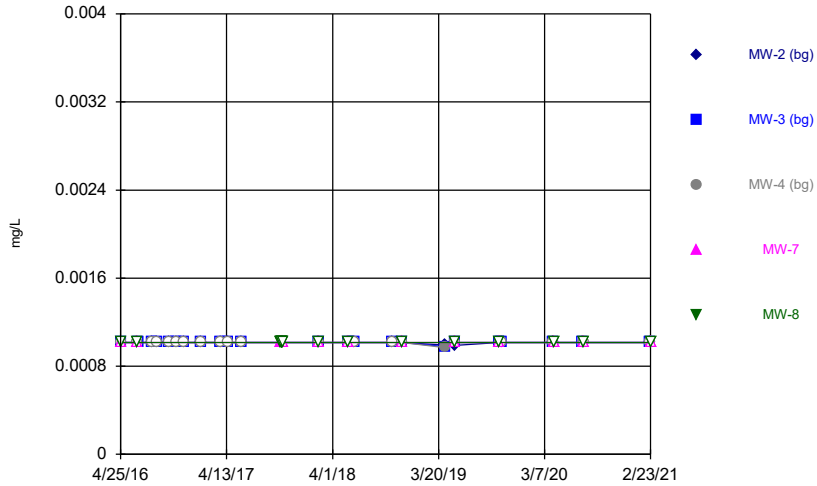
Time Series



Constituent: Antimony Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

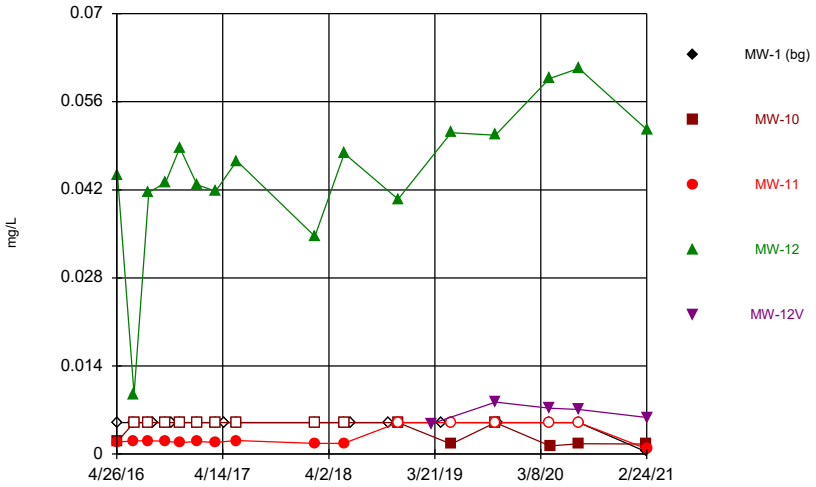
Time Series



Constituent: Antimony Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

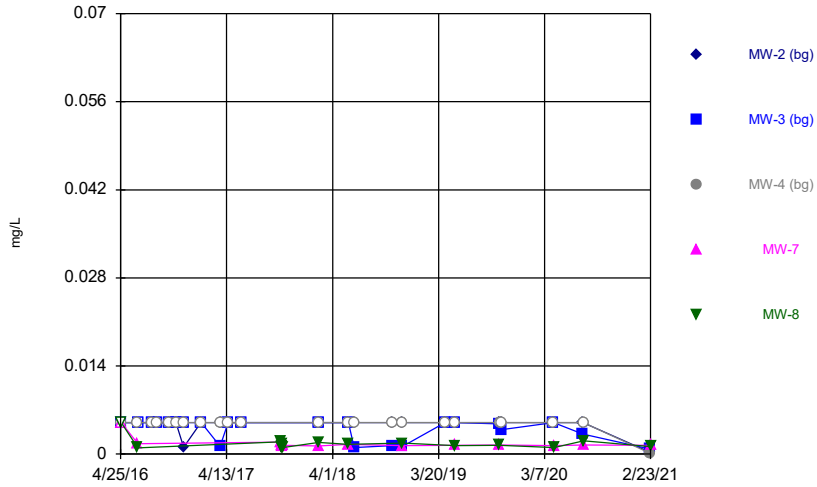
Time Series



Constituent: Arsenic Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

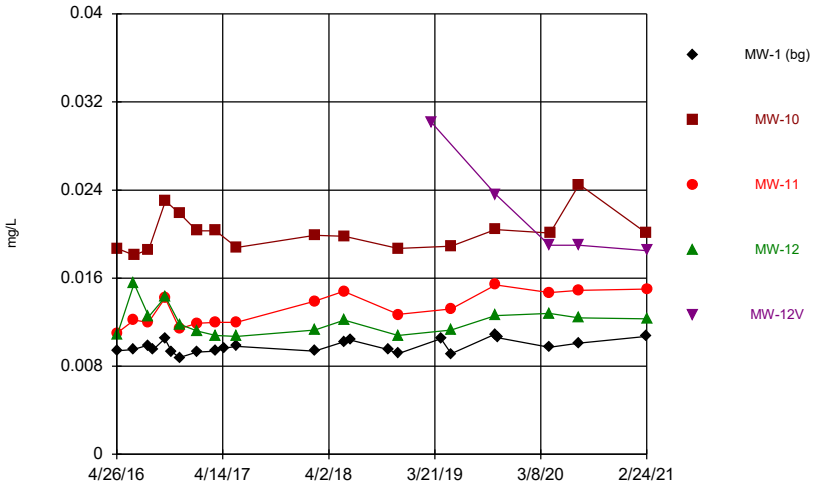
Time Series



Constituent: Arsenic Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

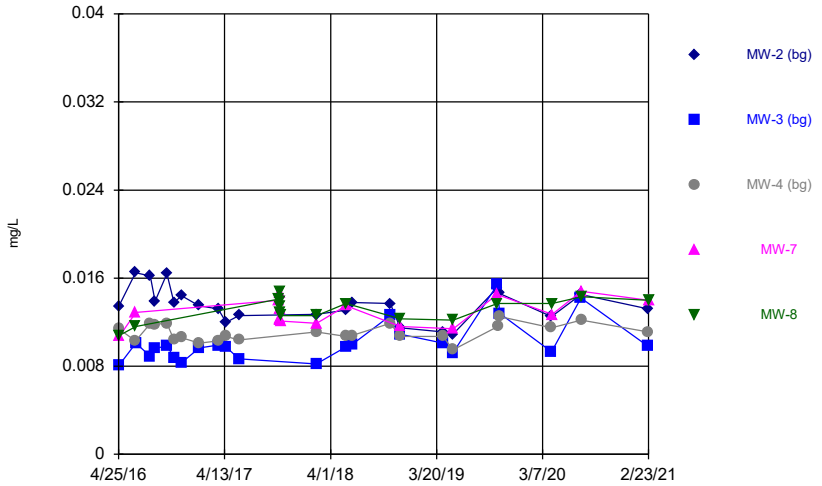
Time Series



Constituent: Barium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

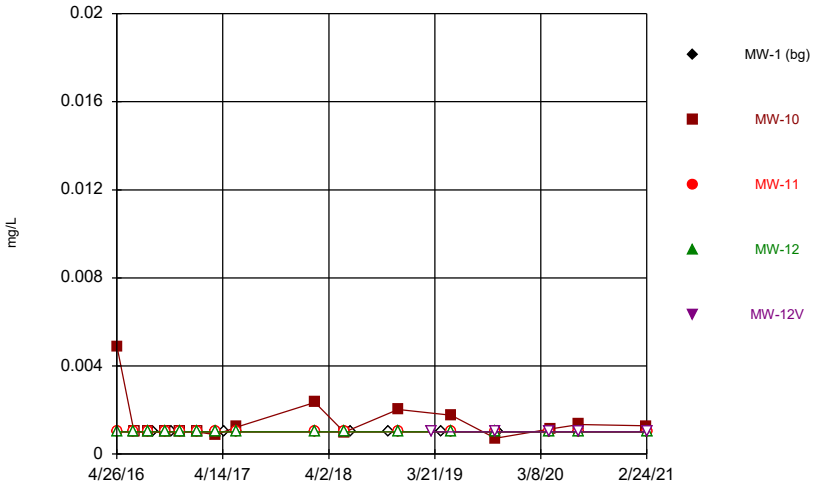
Time Series



Constituent: Barium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

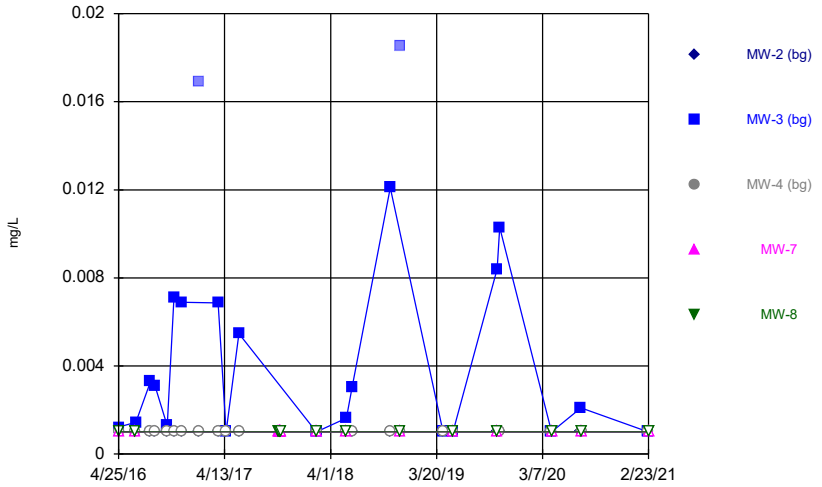
Time Series



Constituent: Beryllium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

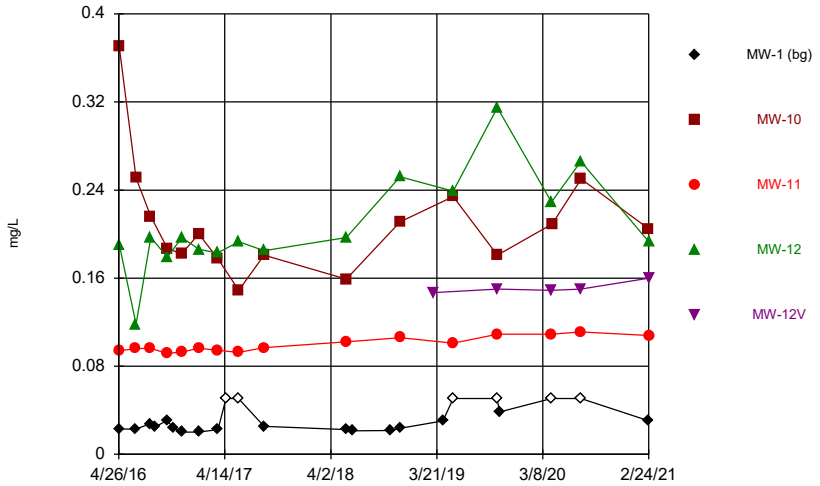
Time Series



Constituent: Beryllium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

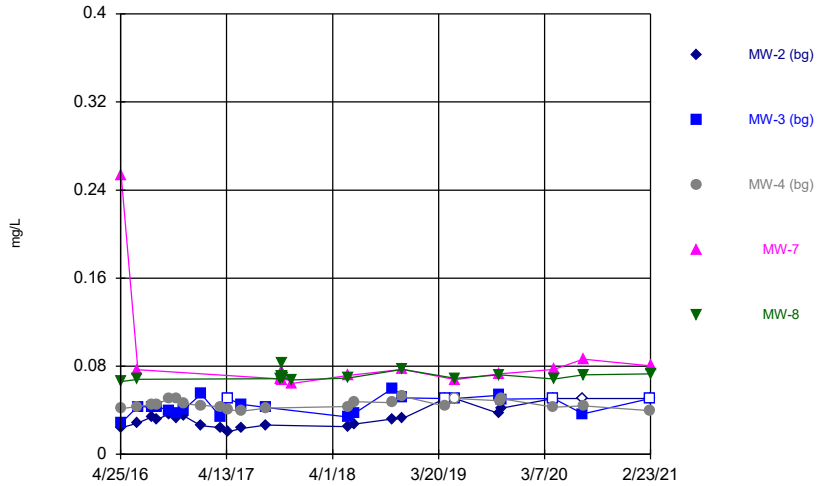
Time Series



Constituent: Boron Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

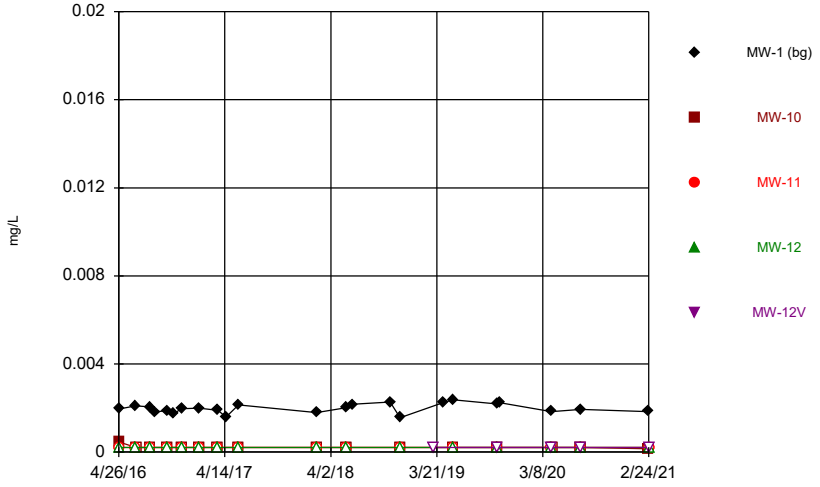
Time Series



Constituent: Boron Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

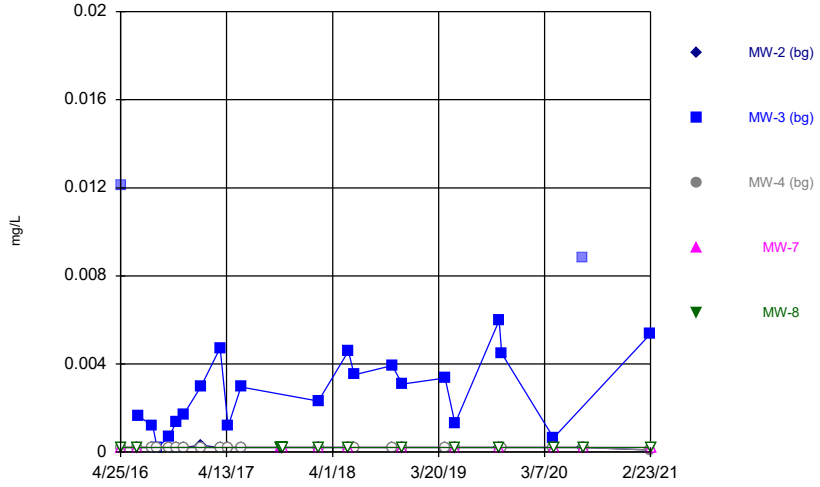
Time Series



Constituent: Cadmium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

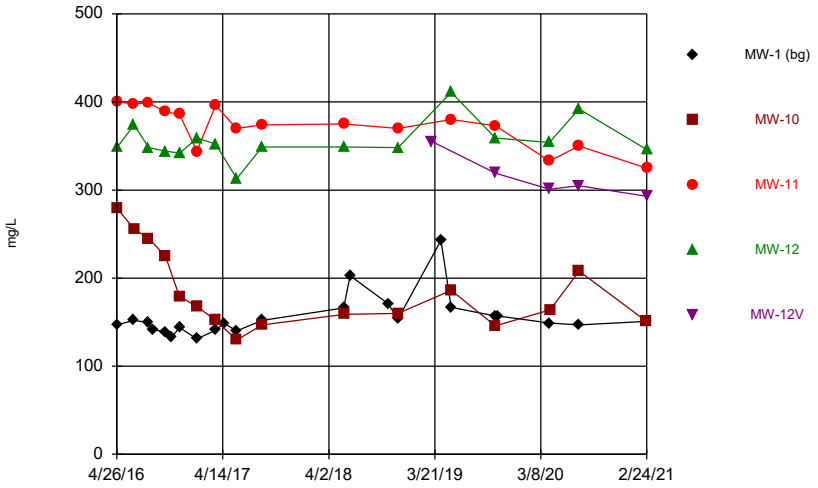
Time Series



Constituent: Cadmium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

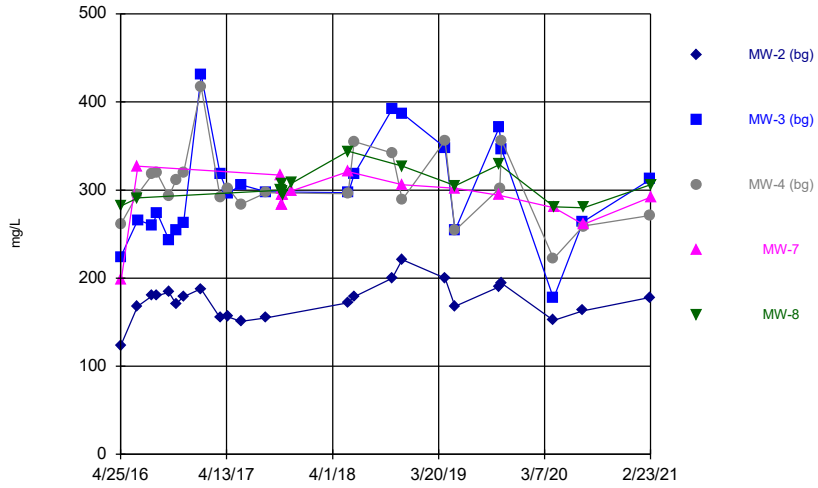
Time Series



Constituent: Calcium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

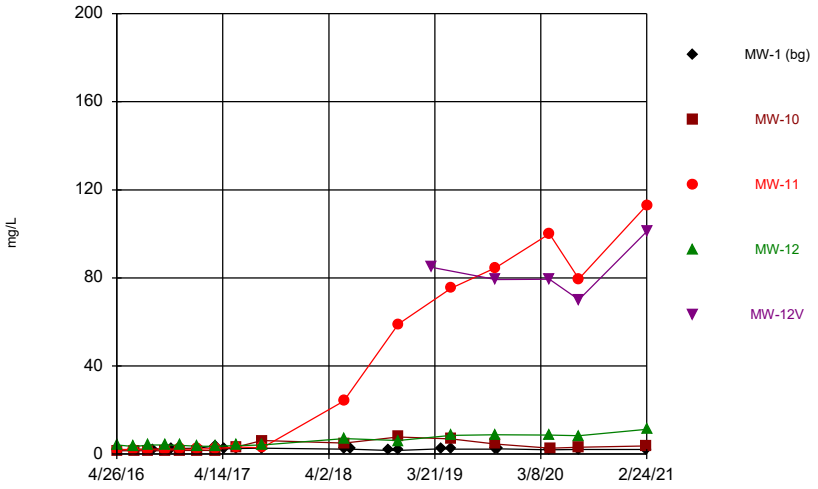
Time Series



Constituent: Calcium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

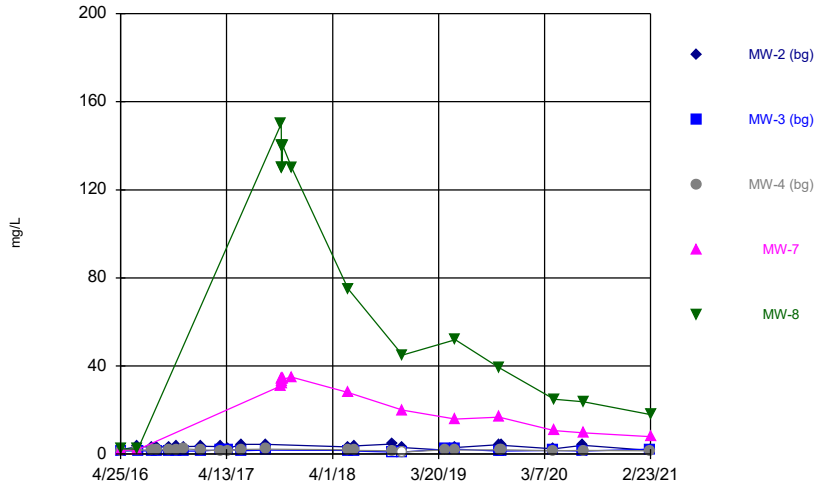
Time Series



Constituent: Chloride Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

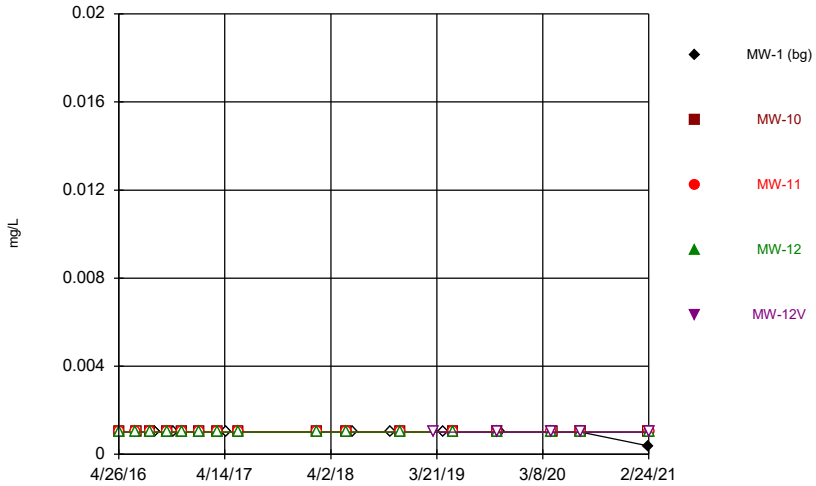
Time Series



Constituent: Chloride Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

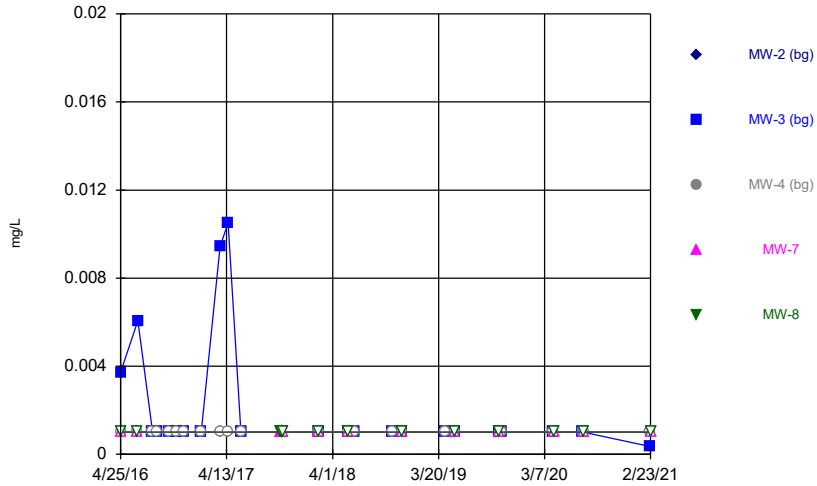
Time Series



Constituent: Chromium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

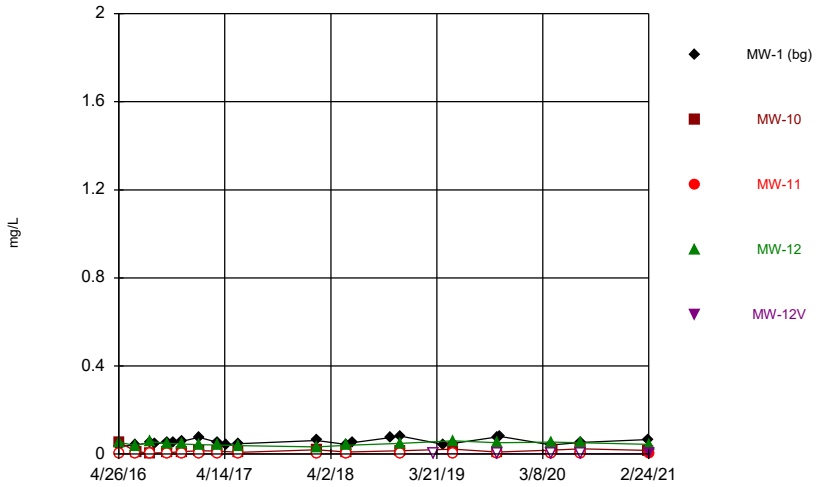
Time Series



Constituent: Chromium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

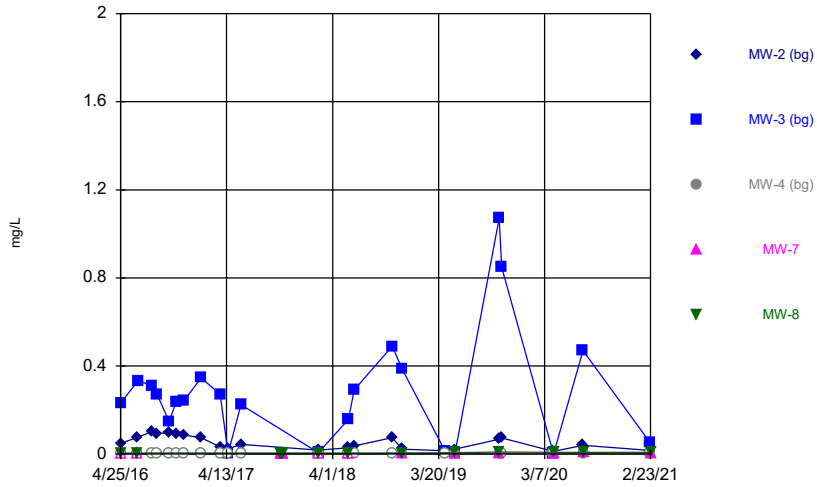
Time Series



Constituent: Cobalt Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

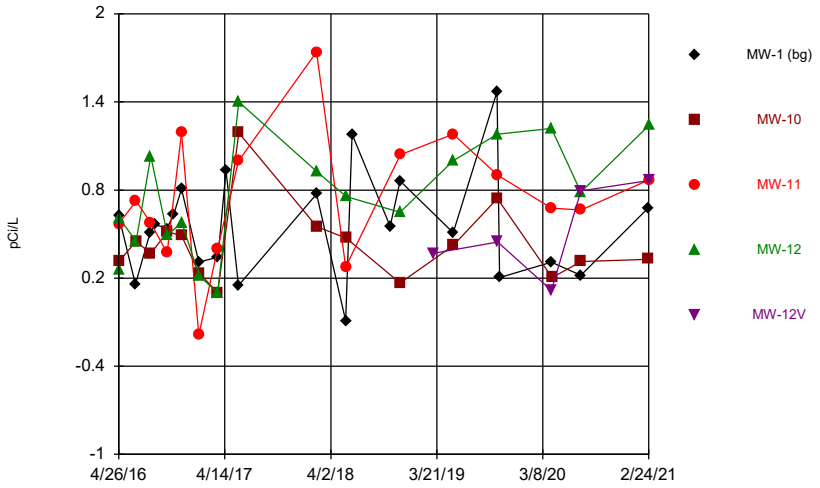
Time Series



Constituent: Cobalt Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

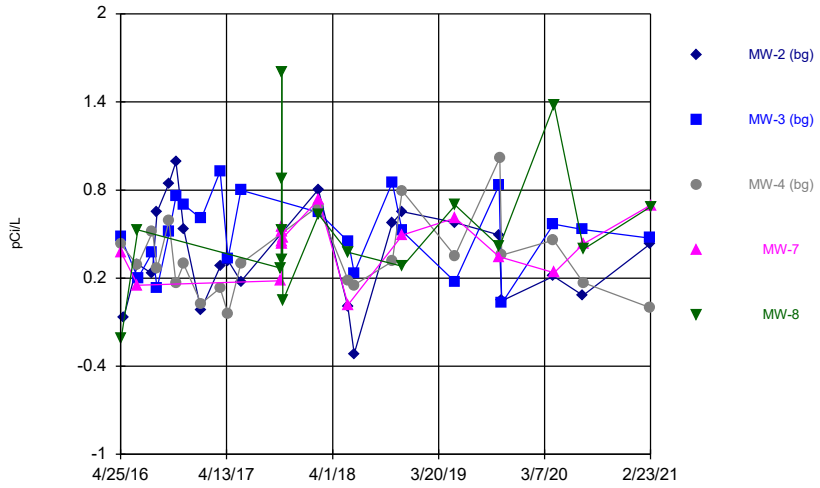
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

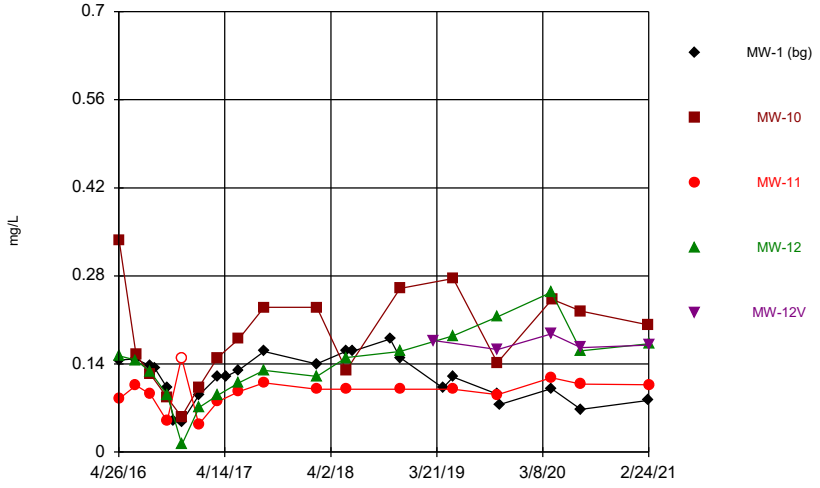
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

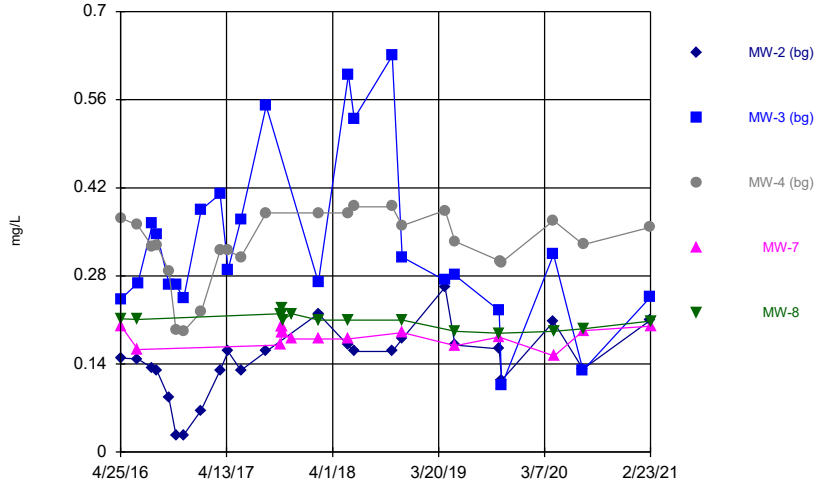
Time Series



Constituent: Fluoride Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

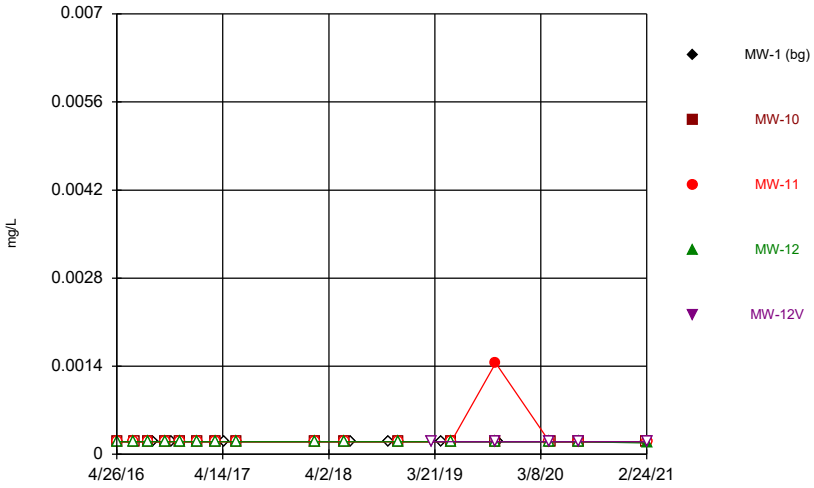
Time Series



Constituent: Fluoride Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

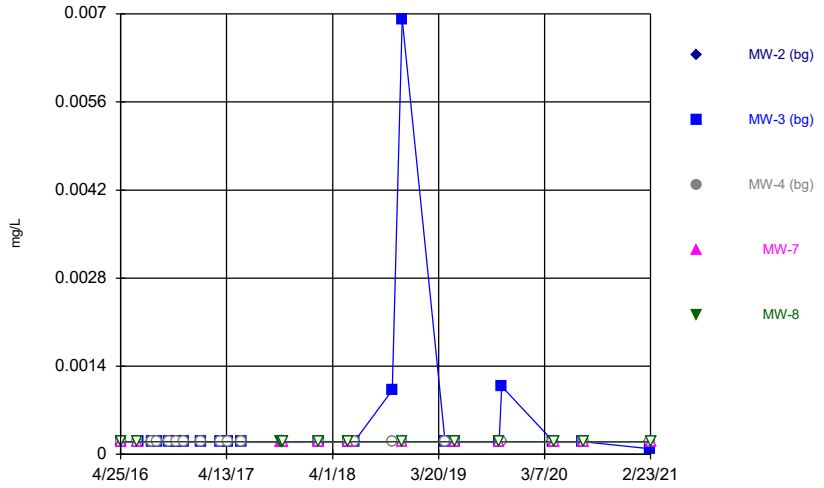
Time Series



Constituent: Lead Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

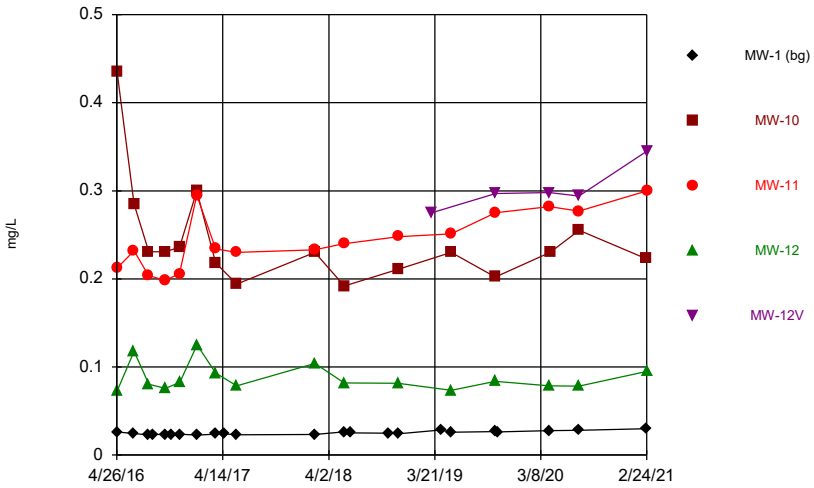
Time Series



Constituent: Lead Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

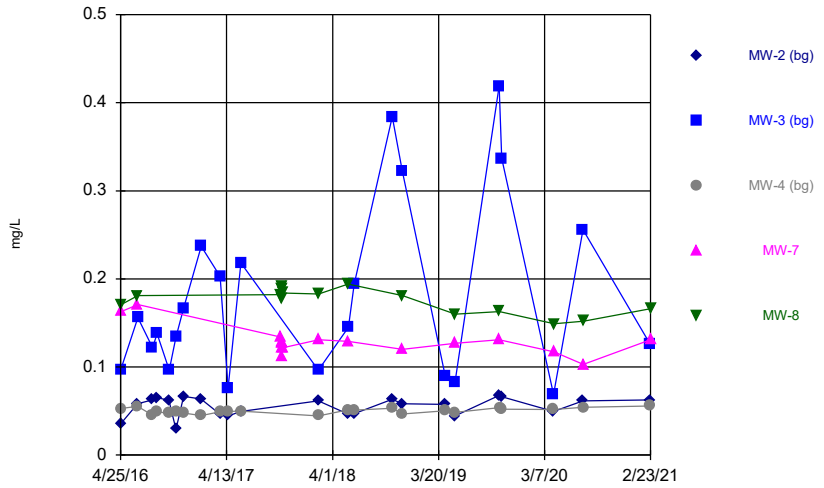
Time Series



Constituent: Lithium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

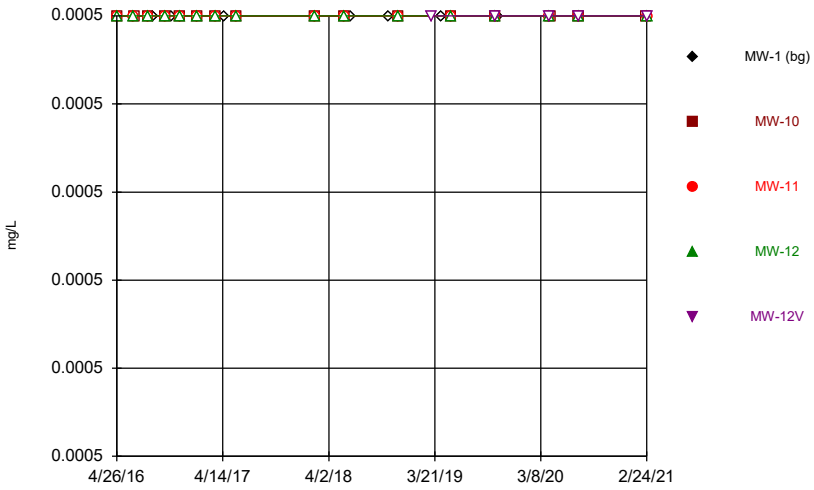
Time Series



Constituent: Lithium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

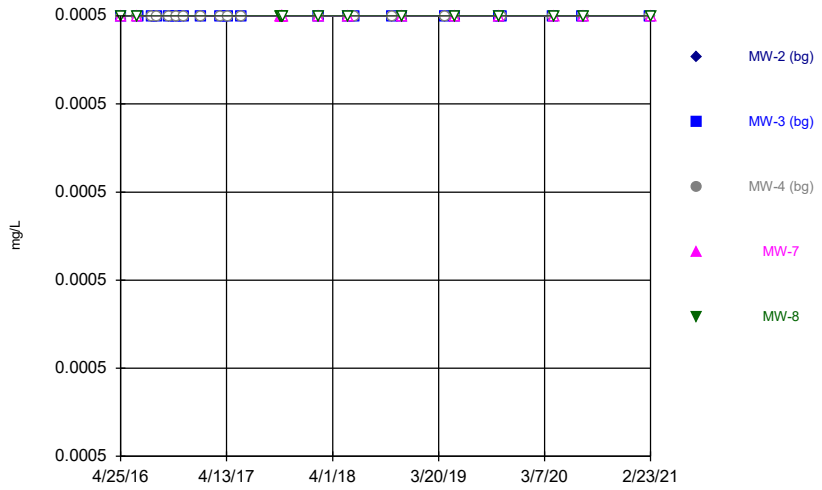
Time Series



Constituent: Mercury Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

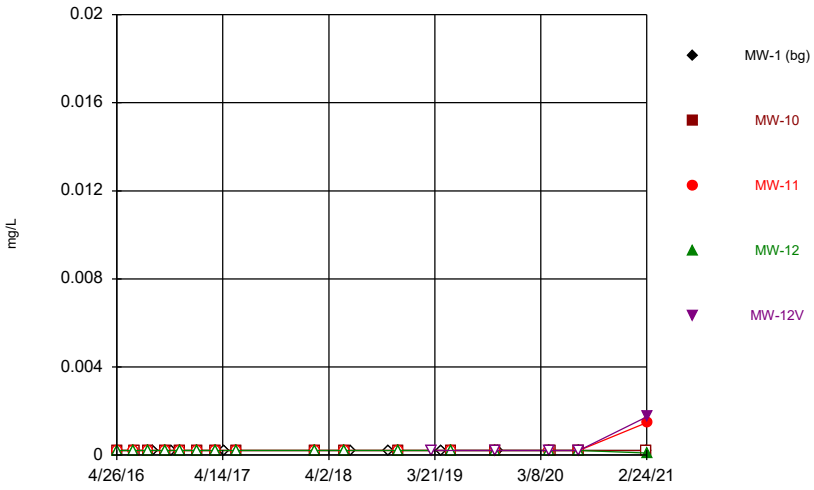
Time Series



Constituent: Mercury Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

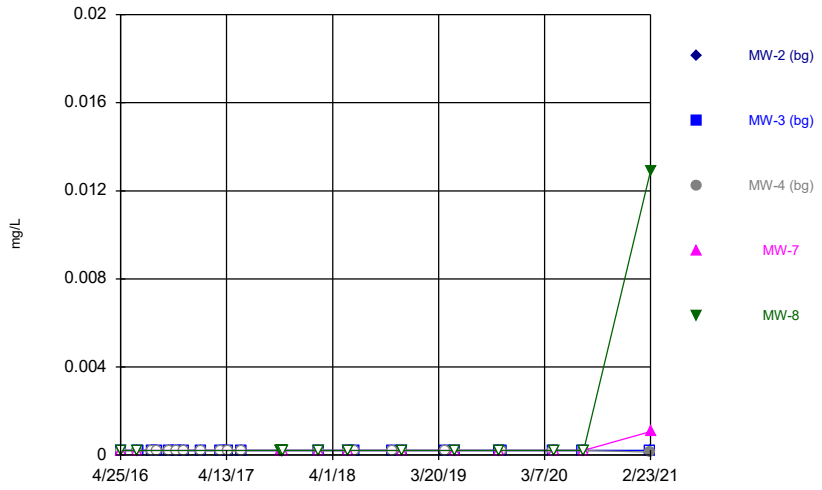
Time Series



Constituent: Molybdenum Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

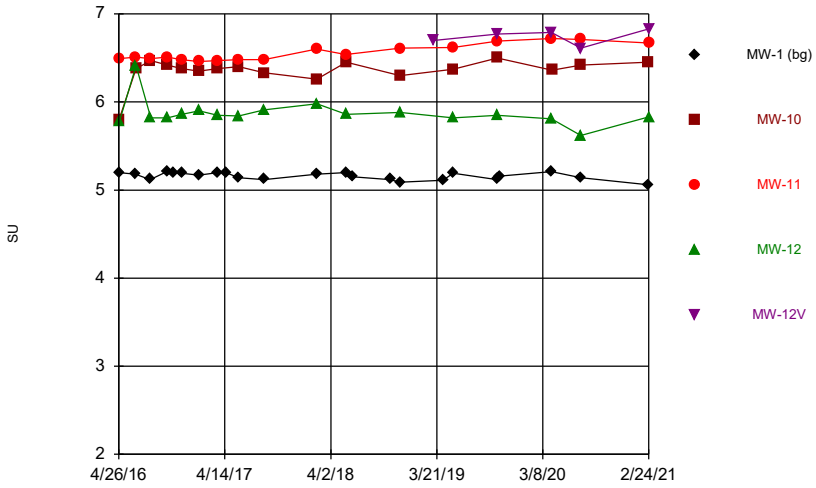
Time Series



Constituent: Molybdenum Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

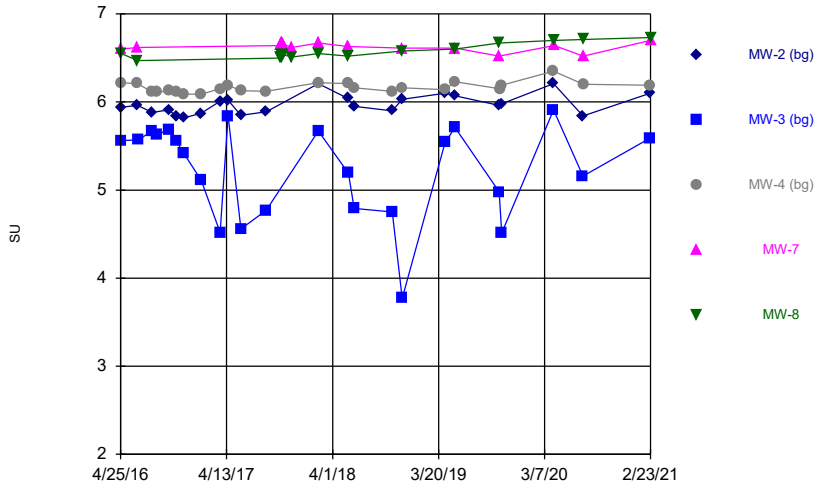
Time Series



Constituent: pH Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

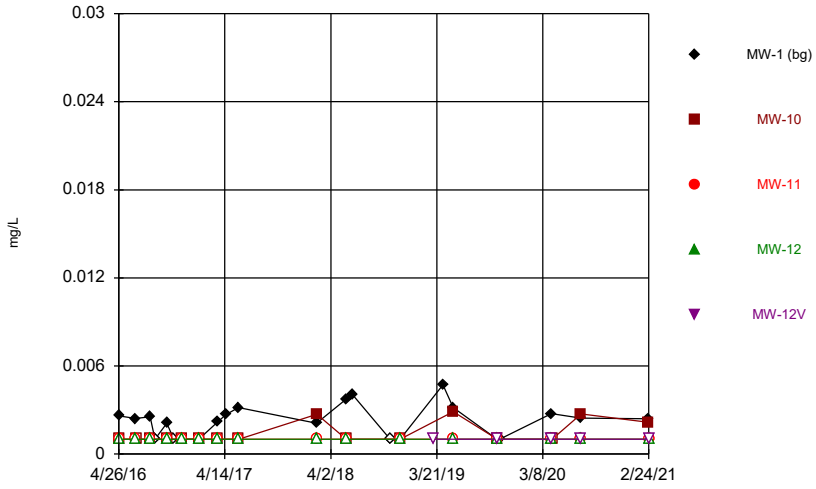
Time Series



Constituent: pH Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

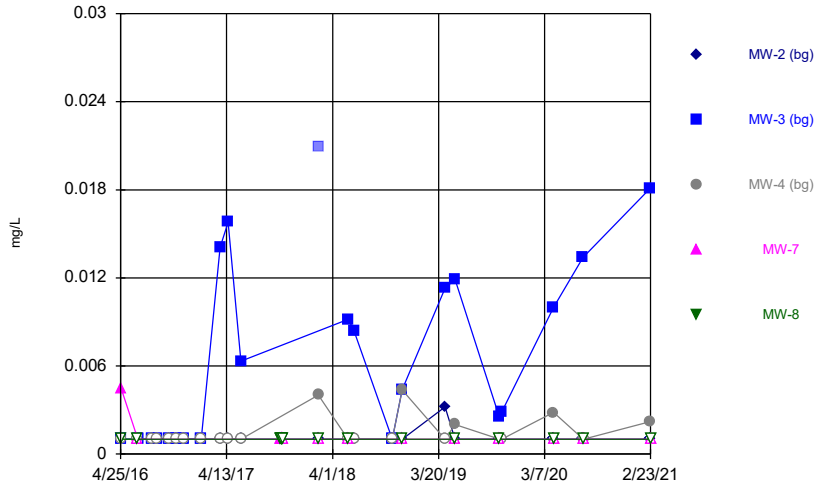
Time Series



Constituent: Selenium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

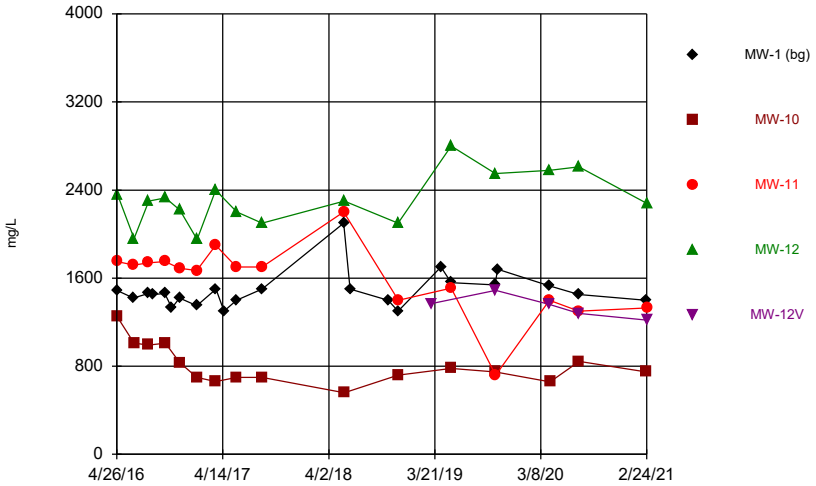
Time Series



Constituent: Selenium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

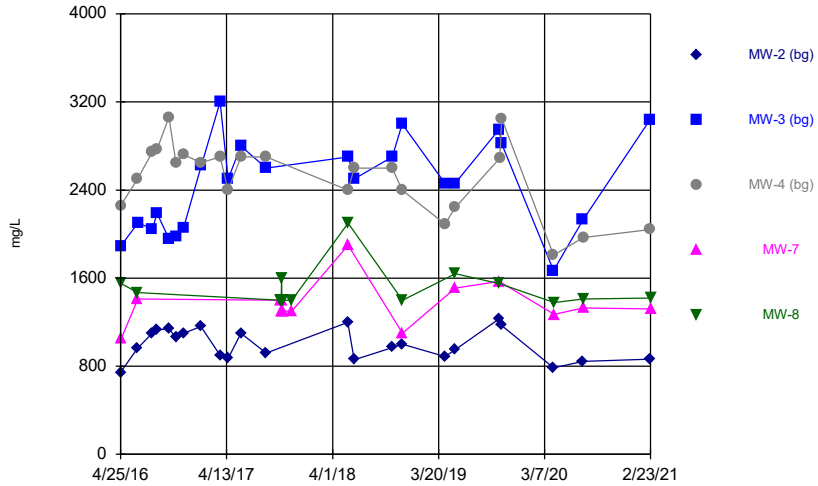
Time Series



Constituent: Sulfate Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

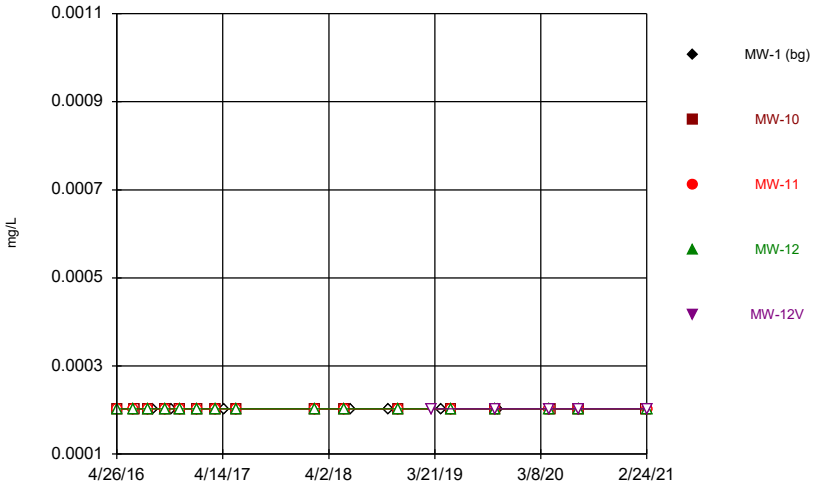
Time Series



Constituent: Sulfate Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

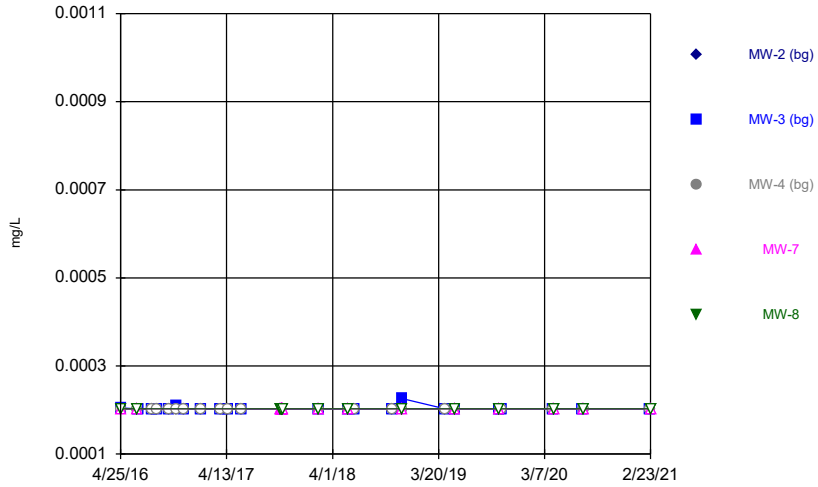
Time Series



Constituent: Thallium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

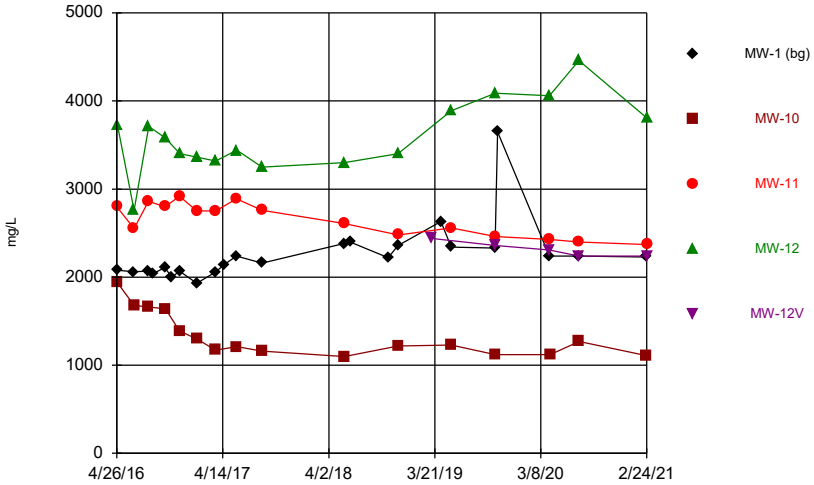
Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

Time Series



Constituent: Thallium Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

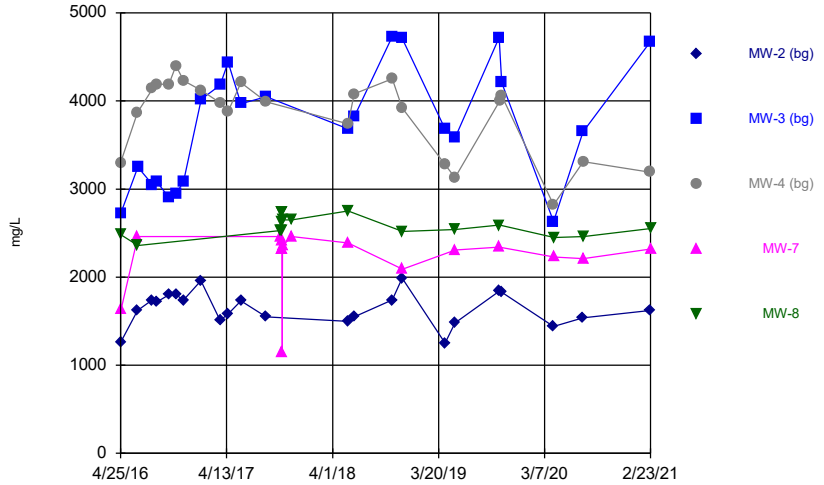
Time Series



Constituent: Total Dissolved Solids Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Time Series



Constituent: Total Dissolved Solids Analysis Run 5/18/2021 5:21 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/18/2021 5:50 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.001015		<0.001015		
4/27/2016		<0.001015			
4/28/2016				<0.001015	
6/20/2016	<0.001015				
6/22/2016			<0.001015	<0.001015	
6/23/2016		<0.001015			
8/8/2016	<0.001015				
8/9/2016			<0.001015		
8/10/2016		<0.001015		<0.001015	
8/24/2016	<0.001015				
10/3/2016	<0.001015				
10/4/2016			<0.001015		
10/5/2016		<0.001015		<0.001015	
10/26/2016	<0.001015				
11/21/2016	<0.001015	<0.001015	<0.001015		
11/22/2016				<0.001015	
1/17/2017	<0.001015	<0.001015	<0.001015		
1/18/2017				<0.001015	
3/21/2017		<0.001015	<0.001015	<0.001015	
3/22/2017	<0.001015				
4/18/2017	<0.001015				
5/30/2017	<0.001015		<0.001015		
5/31/2017		<0.001015		<0.001015	
2/13/2018	<0.001015				
2/14/2018			<0.001015		
2/15/2018		<0.001015		<0.001015	
5/22/2018	<0.001015		<0.001015		
5/24/2018		<0.001015		<0.001015	
6/12/2018	<0.001015				
10/17/2018	<0.001015				
11/19/2018	<0.001015	<0.001015		<0.001015	
11/20/2018			<0.001015		
3/12/2019					0.00159 (J)
4/10/2019	0.00143 (J)				
5/14/2019	0.00137 (J)				
5/15/2019		0.000996 (J)	<0.001015	0.000977 (J)	
10/8/2019	<0.001015				
10/9/2019		<0.001015		<0.001015	
10/10/2019			<0.001015		<0.001015
10/16/2019	<0.001015				
4/6/2020	<0.001015		<0.001015	<0.001015	<0.001015
4/8/2020		<0.001015			
7/13/2020	<0.001015		<0.001015	<0.001015	<0.001015
7/14/2020		<0.001015			
2/22/2021	<0.001015				
2/23/2021		<0.001015			
2/24/2021			<0.001015	<0.001015	<0.001015

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/18/2021 5:50 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.001015	<0.001015	<0.001015		
4/27/2016				<0.001015	<0.001015
6/20/2016	<0.001015		<0.001015		
6/21/2016				<0.001015	<0.001015
6/22/2016		<0.001015			
8/8/2016	<0.001015				
8/9/2016		<0.001015	<0.001015		
8/24/2016	<0.001015	<0.001015	<0.001015		
10/3/2016	<0.001015		<0.001015		
10/4/2016		<0.001015			
10/26/2016	<0.001015	<0.001015	<0.001015		
11/21/2016	<0.001015	<0.001015	<0.001015		
1/17/2017	<0.001015				
1/18/2017		<0.001015	<0.001015		
3/22/2017	<0.001015	<0.001015	<0.001015		
4/18/2017	<0.001015	<0.001015	<0.001015		
5/31/2017	<0.001015	<0.001015	<0.001015		
10/12/2017				<0.001015	<0.001015
10/13/2017				<0.001015	<0.001015
10/14/2017				<0.001015	<0.001015
10/15/2017				<0.001015	<0.001015
10/16/2017				<0.001015	<0.001015
10/17/2017				<0.001015	<0.001015
2/13/2018	<0.001015	<0.001015	<0.001015		
2/14/2018				<0.001015	<0.001015
5/22/2018	<0.001015				
5/23/2018			<0.001015	<0.001015	<0.001015
5/24/2018		<0.001015			
6/12/2018	<0.001015	<0.001015	<0.001015		
10/17/2018	<0.001015	<0.001015	<0.001015		
11/19/2018	<0.001015	<0.001015	<0.001015		
11/20/2018				<0.001015	<0.001015
4/10/2019	0.000993 (J)	0.000978 (J)	0.00097 (J)		
5/14/2019	0.000989 (J)	<0.001015	<0.001015		
5/15/2019				<0.001015	<0.001015
10/8/2019	<0.001015	<0.001015		<0.001015	
10/9/2019					<0.001015
10/10/2019			<0.001015		
10/16/2019	<0.001015	<0.001015	<0.001015		
4/6/2020	<0.001015	<0.001015	<0.001015		
4/8/2020				<0.001015	<0.001015
7/13/2020	<0.001015	<0.001015			
7/14/2020			<0.001015	<0.001015	
7/15/2020					<0.001015
2/22/2021	<0.001015	<0.001015	<0.001015		
2/23/2021				<0.001015	<0.001015

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/18/2021 5:50 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.005		0.00189 (J)		
4/27/2016		0.00196 (J)			
4/28/2016				0.0444	
6/20/2016	<0.005				
6/22/2016			0.00213 (J)	0.00953	
6/23/2016		<0.005			
8/8/2016	<0.005				
8/9/2016			0.0021 (J)		
8/10/2016		<0.005		0.0416	
8/24/2016	<0.005				
10/3/2016	<0.005				
10/4/2016			0.00206 (J)		
10/5/2016		<0.005		0.0431	
10/26/2016	<0.005				
11/21/2016	<0.005	<0.005	0.00182 (J)		
11/22/2016				0.0487	
1/17/2017	<0.005	<0.005	0.00201 (J)		
1/18/2017				0.0428	
3/21/2017		<0.005	0.00183 (J)	0.0418	
3/22/2017	<0.005				
4/18/2017	<0.005				
5/30/2017	<0.005		0.00214 (J)		
5/31/2017		<0.005		0.0466	
2/13/2018	<0.005				
2/14/2018			0.00171 (J)		
2/15/2018		<0.005		0.0346	
5/22/2018	<0.005		0.00168 (J)		
5/24/2018		<0.005		0.0478	
6/12/2018	<0.005				
10/17/2018	<0.005				
11/19/2018	<0.005	<0.005		0.0405	
11/20/2018			<0.005		
3/12/2019					0.00486 (J)
4/10/2019	<0.005				
5/14/2019	<0.005				
5/15/2019		0.00162 (J)	<0.005	0.0511	
10/8/2019	<0.005				
10/9/2019		<0.005		0.0507	
10/10/2019			<0.005		0.00827
10/16/2019	<0.005				
4/6/2020	<0.005		<0.005	0.0597	0.00731
4/8/2020		0.0013 (J)			
7/13/2020	<0.005		<0.005	0.0613	0.0071
7/14/2020		0.00164 (J)			
2/22/2021	0.000403				
2/23/2021		0.0016			
2/24/2021			0.000834	0.0516	0.00584

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/18/2021 5:50 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.005	<0.005	<0.005		
4/27/2016				<0.005	<0.005
6/20/2016	<0.005		<0.005		
6/21/2016				0.00165 (J)	0.00101 (J)
6/22/2016		<0.005			
8/8/2016	<0.005				
8/9/2016		<0.005	<0.005		
8/24/2016	<0.005	<0.005	<0.005		
10/3/2016	<0.005		<0.005		
10/4/2016		<0.005			
10/26/2016	<0.005	<0.005	<0.005		
11/21/2016	0.00111 (J)	<0.005	<0.005		
1/17/2017	<0.005				
1/18/2017		<0.005	<0.005		
3/22/2017	<0.005	0.00122 (J)	<0.005		
4/18/2017	<0.005	<0.005	<0.005		
5/31/2017	<0.005	<0.005	<0.005		
10/12/2017				0.00188 (J)	0.00197 (J)
10/13/2017				0.00181 (J)	0.00159 (J)
10/14/2017				0.00127 (J)	0.00126 (J)
10/15/2017				0.00144 (J)	0.00106 (J)
10/16/2017				0.00139 (J)	0.00106 (J)
10/17/2017				0.00138 (J)	0.00103 (J)
2/13/2018	<0.005	<0.005	<0.005		
2/14/2018				0.00131 (J)	0.00185 (J)
5/22/2018	<0.005				
5/23/2018			<0.005	0.00155 (J)	0.00157 (J)
5/24/2018		<0.005			
6/12/2018	<0.005	0.00103 (J)	<0.005		
10/17/2018	<0.005	0.00133 (J)	<0.005		
11/19/2018	<0.005	0.0012 (J)	<0.005		
11/20/2018				0.00133 (J)	0.00173 (J)
4/10/2019	<0.005	<0.005	<0.005		
5/14/2019	<0.005	<0.005	<0.005		
5/15/2019				0.00138 (J)	0.00136 (J)
10/8/2019	<0.005	0.0048 (J)		0.00145 (J)	
10/9/2019					0.00142 (J)
10/10/2019			<0.005		
10/16/2019	<0.005	0.00389 (J)	<0.005		
4/6/2020	<0.005	<0.005	<0.005		
4/8/2020				0.00136 (J)	0.00102 (J)
7/13/2020	<0.005	0.00316 (J)			
7/14/2020			<0.005	0.00147 (J)	
7/15/2020					0.00212 (J)
2/22/2021	0.000295	0.000789	0.000125 (J)		
2/23/2021				0.00141	0.00117

Time Series

Constituent: Barium (mg/L) Analysis Run 5/18/2021 5:50 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.00941 (J)		0.011		
4/27/2016		0.0187			
4/28/2016				0.0109	
6/20/2016	0.00951 (J)				
6/22/2016			0.0122	0.0155	
6/23/2016		0.0181			
8/8/2016	0.00991 (J)				
8/9/2016			0.012		
8/10/2016		0.0186		0.0125	
8/24/2016	0.00949 (J)				
10/3/2016	0.0105				
10/4/2016			0.0142		
10/5/2016		0.023		0.0143	
10/26/2016	0.00931 (J)				
11/21/2016	0.00879 (J)	0.0219	0.0114		
11/22/2016				0.0118	
1/17/2017	0.00929 (J)	0.0203	0.0119		
1/18/2017				0.0112	
3/21/2017		0.0203	0.012	0.0108	
3/22/2017	0.00938 (J)				
4/18/2017	0.00964 (J)				
5/30/2017	0.00982 (J)		0.012		
5/31/2017		0.0188		0.0107	
2/13/2018	0.00937 (J)				
2/14/2018			0.0139		
2/15/2018		0.0199		0.0113	
5/22/2018	0.0102		0.0148		
5/24/2018		0.0198		0.0122	
6/12/2018	0.0104				
10/17/2018	0.00952 (J)				
11/19/2018	0.00915 (J)	0.0187		0.0108	
11/20/2018			0.0127		
3/12/2019					0.0301
4/10/2019	0.0105				
5/14/2019	0.00913 (J)				
5/15/2019		0.0189	0.0132	0.0113	
10/8/2019	0.0109				
10/9/2019		0.0204		0.0126	
10/10/2019			0.0154		0.0236
10/16/2019	0.0106				
4/6/2020	0.00971 (J)		0.0147	0.0128	0.019
4/8/2020		0.0201			
7/13/2020	0.0101		0.0149	0.0124	0.019
7/14/2020		0.0245			
2/22/2021	0.0107				
2/23/2021		0.0201			
2/24/2021			0.015	0.0123	0.0185

Time Series

Constituent: Barium (mg/L) Analysis Run 5/18/2021 5:50 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	0.0134	0.00803 (J)	0.0114		
4/27/2016				0.0107	0.0108
6/20/2016	0.0165		0.0103		
6/21/2016				0.0129	0.0116
6/22/2016		0.0101			
8/8/2016	0.0162				
8/9/2016		0.00889 (J)	0.0119		
8/24/2016	0.0139	0.00962 (J)	0.0118		
10/3/2016	0.0164		0.0119		
10/4/2016		0.00984 (J)			
10/26/2016	0.0138	0.00878 (J)	0.0104		
11/21/2016	0.0144	0.00833 (J)	0.0106		
1/17/2017	0.0135				
1/18/2017		0.00966 (J)	0.0101		
3/22/2017	0.0132	0.00991 (J)	0.0103		
4/18/2017	0.012	0.00976 (J)	0.0107		
5/31/2017	0.0126	0.00866 (J)	0.0104		
10/12/2017				0.014	0.0141
10/13/2017				0.0147	0.0148
10/14/2017				0.0123	0.0134
10/15/2017				0.0132	0.0139
10/16/2017				0.0122	0.0129
10/17/2017				0.0121	0.0126
2/13/2018	0.0127	0.00821 (J)	0.0111		
2/14/2018				0.0119	0.0126
5/22/2018	0.0131				
5/23/2018			0.0107	0.0135	0.0137
5/24/2018		0.00977 (J)			
6/12/2018	0.0138	0.00997 (J)	0.0108		
10/17/2018	0.0137	0.0126	0.0119		
11/19/2018	0.0115	0.0109	0.0107		
11/20/2018				0.0116	0.0123
4/10/2019	0.0111	0.0101	0.0107		
5/14/2019	0.0109	0.00922 (J)	0.00949 (J)		
5/15/2019				0.0114	0.0122
10/8/2019	0.0151	0.0154		0.0145	
10/9/2019					0.0137
10/10/2019			0.0116		
10/16/2019	0.0146	0.0128	0.0125		
4/6/2020	0.0125	0.00931 (J)	0.0115		
4/8/2020				0.0127	0.0137
7/13/2020	0.0145	0.0142			
7/14/2020			0.0122	0.0148	
7/15/2020					0.0143
2/22/2021	0.0132	0.00981	0.0111		
2/23/2021				0.014	0.014

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/18/2021 5:50 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.001015		<0.001015		
4/27/2016		0.00486			
4/28/2016				<0.001015	
6/20/2016	<0.001015				
6/22/2016			<0.001015	<0.001015	
6/23/2016		<0.001015			
8/8/2016	<0.001015				
8/9/2016			<0.001015		
8/10/2016		<0.001015		<0.001015	
8/24/2016	<0.001015				
10/3/2016	<0.001015				
10/4/2016			<0.001015		
10/5/2016		<0.001015		<0.001015	
10/26/2016	<0.001015				
11/21/2016	<0.001015	<0.001015	<0.001015		
11/22/2016				<0.001015	
1/17/2017	<0.001015	<0.001015	<0.001015		
1/18/2017				<0.001015	
3/21/2017		0.000883 (J)	<0.001015	<0.001015	
3/22/2017	<0.001015				
4/18/2017	<0.001015				
5/30/2017	<0.001015		<0.001015		
5/31/2017		0.00123 (J)		<0.001015	
2/13/2018	<0.001015				
2/14/2018			<0.001015		
2/15/2018		0.00235 (J)		<0.001015	
5/22/2018	<0.001015		<0.001015		
5/24/2018		0.001 (J)		<0.001015	
6/12/2018	<0.001015				
10/17/2018	<0.001015				
11/19/2018	<0.001015	0.00203 (J)		<0.001015	
11/20/2018			<0.001015		
3/12/2019					<0.001015
4/10/2019	<0.001015				
5/14/2019	<0.001015				
5/15/2019		0.00177 (J)	<0.001015	<0.001015	
10/8/2019	<0.001015				
10/9/2019		0.00072 (J)		<0.001015	
10/10/2019			<0.001015		<0.001015
10/16/2019	<0.001015				
4/6/2020	<0.001015		<0.001015	<0.001015	<0.001015
4/8/2020		0.00114 (J)			
7/13/2020	<0.001015		<0.001015	<0.001015	<0.001015
7/14/2020		0.00135 (J)			
2/22/2021	<0.001015				
2/23/2021		0.00128			
2/24/2021			<0.001015	<0.001015	<0.001015

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.001015	0.00122 (J)	<0.001015		
4/27/2016				<0.001015	<0.001015
6/20/2016	<0.001015		<0.001015		
6/21/2016				<0.001015	<0.001015
6/22/2016		0.00144 (J)			
8/8/2016	<0.001015				
8/9/2016		0.00331	<0.001015		
8/24/2016	<0.001015	0.00308	<0.001015		
10/3/2016	<0.001015		<0.001015		
10/4/2016		0.00129 (J)			
10/26/2016	<0.001015	0.0071	<0.001015		
11/21/2016	<0.001015	0.00689	<0.001015		
1/17/2017	<0.001015				
1/18/2017		0.0169 (O)	<0.001015		
3/22/2017	<0.001015	0.00686	<0.001015		
4/18/2017	<0.001015	<0.001015	<0.001015		
5/31/2017	<0.001015	0.00547	<0.001015		
10/12/2017				<0.001015	<0.001015
10/13/2017				<0.001015	<0.001015
10/14/2017				<0.001015	<0.001015
10/15/2017				<0.001015	<0.001015
10/16/2017				<0.001015	<0.001015
10/17/2017				<0.001015	<0.001015
2/13/2018	<0.001015	<0.001015	<0.001015		
2/14/2018				<0.001015	<0.001015
5/22/2018	<0.001015				
5/23/2018			<0.001015	<0.001015	<0.001015
5/24/2018		0.00164 (J)			
6/12/2018	<0.001015	0.00306	<0.001015		
10/17/2018	<0.001015	0.0121	<0.001015		
11/19/2018	<0.001015	0.0185 (O)	<0.001015		
11/20/2018				<0.001015	<0.001015
4/10/2019	<0.001015	<0.001015	<0.001015		
5/14/2019	<0.001015	<0.001015	<0.001015		
5/15/2019				<0.001015	<0.001015
10/8/2019	<0.001015	0.0084		<0.001015	
10/9/2019					<0.001015
10/10/2019			<0.001015		
10/16/2019	<0.001015	0.0103	<0.001015		
4/6/2020	<0.001015	<0.001015	<0.001015		
4/8/2020				<0.001015	<0.001015
7/13/2020	<0.001015	0.0021 (J)			
7/14/2020			<0.001015	<0.001015	
7/15/2020					<0.001015
2/22/2021	<0.001015	<0.001015	<0.001015		
2/23/2021				<0.001015	<0.001015

Time Series

Constituent: Boron (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.0231 (J)		0.094 (J)		
4/27/2016		0.371			
4/28/2016				0.19	
6/20/2016	0.0227 (J)				
6/22/2016			0.0959 (J)	0.118	
6/23/2016		0.251			
8/8/2016	0.0278 (J)				
8/9/2016			0.0964 (J)		
8/10/2016		0.216		0.197	
8/24/2016	0.0247 (J)				
10/3/2016	0.0307 (J)				
10/4/2016			0.0916 (J)		
10/5/2016		0.187		0.179	
10/26/2016	0.0241 (J)				
11/21/2016	0.0202 (J)	0.182	0.0929 (J)		
11/22/2016				0.197	
1/17/2017	0.0201 (J)	0.2	0.0963 (J)		
1/18/2017				0.186	
3/21/2017		0.178	0.0947 (J)	0.183	
3/22/2017	0.0224 (J)				
4/18/2017	<0.1015				
5/30/2017	<0.1015		0.0926 (J)		
5/31/2017		0.149		0.193	
8/23/2017	0.0253 (J)	0.181	0.0968 (J)	0.185	
5/22/2018	0.0224 (J)		0.102		
5/24/2018		0.159		0.197	
6/12/2018	0.0214 (J)				
10/17/2018	0.0216 (J)				
11/19/2018	0.0237 (J)	0.211		0.252	
11/20/2018			0.106		
3/12/2019					0.147
4/10/2019	0.0304 (J)				
5/14/2019	<0.1015				
5/15/2019		0.234	0.101 (J)	0.239	
10/8/2019	<0.1015				
10/9/2019		0.181		0.315	
10/10/2019			0.109		0.15
10/16/2019	0.0385 (J)				
4/6/2020	<0.1015		0.109	0.229	0.149
4/8/2020		0.209			
7/13/2020	<0.1015		0.111	0.266	0.15
7/14/2020		0.25			
2/22/2021	0.0307 (J)				
2/23/2021		0.205			
2/24/2021			0.108	0.193	0.16

Time Series

Constituent: Boron (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	0.0241 (J)	0.028 (J)	0.0414 (J)		
4/27/2016				0.253	0.0662 (J)
6/20/2016	0.0284 (J)		0.0434 (J)		
6/21/2016				0.0768 (J)	0.0681 (J)
6/22/2016		0.0433 (J)			
8/8/2016	0.034 (J)				
8/9/2016		0.0429 (J)	0.0453 (J)		
8/24/2016	0.0316 (J)	0.0431 (J)	0.0451 (J)		
10/3/2016	0.0367 (J)		0.0511 (J)		
10/4/2016		0.04 (J)			
10/26/2016	0.0331 (J)	0.0375 (J)	0.0507 (J)		
11/21/2016	0.035 (J)	0.0406 (J)	0.0458 (J)		
1/17/2017	0.0259 (J)				
1/18/2017		0.0548 (J)	0.0445 (J)		
3/22/2017	0.0243 (J)	0.0344 (J)	0.0432 (J)		
4/18/2017	0.0206 (J)	<0.1015	0.0409 (J)		
5/31/2017	0.0234 (J)	0.0454 (J)	0.0392 (J)		
8/23/2017	0.0267 (J)	0.0425 (J)	0.042 (J)		
10/12/2017				0.0685 (J)	0.0687 (J)
10/13/2017				0.0674 (J)	0.0831 (J)
10/14/2017				0.0756 (J)	0.0702 (J)
10/15/2017				0.0719 (J)	0.0702 (J)
10/16/2017				0.0726 (J)	0.0707 (J)
10/17/2017				0.0716 (J)	0.0695 (J)
11/16/2017				0.0644 (J)	0.0675 (J)
5/22/2018	0.0251 (J)				
5/23/2018			0.0433 (J)	0.0715 (J)	0.0693 (J)
5/24/2018		0.0339 (J)			
6/12/2018	0.0275 (J)	0.0371 (J)	0.0478 (J)		
10/17/2018	0.0321 (J)	0.0596 (J)	0.0468 (J)		
11/19/2018	0.0324 (J)	0.0514 (J)	0.0526 (J)		
11/20/2018				0.0772 (J)	0.0771 (J)
4/10/2019	<0.1015	<0.1015	0.0438 (J)		
5/14/2019	<0.1015	<0.1015	<0.1015		
5/15/2019				0.0678 (J)	0.0689 (J)
10/8/2019	0.0371 (J)	0.0537 (J)		0.073 (J)	
10/9/2019					0.0723 (J)
10/10/2019			0.0487 (J)		
10/16/2019	0.0419 (J)	0.05 (J)	0.0505 (J)		
4/6/2020	<0.1015	<0.1015	0.0428 (J)		
4/8/2020				0.077 (J)	0.0683 (J)
7/13/2020	<0.1015	0.0366 (J)			
7/14/2020			0.0441 (J)	0.0865 (J)	
7/15/2020					0.0723 (J)
2/22/2021	<0.1015	<0.1015	0.0397 (J)		
2/23/2021				0.0803 (J)	0.0731 (J)

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.00196		<0.000203		
4/27/2016		0.000452 (J)			
4/28/2016				<0.000203	
6/20/2016	0.0021				
6/22/2016			<0.000203	<0.000203	
6/23/2016		<0.000203			
8/8/2016	0.00206				
8/9/2016			<0.000203		
8/10/2016		<0.000203		<0.000203	
8/24/2016	0.00182				
10/3/2016	0.00188				
10/4/2016			<0.000203		
10/5/2016		<0.000203		<0.000203	
10/26/2016	0.00175				
11/21/2016	0.00197	<0.000203	<0.000203		
11/22/2016				<0.000203	
1/17/2017	0.002	<0.000203	<0.000203		
1/18/2017				<0.000203	
3/21/2017		<0.000203	<0.000203	<0.000203	
3/22/2017	0.0019				
4/18/2017	0.00159				
5/30/2017	0.00214		<0.000203		
5/31/2017		<0.000203		<0.000203	
2/13/2018	0.0018				
2/14/2018			<0.000203		
2/15/2018		<0.000203		<0.000203	
5/22/2018	0.00201		<0.000203		
5/24/2018		<0.000203		<0.000203	
6/12/2018	0.00217				
10/17/2018	0.00228				
11/19/2018	0.00156	<0.000203		<0.000203	
11/20/2018			<0.000203		
3/12/2019					<0.000203
4/10/2019	0.00224				
5/14/2019	0.00238				
5/15/2019		<0.000203	<0.000203	<0.000203	
10/8/2019	0.00218				
10/9/2019		<0.000203		<0.000203	
10/10/2019			<0.000203		<0.000203
10/16/2019	0.00225				
4/6/2020	0.00184		<0.000203	<0.000203	<0.000203
4/8/2020		<0.000203			
7/13/2020	0.00194		<0.000203	<0.000203	<0.000203
7/14/2020		<0.000203			
2/22/2021	0.00184				
2/23/2021		0.000148 (J)			
2/24/2021			<0.000203	<0.000203	<0.000203

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.000203	0.0121 (O)	<0.000203		
4/27/2016				<0.000203	<0.000203
6/20/2016	<0.000203		<0.000203		
6/21/2016				<0.000203	<0.000203
6/22/2016		0.00163			
8/8/2016	<0.000203				
8/9/2016		0.00122	<0.000203		
8/24/2016	<0.000203	<0.000203	<0.000203		
10/3/2016	<0.000203		<0.000203		
10/4/2016		0.000689 (J)			
10/26/2016	<0.000203	0.00136	<0.000203		
11/21/2016	<0.000203	0.00171	<0.000203		
1/17/2017	0.000311 (J)				
1/18/2017		0.003	<0.000203		
3/22/2017	<0.000203	0.00473	<0.000203		
4/18/2017	<0.000203	0.00117	<0.000203		
5/31/2017	0.000212 (J)	0.00296	<0.000203		
10/12/2017				<0.000203	<0.000203
10/13/2017				<0.000203	<0.000203
10/14/2017				<0.000203	<0.000203
10/15/2017				<0.000203	<0.000203
10/16/2017				<0.000203	<0.000203
10/17/2017				<0.000203	<0.000203
2/13/2018	<0.000203	0.00232	<0.000203		
2/14/2018				<0.000203	<0.000203
5/22/2018	<0.000203				
5/23/2018			<0.000203	<0.000203	<0.000203
5/24/2018		0.00459			
6/12/2018	<0.000203	0.00351	<0.000203		
10/17/2018	<0.000203	0.00393	<0.000203		
11/19/2018	<0.000203	0.00309	<0.000203		
11/20/2018				<0.000203	<0.000203
4/10/2019	<0.000203	0.00337	<0.000203		
5/14/2019	<0.000203	0.0013	<0.000203		
5/15/2019				<0.000203	<0.000203
10/8/2019	<0.000203	0.00598		<0.000203	
10/9/2019					<0.000203
10/10/2019			<0.000203		
10/16/2019	<0.000203	0.00448	<0.000203		
4/6/2020	<0.000203	0.000645 (J)	<0.000203		
4/8/2020				<0.000203	<0.000203
7/13/2020	<0.000203	0.00885 (O)			
7/14/2020			<0.000203	<0.000203	
7/15/2020					<0.000203
2/22/2021	8.96E-05 (J)	0.00536	8.96E-05 (J)		
2/23/2021				<0.000203	<0.000203

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	147		400		
4/27/2016		279			
4/28/2016				349	
6/20/2016	152				
6/22/2016			398	374	
6/23/2016		256			
8/8/2016	150				
8/9/2016			399		
8/10/2016		245		348	
8/24/2016	142				
10/3/2016	139				
10/4/2016			389		
10/5/2016		225		344	
10/26/2016	133				
11/21/2016	144	179	386		
11/22/2016				342	
1/17/2017	131	168	344		
1/18/2017				359	
3/21/2017		152	396	352	
3/22/2017	141				
4/18/2017	149				
5/30/2017	140		370		
5/31/2017		130		313	
8/23/2017	152	147	374	349	
5/22/2018	166		375		
5/24/2018		159		349	
6/12/2018	203				
10/17/2018	171				
11/19/2018	154	160		348	
11/20/2018			370		
3/12/2019					355
4/10/2019	243				
5/14/2019	167				
5/15/2019		186	380	411	
10/8/2019	157				
10/9/2019		146		359	
10/10/2019			373		319
10/16/2019	157				
4/6/2020	149		333	354	301
4/8/2020		164			
7/13/2020	147		350	392	305
7/14/2020		208			
2/22/2021	151				
2/23/2021		151			
2/24/2021			325	346	293

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	123	224	261		
4/27/2016				198	282
6/20/2016	168		295		
6/21/2016				327	291
6/22/2016		266			
8/8/2016	180				
8/9/2016		260	318		
8/24/2016	180	274	319		
10/3/2016	184		293		
10/4/2016		243			
10/26/2016	171	254	311		
11/21/2016	179	263	320		
1/17/2017	188				
1/18/2017		431	417		
3/22/2017	155	318	292		
4/18/2017	156	296	302		
5/31/2017	151	306	284		
8/23/2017	155	298	297		
10/12/2017				317	300
10/13/2017				302	298
10/14/2017				283	299
10/15/2017				294	307
10/16/2017				284	299
10/17/2017				294	294
11/16/2017				299	308
5/22/2018	172				
5/23/2018			296	321	344
5/24/2018		297			
6/12/2018	179	318	355		
10/17/2018	200	392	342		
11/19/2018	221	387	289		
11/20/2018				306	327
4/10/2019	200	348	356		
5/14/2019	168	254	254		
5/15/2019				302	305
10/8/2019	190	371		294	
10/9/2019					329
10/10/2019			302		
10/16/2019	194	346	356		
4/6/2020	152	177	222		
4/8/2020				280	281
7/13/2020	163	264			
7/14/2020			259	261	
7/15/2020					280
2/22/2021	178	312	271		
2/23/2021				292	306

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	1.94		2.16		
4/27/2016		1.46			
4/28/2016				4.12	
6/20/2016	2.09				
6/22/2016			2.16	3.44	
6/23/2016		1.49			
8/8/2016	2.18				
8/9/2016			2.19		
8/10/2016		1.55		4.15	
8/24/2016	2.22				
10/3/2016	2.34				
10/4/2016			2.21		
10/5/2016		1.58		4.12	
10/26/2016	2.34				
11/21/2016	2.5	1.62	2.24		
11/22/2016				3.98	
1/17/2017	2.68	1.61	2.23		
1/18/2017				3.6	
3/21/2017		1.6 (J)	2.5	3.6	
3/22/2017	3.7				
4/18/2017	2.4				
5/30/2017	2.6		3.2		
5/31/2017		3.2		3.9	
8/23/2017	2.7	6.1	2.8	4.2	
5/22/2018	2.3		24		
5/24/2018		5		7.1	
6/12/2018	2.3				
10/17/2018	1.7 (J)				
11/19/2018	1.7 (J)	7.8		6.1	
11/20/2018			59		
3/12/2019					84.8
4/10/2019	2.36				
5/14/2019	2.28				
5/15/2019		6.93	75.4	8.51	
10/8/2019	2.31				
10/9/2019		4.51		8.73	
10/10/2019			84.6		79.3
10/16/2019	2.42				
4/6/2020	2.01		100	8.58	79.4
4/8/2020		2.64			
7/13/2020	2.1		79.6	8.35	70.1
7/14/2020		3.09			
2/22/2021	2.16				
2/23/2021		3.63			
2/24/2021			113	11.2	101

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	1.9	1.32	1.53		
4/27/2016				1.71	2.34
6/20/2016	3.43		1.85		
6/21/2016				2.04	2.29
6/22/2016		1.46			
8/8/2016	3.31				
8/9/2016		1.35	1.95		
8/24/2016	3.23	1.47	2.07		
10/3/2016	3.21		2.02		
10/4/2016		1.59			
10/26/2016	3.35	1.27	2.07		
11/21/2016	3.34	1.38	2.39		
1/17/2017	3.58				
1/18/2017		1.34	1.9		
3/22/2017	3.4	2	1.5 (J)		
4/18/2017	2.6	2.2	1.6 (J)		
5/31/2017	4.4	1.5 (J)	2.1		
8/23/2017	4.4	1.8 (J)	2.3		
10/12/2017				31	150
10/13/2017				32	130
10/14/2017				33	140
10/15/2017				34	130
10/16/2017				34	140
10/17/2017				34	140
11/16/2017				35	130
5/22/2018	3.2				
5/23/2018			2	28	75
5/24/2018		1.6 (J)			
6/12/2018	3.7	1.4 (J)	1.7 (J)		
10/17/2018	4.6	<2	1.5 (J)		
11/19/2018	3	<2	<2		
11/20/2018				20	45
4/10/2019	1.76	2.25	1.88		
5/14/2019	2.98	2.28	1.82		
5/15/2019				15.9	52
10/8/2019	4.26	1.36		16.8	
10/9/2019					39.2
10/10/2019			1.93		
10/16/2019	4.04	1.4	1.92		
4/6/2020	2.43	1.72	1.5		
4/8/2020				10.6	24.9
7/13/2020	4.05	1.34			
7/14/2020			1.61	9.68	
7/15/2020					23.8
2/22/2021	1.72	2.22	1.52		
2/23/2021				7.85	17.9

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.001015		<0.001015		
4/27/2016		<0.001015			
4/28/2016				<0.001015	
6/20/2016	<0.001015				
6/22/2016			<0.001015	<0.001015	
6/23/2016		<0.001015			
8/8/2016	<0.001015				
8/9/2016			<0.001015		
8/10/2016		<0.001015		<0.001015	
8/24/2016	<0.001015				
10/3/2016	<0.001015				
10/4/2016			<0.001015		
10/5/2016		<0.001015		<0.001015	
10/26/2016	<0.001015				
11/21/2016	<0.001015	<0.001015	<0.001015		
11/22/2016				<0.001015	
1/17/2017	<0.001015	<0.001015	<0.001015		
1/18/2017				<0.001015	
3/21/2017		<0.001015	<0.001015	<0.001015	
3/22/2017	<0.001015				
4/18/2017	<0.001015				
5/30/2017	<0.001015		<0.001015		
5/31/2017		<0.001015		<0.001015	
2/13/2018	<0.001015				
2/14/2018			<0.001015		
2/15/2018		<0.001015		<0.001015	
5/22/2018	<0.001015		<0.001015		
5/24/2018		<0.001015		<0.001015	
6/12/2018	<0.001015				
10/17/2018	<0.001015				
11/19/2018	<0.001015	<0.001015		<0.001015	
11/20/2018			<0.001015		
3/12/2019					<0.001015
4/10/2019	<0.001015				
5/14/2019	<0.001015				
5/15/2019		<0.001015	<0.001015	<0.001015	
10/8/2019	<0.001015				
10/9/2019		<0.001015		<0.001015	
10/10/2019			<0.001015		<0.001015
10/16/2019	<0.001015				
4/6/2020	<0.001015		<0.001015	<0.001015	<0.001015
4/8/2020		<0.001015			
7/13/2020	<0.001015		<0.001015	<0.001015	<0.001015
7/14/2020		<0.001015			
2/22/2021	0.000382 (J)				
2/23/2021		<0.001015			
2/24/2021			<0.001015	<0.001015	<0.001015

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.001015	0.00373 (J)	<0.001015		
4/27/2016				<0.001015	<0.001015
6/20/2016	<0.001015		<0.001015		
6/21/2016				<0.001015	<0.001015
6/22/2016		0.00606 (J)			
8/8/2016	<0.001015				
8/9/2016		<0.001015	<0.001015		
8/24/2016	<0.001015	<0.001015	<0.001015		
10/3/2016	<0.001015		<0.001015		
10/4/2016		<0.001015			
10/26/2016	<0.001015	<0.001015	<0.001015		
11/21/2016	<0.001015	<0.001015	<0.001015		
1/17/2017	<0.001015				
1/18/2017		<0.001015	<0.001015		
3/22/2017	<0.001015	0.00945 (J)	<0.001015		
4/18/2017	<0.001015	0.0105	<0.001015		
5/31/2017	<0.001015	<0.001015	<0.001015		
10/12/2017				<0.001015	<0.001015
10/13/2017				<0.001015	<0.001015
10/14/2017				<0.001015	<0.001015
10/15/2017				<0.001015	<0.001015
10/16/2017				<0.001015	<0.001015
10/17/2017				<0.001015	<0.001015
2/13/2018	<0.001015	<0.001015	<0.001015		
2/14/2018				<0.001015	<0.001015
5/22/2018	<0.001015				
5/23/2018			<0.001015	<0.001015	<0.001015
5/24/2018		<0.001015			
6/12/2018	<0.001015	<0.001015	<0.001015		
10/17/2018	<0.001015	<0.001015	<0.001015		
11/19/2018	<0.001015	<0.001015	<0.001015		
11/20/2018				<0.001015	<0.001015
4/10/2019	<0.001015	<0.001015	<0.001015		
5/14/2019	<0.001015	<0.001015	<0.001015		
5/15/2019				<0.001015	<0.001015
10/8/2019	<0.001015	<0.001015		<0.001015	
10/9/2019					<0.001015
10/10/2019			<0.001015		
10/16/2019	<0.001015	<0.001015	<0.001015		
4/6/2020	<0.001015	<0.001015	<0.001015		
4/8/2020				<0.001015	<0.001015
7/13/2020	<0.001015	<0.001015			
7/14/2020			<0.001015	<0.001015	
7/15/2020					<0.001015
2/22/2021	<0.001015	0.00035 (J)	<0.001015		
2/23/2021				<0.001015	<0.001015

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.0343		<0.000203		
4/27/2016		0.0543			
4/28/2016				0.0531	
6/20/2016	0.0413				
6/22/2016			<0.000203	0.0388	
6/23/2016		0.0106			
8/8/2016	0.0513				
8/9/2016			<0.000203		
8/10/2016		0.00438 (J)		0.0565	
8/24/2016	0.0471				
10/3/2016	0.0525				
10/4/2016			<0.000203		
10/5/2016		0.00663 (J)		0.0479	
10/26/2016	0.0527				
11/21/2016	0.0569	0.0109	<0.000203		
11/22/2016				0.0453	
1/17/2017	0.0768	0.0146	<0.000203		
1/18/2017				0.0431	
3/21/2017		0.013	<0.000203	0.0414	
3/22/2017	0.0535				
4/18/2017	0.0442				
5/30/2017	0.0465		<0.000203		
5/31/2017		0.0086 (J)		0.0379	
2/13/2018	0.062				
2/14/2018			<0.000203		
2/15/2018		0.0199		0.0333	
5/22/2018	0.0443		<0.000203		
5/24/2018		0.00905 (J)		0.0399	
6/12/2018	0.0512				
10/17/2018	0.0751				
11/19/2018	0.0825	0.0147		0.0485	
11/20/2018			<0.000203		
3/12/2019					<0.000203
4/10/2019	0.0445				
5/14/2019	0.0485				
5/15/2019		0.0226	<0.000203	0.0603	
10/8/2019	0.0778				
10/9/2019		0.00969		0.0512	
10/10/2019			<0.000203		<0.000203
10/16/2019	0.08				
4/6/2020	0.0417		<0.000203	0.0537	<0.000203
4/8/2020		0.0176			
7/13/2020	0.0532		<0.000203	0.0515	<0.000203
7/14/2020		0.0232			
2/22/2021	0.0657				
2/23/2021		0.0167			
2/24/2021			0.00026	0.0442	0.000378

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	0.0487	0.232	<0.000203		
4/27/2016				<0.000203	0.00436 (J)
6/20/2016	0.0767		<0.000203		
6/21/2016				<0.000203	0.00484 (J)
6/22/2016		0.332			
8/8/2016	0.103				
8/9/2016		0.311	<0.000203		
8/24/2016	0.093	0.271	<0.000203		
10/3/2016	0.0964		<0.000203		
10/4/2016		0.148			
10/26/2016	0.0904	0.236	<0.000203		
11/21/2016	0.0857	0.241	<0.000203		
1/17/2017	0.0745				
1/18/2017		0.347	<0.000203		
3/22/2017	0.0328	0.271	<0.000203		
4/18/2017	0.0242	0.00324 (J)	<0.000203		
5/31/2017	0.0441	0.225	<0.000203		
10/12/2017				0.00269 (J)	0.005 (J)
10/13/2017				0.00341 (J)	0.0052 (J)
10/14/2017				0.00451 (J)	0.00513 (J)
10/15/2017				0.00371 (J)	0.00518 (J)
10/16/2017				0.00371 (J)	0.00453 (J)
10/17/2017				0.0035 (J)	0.00463 (J)
2/13/2018	0.0179	0.00661 (J)	<0.000203		
2/14/2018				<0.000203	0.00441 (J)
5/22/2018	0.028				
5/23/2018			<0.000203	<0.000203	0.00466 (J)
5/24/2018		0.158			
6/12/2018	0.0366	0.291	<0.000203		
10/17/2018	0.0745	0.49	<0.000203		
11/19/2018	0.0225	0.386	<0.000203		
11/20/2018				0.00306 (J)	0.00551
4/10/2019	0.0152	0.0144	<0.000203		
5/14/2019	0.0222	0.00536	<0.000203		
5/15/2019				0.00234 (J)	0.00643
10/8/2019	0.0674	1.07		0.00408 (J)	
10/9/2019					0.00864
10/10/2019			<0.000203		
10/16/2019	0.073	0.848	<0.000203		
4/6/2020	0.0116	<0.000203	<0.000203		
4/8/2020				0.00394 (J)	0.00762
7/13/2020	0.0405	0.47			
7/14/2020			<0.000203	0.00653	
7/15/2020					0.00821
2/22/2021	0.0161	0.0515	<0.000203		
2/23/2021				0.00294	0.00796

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.622		0.57		
4/27/2016		0.316 (U)		0.259 (U)	
4/28/2016				0.608	
6/20/2016	0.159 (U)				
6/22/2016			0.724	0.45 (U)	
6/23/2016		0.451 (U)			
8/8/2016	0.511 (U)				
8/9/2016			0.579		
8/10/2016		0.368 (U)		1.03	
8/24/2016	0.566 (U)				
10/3/2016	0.537 (U)				
10/4/2016			0.372 (U)		
10/5/2016		0.515		0.494 (U)	
10/26/2016	0.636				
11/21/2016	0.807	0.489 (U)	1.19		
11/22/2016				0.578	
1/17/2017	0.308 (U)	0.236 (U)	-0.187 (U)		
1/18/2017				0.216 (U)	
3/21/2017		0.101 (U)	0.403 (U)	0.101 (U)	
3/22/2017	0.344 (U)				
4/18/2017	0.934				
5/30/2017	0.149 (U)		0.998		
5/31/2017		1.19		1.4	
2/13/2018	0.774				
2/14/2018			1.74		
2/15/2018		0.55		0.925	
5/22/2018	-0.091 (U)		0.276 (U)		
5/24/2018		0.472		0.756	
6/12/2018	1.18				
10/17/2018	0.553 (U)				
11/19/2018	0.862 (D)	0.167 (U)		0.648	
11/20/2018			1.04		
3/12/2019					0.369
5/14/2019	0.509				
5/15/2019		0.421 (U)	1.18	1	
10/8/2019	1.47				
10/9/2019		0.742 (U)		1.18	
10/10/2019			0.902		0.446 (U)
10/16/2019	0.204 (U)				
4/6/2020	0.309 (U)		0.678	1.22	0.116 (U)
4/8/2020		0.205 (U)			
7/13/2020	0.219 (U)		0.665	0.787	0.794
7/14/2020		0.314 (U)			
2/22/2021	0.677 (U)				
2/23/2021		0.329 (U)			
2/24/2021			0.869 (U)	1.24	0.865 (U)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016		0.484 (U)	0.434 (U)		
4/27/2016				0.374 (U)	-0.207 (U)
5/5/2016	-0.0718 (U)				
6/20/2016	0.295 (U)		0.287 (U)		
6/21/2016				0.151 (U)	0.529
6/22/2016		0.2 (U)			
8/8/2016	0.231 (U)				
8/9/2016		0.378 (U)	0.516 (U)		
8/24/2016	0.65	0.131 (U)	0.266 (U)		
10/3/2016	0.845		0.59 (U)		
10/4/2016		0.514 (U)			
10/26/2016	0.994	0.755	0.164 (U)		
11/21/2016	0.537 (U)	0.7	0.296 (U)		
1/17/2017	-0.0159 (U)				
1/18/2017		0.606	0.0267 (U)		
3/22/2017	0.279 (U)	0.927	0.132 (U)		
4/18/2017	0.32 (U)	0.334 (U)	-0.0439 (U)		
5/31/2017	0.178 (U)	0.8	0.3 (U)		
10/12/2017				0.182 (U)	0.267 (U)
10/13/2017				0.517 (U)	0.873 (U)
10/14/2017				0.43 (U)	1.6 (U)
10/15/2017				0.45 (U)	0.327 (U)
10/16/2017				0.55 (U)	0.524 (U)
10/17/2017				0.474 (U)	0.0455 (U)
2/13/2018	0.804	0.649	0.69		
2/14/2018				0.736	0.633
5/22/2018	0.0077 (U)				
5/23/2018			0.186 (U)	0.0192 (U)	0.377 (U)
5/24/2018		0.448 (U)			
6/12/2018	-0.315 (U)	0.234 (U)	0.153 (U)		
10/17/2018	0.574 (U)	0.852	0.313 (U)		
11/19/2018	0.654 (D)	0.521 (D)	0.794 (D)		
11/20/2018				0.494	0.28 (U)
5/14/2019	0.579	0.176 (U)	0.352 (U)		
5/15/2019				0.61	0.697
10/8/2019	0.493 (U)	0.833 (U)		0.345 (U)	
10/9/2019					0.416 (U)
10/10/2019			1.02 (U)		
10/16/2019	0.046 (U)	0.0279 (U)	0.356 (U)		
4/6/2020	0.212 (U)	0.569 (U)	0.459 (U)		
4/8/2020				0.237 (U)	1.38 (U)
7/13/2020	0.0814 (U)	0.53			
7/14/2020			0.169 (U)	0.434	
7/15/2020					0.398 (U)
2/22/2021	0.434 (U)	0.472 (U)	0 (U)		
2/23/2021				0.696 (U)	0.685 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.146 (J)		0.084 (J)		
4/27/2016		0.337			
4/28/2016				0.153 (J)	
6/20/2016	0.148 (J)				
6/22/2016			0.106 (J)	0.146 (J)	
6/23/2016		0.155 (J)			
8/8/2016	0.137 (J)				
8/9/2016			0.092 (J)		
8/10/2016		0.123 (J)		0.127 (J)	
8/24/2016	0.133 (J)				
10/3/2016	0.103 (J)				
10/4/2016			0.049 (J)		
10/5/2016		0.086 (J)		0.09 (J)	
10/26/2016	0.05 (J)				
11/21/2016	0.047 (J)	0.056 (J)	<0.3		
11/22/2016				0.012 (J)	
1/17/2017	0.09 (J)	0.103 (J)	0.044 (J)		
1/18/2017				0.071 (J)	
3/21/2017		0.15	0.08 (J)	0.09 (J)	
3/22/2017	0.12				
4/18/2017	0.12				
5/30/2017	0.13		0.096 (J)		
5/31/2017		0.18		0.11	
8/23/2017	0.16	0.23	0.11	0.13	
2/13/2018	0.14 (D)				
2/14/2018			0.1 (D)		
2/15/2018		0.23 (D)		0.12 (D)	
5/22/2018	0.16		0.1		
5/24/2018		0.13		0.15	
6/12/2018	0.16				
10/17/2018	0.18				
11/19/2018	0.15	0.26		0.16	
11/20/2018			0.1		
3/12/2019					0.177
4/10/2019	0.102				
5/14/2019	0.119				
5/15/2019		0.276	0.1	0.185	
10/8/2019	0.0924 (J)				
10/9/2019		0.142		0.215	
10/10/2019			0.0915 (J)		0.163
10/16/2019	0.0756 (J)				
4/6/2020	0.101		0.118	0.254	0.188
4/8/2020		0.243			
7/13/2020	0.0678 (J)		0.108	0.161	0.166
7/14/2020		0.224			
2/22/2021	0.082 (J)				
2/23/2021		0.202			
2/24/2021			0.107	0.172	0.17

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	0.149 (J)	0.243 (J)	0.372		
4/27/2016				0.2 (J)	0.212 (J)
6/20/2016	0.148 (J)		0.361		
6/21/2016				0.163 (J)	0.211 (J)
6/22/2016		0.269 (J)			
8/8/2016	0.134 (J)				
8/9/2016		0.363	0.326		
8/24/2016	0.129 (J)	0.346	0.329		
10/3/2016	0.086 (J)		0.287 (J)		
10/4/2016		0.266 (J)			
10/26/2016	0.027 (J)	0.266 (J)	0.194 (J)		
11/21/2016	0.027 (J)	0.244 (J)	0.192 (J)		
1/17/2017	0.066 (J)				
1/18/2017		0.385	0.223 (J)		
3/22/2017	0.13	0.41	0.32		
4/18/2017	0.16	0.29	0.32		
5/31/2017	0.13	0.37	0.31		
8/23/2017	0.16	0.55	0.38		
10/12/2017				0.17	0.22
10/13/2017				0.19	0.23
10/14/2017				0.2	0.22
10/15/2017				0.2	0.22
10/16/2017				0.2	0.22
10/17/2017				0.19	0.21
11/16/2017				0.18	0.22
2/13/2018	0.22 (D)	0.27 (D)	0.38 (D)		
2/14/2018				0.18 (D)	0.21 (D)
5/22/2018	0.17				
5/23/2018			0.38	0.18	0.21
5/24/2018		0.6			
6/12/2018	0.16	0.53	0.39		
10/17/2018	0.16	0.63	0.39		
11/19/2018	0.18	0.31	0.36		
11/20/2018				0.19	0.21
4/10/2019	0.262	0.273	0.384		
5/14/2019	0.17	0.281	0.335		
5/15/2019				0.169	0.192
10/8/2019	0.164	0.225		0.183	
10/9/2019					0.189
10/10/2019			0.304		
10/16/2019	0.114	0.106	0.302		
4/6/2020	0.207	0.314	0.368		
4/8/2020				0.153	0.192
7/13/2020	0.132	0.13			
7/14/2020			0.33	0.193	
7/15/2020					0.196
2/22/2021	0.209	0.246	0.357		
2/23/2021				0.2	0.208

Time Series

Constituent: Lead (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.000203		<0.000203		
4/27/2016		<0.000203			
4/28/2016				<0.000203	
6/20/2016	<0.000203				
6/22/2016			<0.000203	<0.000203	
6/23/2016		<0.000203			
8/8/2016	<0.000203				
8/9/2016			<0.000203		
8/10/2016		<0.000203		<0.000203	
8/24/2016	<0.000203				
10/3/2016	<0.000203				
10/4/2016			<0.000203		
10/5/2016		<0.000203		<0.000203	
10/26/2016	<0.000203				
11/21/2016	<0.000203	<0.000203	<0.000203		
11/22/2016				<0.000203	
1/17/2017	<0.000203	<0.000203	<0.000203		
1/18/2017				<0.000203	
3/21/2017		<0.000203	<0.000203	<0.000203	
3/22/2017	<0.000203				
4/18/2017	<0.000203				
5/30/2017	<0.000203		<0.000203		
5/31/2017		<0.000203		<0.000203	
2/13/2018	<0.000203				
2/14/2018			<0.000203		
2/15/2018		<0.000203		<0.000203	
5/22/2018	<0.000203		<0.000203		
5/24/2018		<0.000203		<0.000203	
6/12/2018	<0.000203				
10/17/2018	<0.000203				
11/19/2018	<0.000203	<0.000203		<0.000203	
11/20/2018			<0.000203		
3/12/2019					<0.000203
4/10/2019	<0.000203				
5/14/2019	<0.000203				
5/15/2019		<0.000203	<0.000203	<0.000203	
10/8/2019	<0.000203				
10/9/2019		<0.000203		<0.000203	
10/10/2019			0.00145 (J)		<0.000203
10/16/2019	<0.000203				
4/6/2020	<0.000203		<0.000203	<0.000203	<0.000203
4/8/2020		<0.000203			
7/13/2020	<0.000203		<0.000203	<0.000203	<0.000203
7/14/2020		<0.000203			
2/22/2021	<0.000203				
2/23/2021		<0.000203			
2/24/2021			<0.000203	0.000178 (J)	<0.000203

Time Series

Constituent: Lead (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.000203	<0.000203	<0.000203		
4/27/2016				<0.000203	<0.000203
6/20/2016	<0.000203		<0.000203		
6/21/2016				<0.000203	<0.000203
6/22/2016		<0.000203			
8/8/2016	<0.000203				
8/9/2016		<0.000203	<0.000203		
8/24/2016	<0.000203	<0.000203	<0.000203		
10/3/2016	<0.000203		<0.000203		
10/4/2016		<0.000203			
10/26/2016	<0.000203	<0.000203	<0.000203		
11/21/2016	<0.000203	<0.000203	<0.000203		
1/17/2017	<0.000203				
1/18/2017		<0.000203	<0.000203		
3/22/2017	<0.000203	<0.000203	<0.000203		
4/18/2017	<0.000203	<0.000203	<0.000203		
5/31/2017	<0.000203	<0.000203	<0.000203		
10/12/2017				<0.000203	<0.000203
10/13/2017				<0.000203	<0.000203
10/14/2017				<0.000203	<0.000203
10/15/2017				<0.000203	<0.000203
10/16/2017				<0.000203	<0.000203
10/17/2017				<0.000203	<0.000203
2/13/2018	<0.000203	<0.000203	<0.000203		
2/14/2018				<0.000203	<0.000203
5/22/2018	<0.000203				
5/23/2018			<0.000203	<0.000203	<0.000203
5/24/2018		<0.000203			
6/12/2018	<0.000203	<0.000203	<0.000203		
10/17/2018	<0.000203	0.00102 (J)	<0.000203		
11/19/2018	<0.000203	0.00692	<0.000203		
11/20/2018				<0.000203	<0.000203
4/10/2019	<0.000203	<0.000203	<0.000203		
5/14/2019	<0.000203	<0.000203	<0.000203		
5/15/2019				<0.000203	<0.000203
10/8/2019	<0.000203	<0.000203		<0.000203	
10/9/2019					<0.000203
10/10/2019			<0.000203		
10/16/2019	<0.000203	0.00108 (J)	<0.000203		
4/6/2020	<0.000203	<0.000203	<0.000203		
4/8/2020				<0.000203	<0.000203
7/13/2020	<0.000203	<0.000203			
7/14/2020			<0.000203	<0.000203	
7/15/2020					<0.000203
2/22/2021	<0.000203	8.8E-05 (J)	<0.000203		
2/23/2021				<0.000203	<0.000203

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.0264 (J)		0.212		
4/27/2016		0.435			
4/28/2016				0.0735	
6/20/2016	0.0246 (J)				
6/22/2016			0.232	0.118	
6/23/2016		0.285			
8/8/2016	0.0229 (J)				
8/9/2016			0.204		
8/10/2016		0.231		0.0805	
8/24/2016	0.0236 (J)				
10/3/2016	0.0229 (J)				
10/4/2016			0.198		
10/5/2016		0.231		0.0757	
10/26/2016	0.0227 (J)				
11/21/2016	0.0236 (J)	0.236	0.206		
11/22/2016				0.0828	
1/17/2017	0.0228 (J)	0.3	0.295		
1/18/2017				0.125	
3/21/2017		0.218	0.234	0.093	
3/22/2017	0.0238 (J)				
4/18/2017	0.0242 (J)				
5/30/2017	0.0229 (J)		0.23		
5/31/2017		0.194		0.0787	
2/13/2018	0.0233 (J)				
2/14/2018			0.233		
2/15/2018		0.23		0.104	
5/22/2018	0.0263 (J)		0.24		
5/24/2018		0.192		0.0819	
6/12/2018	0.0251 (J)				
10/17/2018	0.025 (J)				
11/19/2018	0.0241	0.211		0.0816	
11/20/2018			0.248		
3/12/2019					0.275
4/10/2019	0.0285				
5/14/2019	0.026 (J)				
5/15/2019		0.23	0.251	0.0736	
10/8/2019	0.0268				
10/9/2019		0.202		0.0838	
10/10/2019			0.275		0.297
10/16/2019	0.0263				
4/6/2020	0.0278		0.282	0.0786	0.298
4/8/2020		0.23			
7/13/2020	0.028		0.277	0.0784	0.294
7/14/2020		0.255			
2/22/2021	0.0301				
2/23/2021		0.223			
2/24/2021			0.3	0.0949	0.345

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	0.0353 (J)	0.0964	0.0528		
4/27/2016				0.163	0.171
6/20/2016	0.0583		0.0554		
6/21/2016				0.171	0.181
6/22/2016		0.156			
8/8/2016	0.0627				
8/9/2016		0.122	0.0452 (J)		
8/24/2016	0.0651	0.138	0.0488 (J)		
10/3/2016	0.0622		0.0476 (J)		
10/4/2016		0.0966			
10/26/2016	0.0293 (J)	0.134	0.049 (J)		
11/21/2016	0.0667	0.167	0.0477 (J)		
1/17/2017	0.0636				
1/18/2017		0.237	0.045 (J)		
3/22/2017	0.0464 (J)	0.203	0.0493 (J)		
4/18/2017	0.0446 (J)	0.0764	0.0494 (J)		
5/31/2017	0.0496 (J)	0.218	0.0501		
10/12/2017				0.134	0.182
10/13/2017				0.127	0.189
10/14/2017				0.112	0.177
10/15/2017				0.129	0.191
10/16/2017				0.122	0.189
10/17/2017				0.122	0.184
2/13/2018	0.0615	0.0964	0.0446 (J)		
2/14/2018				0.131	0.183
5/22/2018	0.0465 (J)				
5/23/2018			0.0513	0.129	0.194
5/24/2018		0.145			
6/12/2018	0.0472 (J)	0.194	0.0511		
10/17/2018	0.0633	0.384	0.0532		
11/19/2018	0.0584	0.323	0.0467		
11/20/2018				0.12	0.181
4/10/2019	0.0574	0.0905	0.0504		
5/14/2019	0.0445	0.0828	0.0485		
5/15/2019				0.127	0.16
10/8/2019	0.0677	0.419		0.131	
10/9/2019					0.163
10/10/2019			0.054		
10/16/2019	0.0661	0.337	0.052		
4/6/2020	0.0496	0.0689	0.0519		
4/8/2020				0.117	0.149
7/13/2020	0.0615	0.256			
7/14/2020			0.0543	0.103	
7/15/2020					0.152
2/22/2021	0.0625	0.126	0.0558		
2/23/2021				0.131	0.166

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.0005		<0.0005		
4/27/2016		<0.0005			
4/28/2016				<0.0005	
6/20/2016	<0.0005				
6/22/2016			<0.0005	<0.0005	
6/23/2016		<0.0005			
8/8/2016	<0.0005				
8/9/2016			<0.0005		
8/10/2016		<0.0005		<0.0005	
8/24/2016	<0.0005				
10/3/2016	<0.0005				
10/4/2016			<0.0005		
10/5/2016		<0.0005		<0.0005	
10/26/2016	<0.0005				
11/21/2016	<0.0005	<0.0005	<0.0005		
11/22/2016				<0.0005	
1/17/2017	<0.0005	<0.0005	<0.0005		
1/18/2017				<0.0005	
3/21/2017		<0.0005	<0.0005	<0.0005	
3/22/2017	<0.0005				
4/18/2017	<0.0005				
5/30/2017	<0.0005		<0.0005		
5/31/2017		<0.0005		<0.0005	
2/13/2018	<0.0005				
2/14/2018			<0.0005		
2/15/2018		<0.0005		<0.0005	
5/22/2018	<0.0005		<0.0005		
5/24/2018		<0.0005		<0.0005	
6/12/2018	<0.0005				
10/17/2018	<0.0005				
11/19/2018	<0.0005	<0.0005		<0.0005	
11/20/2018			<0.0005		
3/12/2019					<0.0005
4/10/2019	<0.0005				
5/14/2019	<0.0005				
5/15/2019		<0.0005	<0.0005	<0.0005	
10/8/2019	<0.0005				
10/9/2019		<0.0005		<0.0005	
10/10/2019			<0.0005		<0.0005
10/16/2019	<0.0005				
4/6/2020	<0.0005		<0.0005	<0.0005	<0.0005
4/8/2020		<0.0005			
7/13/2020	<0.0005		<0.0005	<0.0005	<0.0005
7/14/2020		<0.0005			
2/22/2021	<0.0005				
2/23/2021		<0.0005			
2/24/2021			<0.0005	<0.0005	<0.0005

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.0005	<0.0005	<0.0005		
4/27/2016				<0.0005	<0.0005
6/20/2016	<0.0005		<0.0005		
6/21/2016				<0.0005	<0.0005
6/22/2016		<0.0005			
8/8/2016	<0.0005				
8/9/2016		<0.0005	<0.0005		
8/24/2016	<0.0005	<0.0005	<0.0005		
10/3/2016	<0.0005		<0.0005		
10/4/2016		<0.0005			
10/26/2016	<0.0005	<0.0005	<0.0005		
11/21/2016	<0.0005	<0.0005	<0.0005		
1/17/2017	<0.0005				
1/18/2017		<0.0005	<0.0005		
3/22/2017	<0.0005	<0.0005	<0.0005		
4/18/2017	<0.0005	<0.0005	<0.0005		
5/31/2017	<0.0005	<0.0005	<0.0005		
10/12/2017				<0.0005	<0.0005
10/13/2017				<0.0005	<0.0005
10/14/2017				<0.0005	<0.0005
10/15/2017				<0.0005	<0.0005
10/16/2017				<0.0005	<0.0005
10/17/2017				<0.0005	<0.0005
2/13/2018	<0.0005	<0.0005	<0.0005		
2/14/2018				<0.0005	<0.0005
5/22/2018	<0.0005				
5/23/2018			<0.0005	<0.0005	<0.0005
5/24/2018		<0.0005			
6/12/2018	<0.0005	<0.0005	<0.0005		
10/17/2018	<0.0005	<0.0005	<0.0005		
11/19/2018	<0.0005	<0.0005	<0.0005		
11/20/2018				<0.0005	<0.0005
4/10/2019	<0.0005	<0.0005	<0.0005		
5/14/2019	<0.0005	<0.0005	<0.0005		
5/15/2019				<0.0005	<0.0005
10/8/2019	<0.0005	<0.0005		<0.0005	
10/9/2019					<0.0005
10/10/2019			<0.0005		
10/16/2019	<0.0005	<0.0005	<0.0005		
4/6/2020	<0.0005	<0.0005	<0.0005		
4/8/2020				<0.0005	<0.0005
7/13/2020	<0.0005	<0.0005			
7/14/2020			<0.0005	<0.0005	
7/15/2020					<0.0005
2/22/2021	<0.0005	<0.0005	<0.0005		
2/23/2021				<0.0005	<0.0005

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.000203		<0.000203		
4/27/2016		<0.000203			
4/28/2016				<0.000203	
6/20/2016	<0.000203				
6/22/2016			<0.000203	<0.000203	
6/23/2016		<0.000203			
8/8/2016	<0.000203				
8/9/2016			<0.000203		
8/10/2016		<0.000203		<0.000203	
8/24/2016	<0.000203				
10/3/2016	<0.000203				
10/4/2016			<0.000203		
10/5/2016		<0.000203		<0.000203	
10/26/2016	<0.000203				
11/21/2016	<0.000203	<0.000203	<0.000203		
11/22/2016				<0.000203	
1/17/2017	<0.000203	<0.000203	<0.000203		
1/18/2017				<0.000203	
3/21/2017		<0.000203	<0.000203	<0.000203	
3/22/2017	<0.000203				
4/18/2017	<0.000203				
5/30/2017	<0.000203		<0.000203		
5/31/2017		<0.000203		<0.000203	
2/13/2018	<0.000203				
2/14/2018			<0.000203		
2/15/2018		<0.000203		<0.000203	
5/22/2018	<0.000203		<0.000203		
5/24/2018		<0.000203		<0.000203	
6/12/2018	<0.000203				
10/17/2018	<0.000203				
11/19/2018	<0.000203	<0.000203		<0.000203	
11/20/2018			<0.000203		
3/12/2019					<0.000203
4/10/2019	<0.000203				
5/14/2019	<0.000203				
5/15/2019		<0.000203	<0.000203	<0.000203	
10/8/2019	<0.000203				
10/9/2019		<0.000203		<0.000203	
10/10/2019			<0.000203		<0.000203
10/16/2019	<0.000203				
4/6/2020	<0.000203		<0.000203	<0.000203	<0.000203
4/8/2020		<0.000203			
7/13/2020	<0.000203		<0.000203	<0.000203	<0.000203
7/14/2020		<0.000203			
2/22/2021	<0.000203				
2/23/2021		<0.000203			
2/24/2021			0.00148	8.8E-05 (J)	0.00174

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.000203	<0.000203	<0.000203		
4/27/2016				<0.000203	<0.000203
6/20/2016	<0.000203		<0.000203		
6/21/2016				<0.000203	<0.000203
6/22/2016		<0.000203			
8/8/2016	<0.000203				
8/9/2016		<0.000203	<0.000203		
8/24/2016	<0.000203	<0.000203	<0.000203		
10/3/2016	<0.000203		<0.000203		
10/4/2016		<0.000203			
10/26/2016	<0.000203	<0.000203	<0.000203		
11/21/2016	<0.000203	<0.000203	<0.000203		
1/17/2017	<0.000203				
1/18/2017		<0.000203	<0.000203		
3/22/2017	<0.000203	<0.000203	<0.000203		
4/18/2017	<0.000203	<0.000203	<0.000203		
5/31/2017	<0.000203	<0.000203	<0.000203		
10/12/2017				<0.000203	<0.000203
10/13/2017				<0.000203	<0.000203
10/14/2017				<0.000203	<0.000203
10/15/2017				<0.000203	<0.000203
10/16/2017				<0.000203	<0.000203
10/17/2017				<0.000203	<0.000203
2/13/2018	<0.000203	<0.000203	<0.000203		
2/14/2018				<0.000203	<0.000203
5/22/2018	<0.000203				
5/23/2018			<0.000203	<0.000203	<0.000203
5/24/2018		<0.000203			
6/12/2018	<0.000203	<0.000203	<0.000203		
10/17/2018	<0.000203	<0.000203	<0.000203		
11/19/2018	<0.000203	<0.000203	<0.000203		
11/20/2018				<0.000203	<0.000203
4/10/2019	<0.000203	<0.000203	<0.000203		
5/14/2019	<0.000203	<0.000203	<0.000203		
5/15/2019				<0.000203	<0.000203
10/8/2019	<0.000203	<0.000203		<0.000203	
10/9/2019					<0.000203
10/10/2019			<0.000203		
10/16/2019	<0.000203	<0.000203	<0.000203		
4/6/2020	<0.000203	<0.000203	<0.000203		
4/8/2020				<0.000203	<0.000203
7/13/2020	<0.000203	<0.000203			
7/14/2020			<0.000203	<0.000203	
7/15/2020					<0.000203
2/22/2021	<0.000203	<0.000203	0.000131 (J)		
2/23/2021				0.00107	0.0129

Time Series

Constituent: pH (SU) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	5.2		6.49		
4/27/2016		5.8			
4/28/2016				5.78	
6/20/2016	5.18				
6/22/2016			6.51	6.41	
6/23/2016		6.38			
8/8/2016	5.12				
8/9/2016			6.49		
8/10/2016		6.47		5.82	
10/3/2016	5.21 (D)				
10/4/2016			6.51 (D)		
10/5/2016		6.42 (D)		5.82 (D)	
10/26/2016	5.2				
11/21/2016	5.19 (D)	6.38	6.48		
11/22/2016				5.86	
1/17/2017	5.17 (D)	6.35	6.46		
1/18/2017				5.9	
3/21/2017		6.38	6.47	5.85	
3/22/2017	5.2 (D)				
4/18/2017	5.2				
5/30/2017	5.14 (D)		6.48		
5/31/2017		6.4		5.84	
8/23/2017	5.12 (D)	6.33	6.48	5.91	
2/13/2018	5.18				
2/14/2018			6.6		
2/15/2018		6.26		5.98	
5/22/2018	5.2		6.54		
5/24/2018		6.45		5.86	
6/12/2018	5.15				
10/17/2018	5.12				
11/19/2018	5.09	6.3		5.88	
11/20/2018			6.61		
3/12/2019					6.7
4/10/2019	5.11				
5/14/2019	5.19				
5/15/2019		6.37	6.62	5.82	
10/8/2019	5.12				
10/9/2019		6.5		5.85	
10/10/2019			6.69		6.77
10/16/2019	5.16				
4/6/2020	5.21		6.72	5.81	6.79
4/8/2020		6.36			
7/13/2020	5.14		6.71	5.62	6.61
7/14/2020		6.42			
2/22/2021	5.06				
2/23/2021		6.45			
2/24/2021			6.67	5.83	6.83

Time Series

Constituent: pH (SU) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	5.94	5.56	6.22		
4/27/2016				6.6	6.55
6/20/2016	5.96		6.21		
6/21/2016				6.62	6.47
6/22/2016		5.57			
8/8/2016	5.88				
8/9/2016		5.67	6.11		
8/24/2016		5.63	6.11		
10/3/2016	5.91 (D)		6.13 (D)		
10/4/2016		5.69 (D)			
10/26/2016	5.84	5.56	6.12		
11/21/2016	5.82 (D)	5.42 (D)	6.09 (D)		
1/17/2017	5.87 (D)				
1/18/2017		5.11 (D)	6.09 (D)		
3/22/2017	6.01 (D)	4.52 (D)	6.15 (D)		
4/18/2017	6.02	5.84	6.19		
5/31/2017	5.85 (D)	4.56 (D)	6.13 (D)		
8/23/2017	5.89 (D)	4.77 (D)	6.12 (D)		
10/12/2017				6.64	6.5
10/13/2017				6.64	6.51
10/14/2017				6.66	6.53
10/15/2017				6.67	6.53
10/16/2017				6.67	6.54
10/17/2017				6.66	6.54
11/16/2017				6.62	6.51
2/13/2018	6.21	5.67	6.22		
2/14/2018				6.67	6.55
5/22/2018	6.04				
5/23/2018			6.21	6.63	6.52
5/24/2018		5.19			
6/12/2018	5.95	4.79	6.16		
10/17/2018	5.9	4.75	6.12		
11/19/2018	6.03	3.77 (E)	6.16		
11/20/2018				6.61	6.58
4/10/2019	6.1	5.54	6.14		
5/14/2019	6.07	5.71	6.23		
5/15/2019				6.61	6.6
10/8/2019	5.96	4.98		6.52	
10/9/2019					6.67
10/10/2019			6.15		
10/16/2019	5.98	4.51	6.19		
4/6/2020	6.21	5.91	6.35		
4/8/2020				6.64	6.7
7/13/2020	5.84	5.16			
7/14/2020			6.2	6.52	
7/15/2020					6.71
2/22/2021	6.1	5.59	6.19		
2/23/2021				6.7	6.73

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.00261 (J)		<0.001015		
4/27/2016		<0.001015			
4/28/2016				<0.001015	
6/20/2016	0.00242 (J)				
6/22/2016			<0.001015	<0.001015	
6/23/2016		<0.001015			
8/8/2016	0.00253 (J)				
8/9/2016			<0.001015		
8/10/2016		<0.001015		<0.001015	
8/24/2016	<0.001015				
10/3/2016	0.00211 (J)				
10/4/2016			<0.001015		
10/5/2016		<0.001015		<0.001015	
10/26/2016	<0.001015				
11/21/2016	<0.001015	<0.001015	<0.001015		
11/22/2016				<0.001015	
1/17/2017	<0.001015	<0.001015	<0.001015		
1/18/2017				<0.001015	
3/21/2017		<0.001015	<0.001015	<0.001015	
3/22/2017	0.0022 (J)				
4/18/2017	0.0027 (J)				
5/30/2017	0.00316 (J)		<0.001015		
5/31/2017		<0.001015		<0.001015	
2/13/2018	0.00211 (J)				
2/14/2018			<0.001015		
2/15/2018		0.00272 (J)		<0.001015	
5/22/2018	0.00372 (J)		<0.001015		
5/24/2018		<0.001015		<0.001015	
6/12/2018	0.00409 (J)				
10/17/2018	<0.001015				
11/19/2018	<0.001015	<0.001015		<0.001015	
11/20/2018			<0.001015		
3/12/2019					<0.001015
4/10/2019	0.00471 (J)				
5/14/2019	0.00316 (J)				
5/15/2019		0.00289 (J)	<0.001015	<0.001015	
10/8/2019	<0.001015				
10/9/2019		<0.001015		<0.001015	
10/10/2019			<0.001015		<0.001015
10/16/2019	<0.001015				
4/6/2020	0.00275 (J)		<0.001015	<0.001015	<0.001015
4/8/2020		<0.001015			
7/13/2020	0.00245 (J)		<0.001015	<0.001015	<0.001015
7/14/2020		0.00273 (J)			
2/22/2021	0.00241				
2/23/2021		0.00217			
2/24/2021			<0.001015	<0.001015	<0.001015

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.001015	<0.001015	<0.001015		
4/27/2016				0.00445 (J)	<0.001015
6/20/2016	<0.001015		<0.001015		
6/21/2016				<0.001015	<0.001015
6/22/2016		<0.001015			
8/8/2016	<0.001015				
8/9/2016		<0.001015	<0.001015		
8/24/2016	<0.001015	<0.001015	<0.001015		
10/3/2016	<0.001015		<0.001015		
10/4/2016		<0.001015			
10/26/2016	<0.001015	<0.001015	<0.001015		
11/21/2016	<0.001015	<0.001015	<0.001015		
1/17/2017	<0.001015				
1/18/2017		<0.001015	<0.001015		
3/22/2017	<0.001015	0.0141	<0.001015		
4/18/2017	<0.001015	0.0158	<0.001015		
5/31/2017	<0.001015	0.00632 (J)	<0.001015		
10/12/2017				<0.001015	<0.001015
10/13/2017				<0.001015	<0.001015
10/14/2017				<0.001015	<0.001015
10/15/2017				<0.001015	<0.001015
10/16/2017				<0.001015	<0.001015
10/17/2017				<0.001015	<0.001015
2/13/2018	<0.001015	0.0209 (O)	0.00403 (J)		
2/14/2018				<0.001015	<0.001015
5/22/2018	<0.001015				
5/23/2018			<0.001015	<0.001015	<0.001015
5/24/2018		0.00918 (J)			
6/12/2018	<0.001015	0.00836 (J)	<0.001015		
10/17/2018	<0.001015	<0.001015	<0.001015		
11/19/2018	<0.001015	0.00439 (J)	0.00436 (J)		
11/20/2018				<0.001015	<0.001015
4/10/2019	0.00322 (J)	0.0113	<0.001015		
5/14/2019	<0.001015	0.0119	0.00201 (J)		
5/15/2019				<0.001015	<0.001015
10/8/2019	<0.001015	0.00256 (J)		<0.001015	
10/9/2019					<0.001015
10/10/2019			<0.001015		
10/16/2019	<0.001015	0.00286 (J)	<0.001015		
4/6/2020	<0.001015	0.01	0.00284 (J)		
4/8/2020				<0.001015	<0.001015
7/13/2020	<0.001015	0.0134			
7/14/2020			<0.001015	<0.001015	
7/15/2020					<0.001015
2/22/2021	<0.001015	0.0181	0.00222		
2/23/2021				<0.001015	<0.001015

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	1490		1750		
4/27/2016		1250			
4/28/2016				2360	
6/20/2016	1420				
6/22/2016			1720	1960	
6/23/2016		1010			
8/8/2016	1460				
8/9/2016			1740		
8/10/2016		992		2300	
8/24/2016	1450				
10/3/2016	1460				
10/4/2016			1750		
10/5/2016		1010		2330	
10/26/2016	1330				
11/21/2016	1420	834	1690		
11/22/2016				2220	
1/17/2017	1350	700	1670		
1/18/2017				1950	
3/21/2017		660	1900	2400	
3/22/2017	1500				
4/18/2017	1300				
5/30/2017	1400		1700		
5/31/2017		700		2200	
8/23/2017	1500	700	1700	2100	
5/22/2018	2100		2200		
5/24/2018		560		2300	
6/12/2018	1500				
10/17/2018	1400				
11/19/2018	1300	720		2100	
11/20/2018			1400		
3/12/2019					1370
4/10/2019	1700				
5/14/2019	1560				
5/15/2019		780	1510	2800	
10/8/2019	1540				
10/9/2019		748		2550	
10/10/2019			719		1490
10/16/2019	1680				
4/6/2020	1530		1400	2580	1360
4/8/2020		658			
7/13/2020	1450		1300	2610	1280
7/14/2020		845			
2/22/2021	1400				
2/23/2021		747			
2/24/2021			1330	2280	1220

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	745	1890	2260		
4/27/2016				1050	1550
6/20/2016	964		2500		
6/21/2016				1410	1470
6/22/2016		2100			
8/8/2016	1100				
8/9/2016		2050	2750		
8/24/2016	1130	2190	2770		
10/3/2016	1140		3060		
10/4/2016		1950			
10/26/2016	1060	1980	2650		
11/21/2016	1100	2060	2720		
1/17/2017	1160				
1/18/2017		2620	2650		
3/22/2017	900	3200	2700		
4/18/2017	870	2500	2400		
5/31/2017	1100	2800	2700		
8/23/2017	920	2600	2700		
10/12/2017				1400	1400
10/13/2017				1400	1600
10/14/2017				1300	1400
10/15/2017				1300	1400
10/16/2017				1300	1400
10/17/2017				1300	1400
11/16/2017				1300	1400
5/22/2018	1200				
5/23/2018			2400	1900	2100
5/24/2018		2700			
6/12/2018	860	2500	2600		
10/17/2018	970	2700	2600		
11/19/2018	1000	3000	2400		
11/20/2018				1100	1400
4/10/2019	889	2460	2090		
5/14/2019	948	2460	2240		
5/15/2019				1510	1640
10/8/2019	1230	2950		1570	
10/9/2019					1550
10/10/2019			2690		
10/16/2019	1170	2820	3050		
4/6/2020	786	1670	1810		
4/8/2020				1270	1380
7/13/2020	843	2130			
7/14/2020			1970	1330	
7/15/2020					1410
2/22/2021	864	3040	2040		
2/23/2021				1320	1420

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.000203		<0.000203		
4/27/2016		<0.000203			
4/28/2016				<0.000203	
6/20/2016	<0.000203				
6/22/2016			<0.000203	<0.000203	
6/23/2016		<0.000203			
8/8/2016	<0.000203				
8/9/2016			<0.000203		
8/10/2016		<0.000203		<0.000203	
8/24/2016	<0.000203				
10/3/2016	<0.000203				
10/4/2016			<0.000203		
10/5/2016		<0.000203		<0.000203	
10/26/2016	<0.000203				
11/21/2016	<0.000203	<0.000203	<0.000203		
11/22/2016				<0.000203	
1/17/2017	<0.000203	<0.000203	<0.000203		
1/18/2017				<0.000203	
3/21/2017		<0.000203	<0.000203	<0.000203	
3/22/2017	<0.000203				
4/18/2017	<0.000203				
5/30/2017	<0.000203		<0.000203		
5/31/2017		<0.000203		<0.000203	
2/13/2018	<0.000203				
2/14/2018			<0.000203		
2/15/2018		<0.000203		<0.000203	
5/22/2018	<0.000203		<0.000203		
5/24/2018		<0.000203		<0.000203	
6/12/2018	<0.000203				
10/17/2018	<0.000203				
11/19/2018	<0.000203	<0.000203		<0.000203	
11/20/2018			<0.000203		
3/12/2019					<0.000203
4/10/2019	<0.000203				
5/14/2019	<0.000203				
5/15/2019		<0.000203	<0.000203	<0.000203	
10/8/2019	<0.000203				
10/9/2019		<0.000203		<0.000203	
10/10/2019			<0.000203		<0.000203
10/16/2019	<0.000203				
4/6/2020	<0.000203		<0.000203	<0.000203	<0.000203
4/8/2020		<0.000203			
7/13/2020	<0.000203		<0.000203	<0.000203	<0.000203
7/14/2020		<0.000203			
2/22/2021	<0.000203				
2/23/2021		<0.000203			
2/24/2021			<0.000203	<0.000203	<0.000203

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.000203	0.000205 (J)	<0.000203		
4/27/2016				<0.000203	<0.000203
6/20/2016	<0.000203		<0.000203		
6/21/2016				<0.000203	<0.000203
6/22/2016		<0.000203			
8/8/2016	<0.000203				
8/9/2016		<0.000203	<0.000203		
8/24/2016	<0.000203	<0.000203	<0.000203		
10/3/2016	<0.000203		<0.000203		
10/4/2016		<0.000203			
10/26/2016	<0.000203	0.000209 (J)	<0.000203		
11/21/2016	<0.000203	<0.000203	<0.000203		
1/17/2017	<0.000203				
1/18/2017		<0.000203	<0.000203		
3/22/2017	<0.000203	<0.000203	<0.000203		
4/18/2017	<0.000203	<0.000203	<0.000203		
5/31/2017	<0.000203	<0.000203	<0.000203		
10/12/2017				<0.000203	<0.000203
10/13/2017				<0.000203	<0.000203
10/14/2017				<0.000203	<0.000203
10/15/2017				<0.000203	<0.000203
10/16/2017				<0.000203	<0.000203
10/17/2017				<0.000203	<0.000203
2/13/2018	<0.000203	<0.000203	<0.000203		
2/14/2018				<0.000203	<0.000203
5/22/2018	<0.000203				
5/23/2018			<0.000203	<0.000203	<0.000203
5/24/2018		<0.000203			
6/12/2018	<0.000203	<0.000203	<0.000203		
10/17/2018	<0.000203	<0.000203	<0.000203		
11/19/2018	<0.000203	0.000226 (J)	<0.000203		
11/20/2018				<0.000203	<0.000203
4/10/2019	<0.000203	<0.000203	<0.000203		
5/14/2019	<0.000203	<0.000203	<0.000203		
5/15/2019				<0.000203	<0.000203
10/8/2019	<0.000203	<0.000203		<0.000203	
10/9/2019					<0.000203
10/10/2019			<0.000203		
10/16/2019	<0.000203	<0.000203	<0.000203		
4/6/2020	<0.000203	<0.000203	<0.000203		
4/8/2020				<0.000203	<0.000203
7/13/2020	<0.000203	<0.000203			
7/14/2020			<0.000203	<0.000203	
7/15/2020					<0.000203
2/22/2021	<0.000203	<0.000203	<0.000203		
2/23/2021				<0.000203	<0.000203

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	2080 (D)		2800		
4/27/2016		1940			
4/28/2016				3730	
6/20/2016	2060 (D)				
6/22/2016			2550	2760	
6/23/2016		1680			
8/8/2016	2070 (D)				
8/9/2016			2860		
8/10/2016		1660		3710	
8/24/2016	2040 (D)				
10/3/2016	2110 (D)				
10/4/2016			2800		
10/5/2016		1640		3580	
10/26/2016	2000 (D)				
11/21/2016	2070 (D)	1390	2920		
11/22/2016				3400	
1/17/2017	1930 (D)	1300	2750		
1/18/2017				3360	
3/21/2017		1170	2750	3320	
3/22/2017	2060 (D)				
4/18/2017	2140 (D)				
5/30/2017	2240 (D)		2890		
5/31/2017		1210		3440	
8/23/2017	2160 (D)	1160	2760	3250	
5/22/2018	2380 (D)		2610		
5/24/2018		1100		3300	
6/12/2018	2400				
10/17/2018	2220				
11/19/2018	2360	1220		3400	
11/20/2018			2480		
3/12/2019					2440
4/10/2019	2630				
5/14/2019	2340 (D)				
5/15/2019		1230	2560	3890	
10/8/2019	2330				
10/9/2019		1120		4090	
10/10/2019			2460		2360
10/16/2019	3650				
4/6/2020	2240		2430	4060	2310
4/8/2020		1120			
7/13/2020	2240		2400	4460	2240
7/14/2020		1270			
2/22/2021	2230				
2/23/2021		1110			
2/24/2021			2370	3810	2240

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/18/2021 5:51 PM View: Constituents View

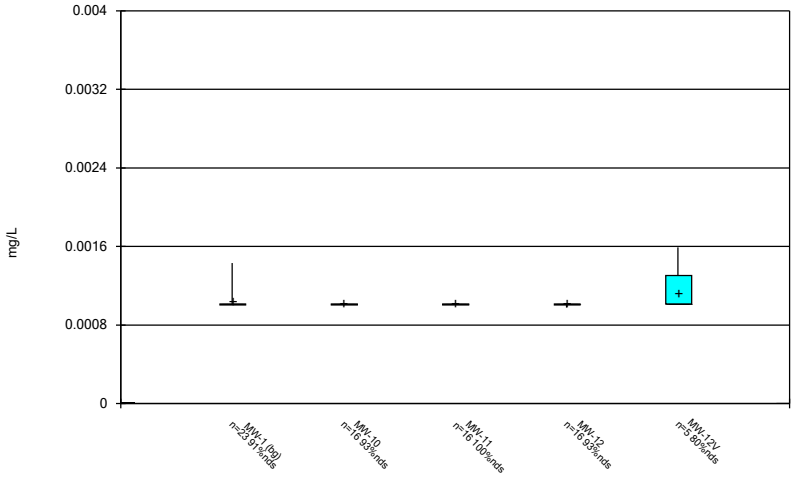
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	1260 (D)	2720 (D)	3300 (D)		
4/27/2016				1640	2480
6/20/2016	1620 (D)		3870 (D)		
6/21/2016				2460	2360
6/22/2016		3250 (D)			
8/8/2016	1740 (D)				
8/9/2016		3050 (D)	4140 (D)		
8/24/2016	1720 (D)	3080 (D)	4190 (D)		
10/3/2016	1800 (D)		4190 (D)		
10/4/2016		2900 (D)			
10/26/2016	1800 (D)	2940 (D)	4400 (D)		
11/21/2016	1740 (D)	3090 (D)	4230 (D)		
1/17/2017	1960 (D)				
1/18/2017		4020 (D)	4120 (D)		
3/22/2017	1510 (D)	4180 (D)	3980 (D)		
4/18/2017	1580 (D)	4440 (D)	3880 (D)		
5/31/2017	1730 (D)	3970 (D)	4210 (D)		
8/23/2017	1550 (D)	4050 (D)	3990 (D)		
10/12/2017				2460	2530
10/13/2017				2420	2740
10/14/2017				2320	2630
10/15/2017				1150	2530
10/16/2017				2320	2740
10/17/2017				2360	2650
11/16/2017				2460	2650
5/22/2018	1500 (D)				
5/23/2018			3740 (D)	2390	2750
5/24/2018		3680 (D)			
6/12/2018	1550	3820	4080		
10/17/2018	1740	4730	4250		
11/19/2018	1990	4710	3920		
11/20/2018				2090	2520
4/10/2019	1250 (D)	3680	3280		
5/14/2019	1480	3580 (D)	3130 (D)		
5/15/2019				2310	2540
10/8/2019	1840	4720		2340	
10/9/2019					2590
10/10/2019			4000		
10/16/2019	1830	4210	4060		
4/6/2020	1440	2630	2820		
4/8/2020				2230	2450
7/13/2020	1540	3650			
7/14/2020			3310	2210	
7/15/2020					2460
2/22/2021	1620	4670	3190		
2/23/2021				2320	2550

FIGURE B.

Sanitas™ v.9.6.28 . UG

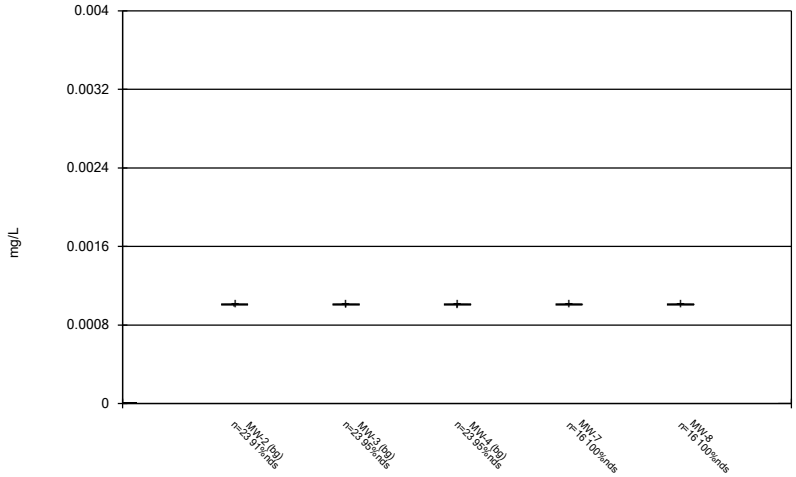
Box & Whiskers Plot



Constituent: Antimony Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

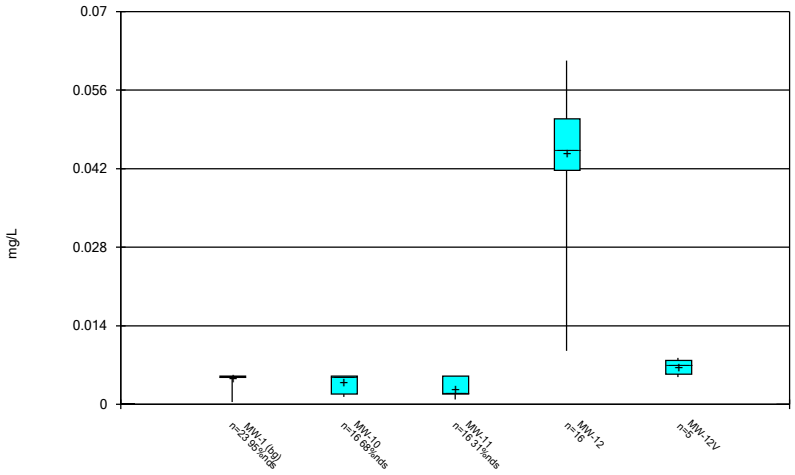
Box & Whiskers Plot



Constituent: Antimony Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

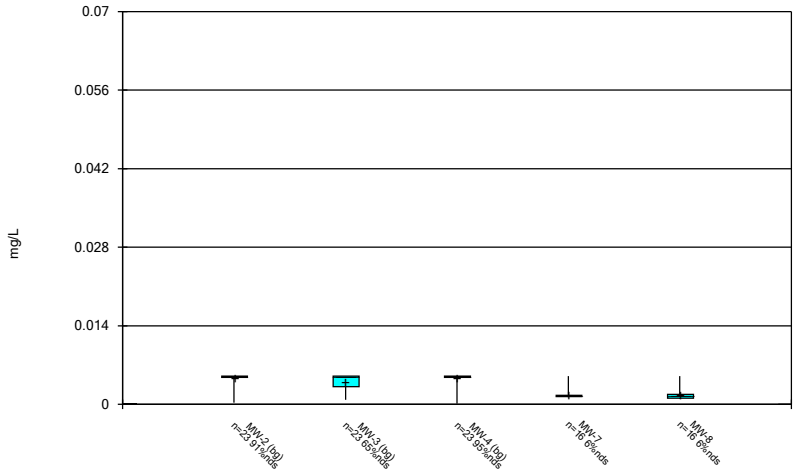
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

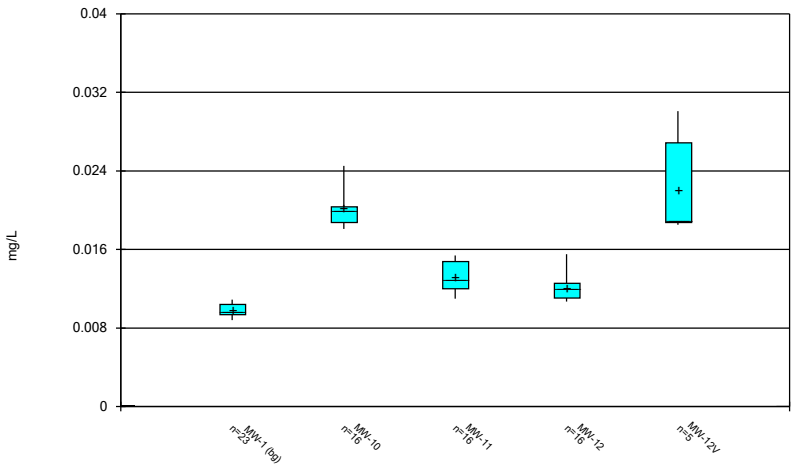
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

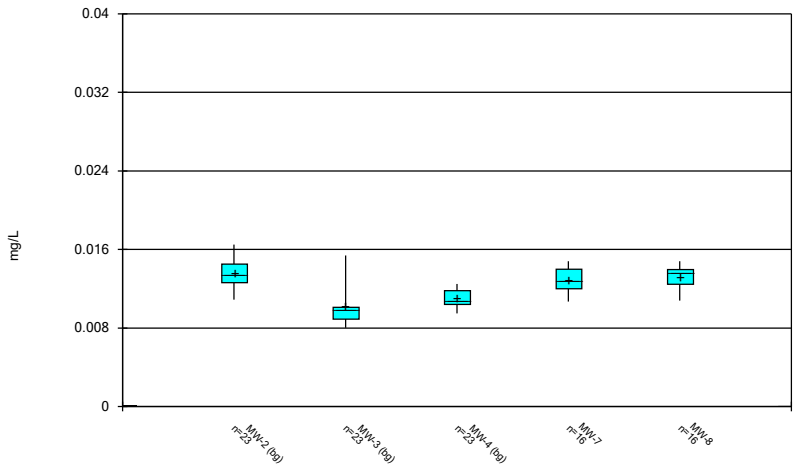
Box & Whiskers Plot



Constituent: Barium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

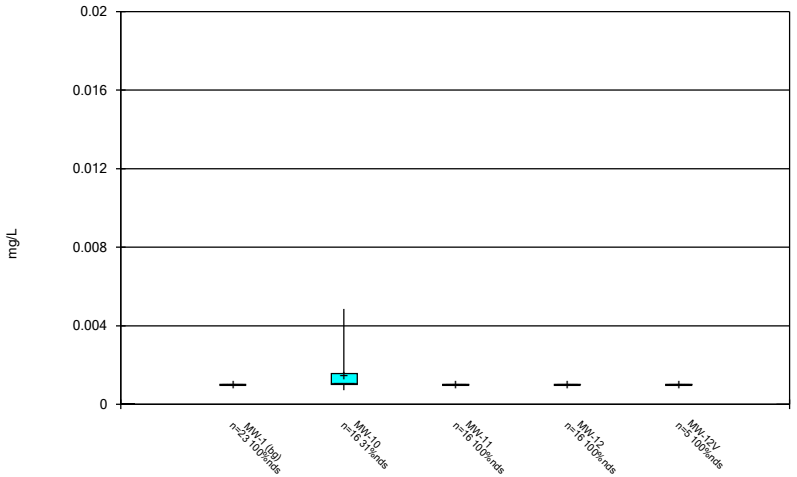
Box & Whiskers Plot



Constituent: Barium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

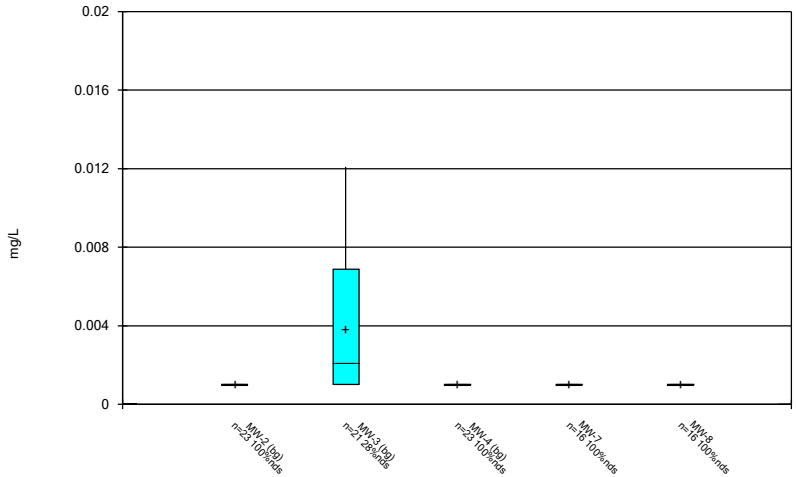
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

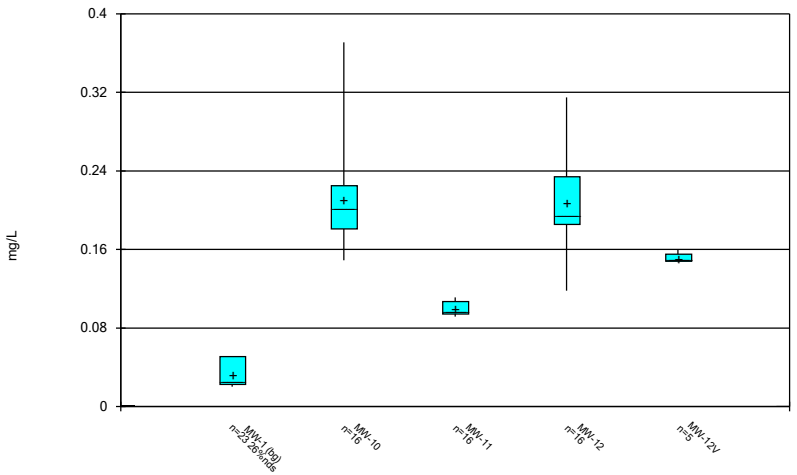
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

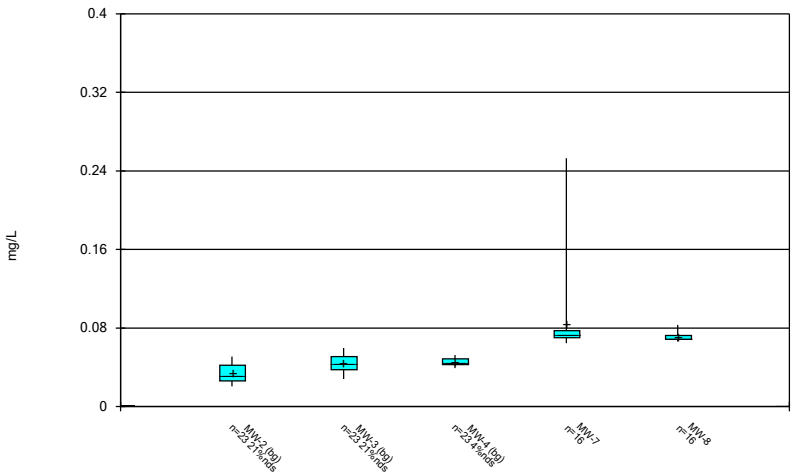
Box & Whiskers Plot



Constituent: Boron Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

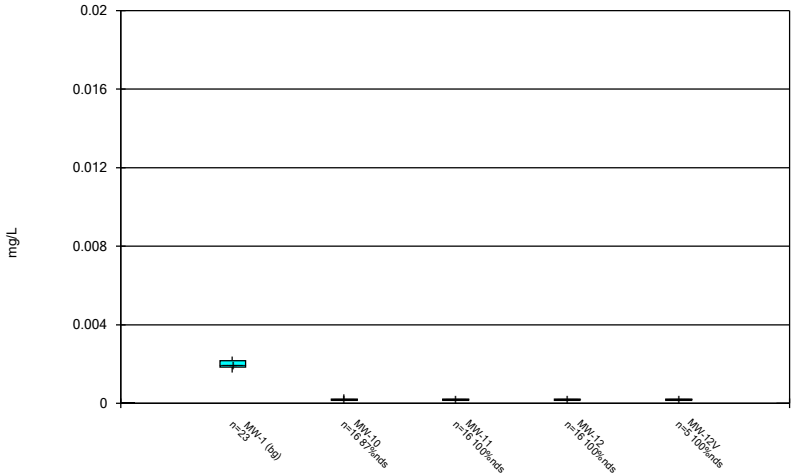
Box & Whiskers Plot



Constituent: Boron Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

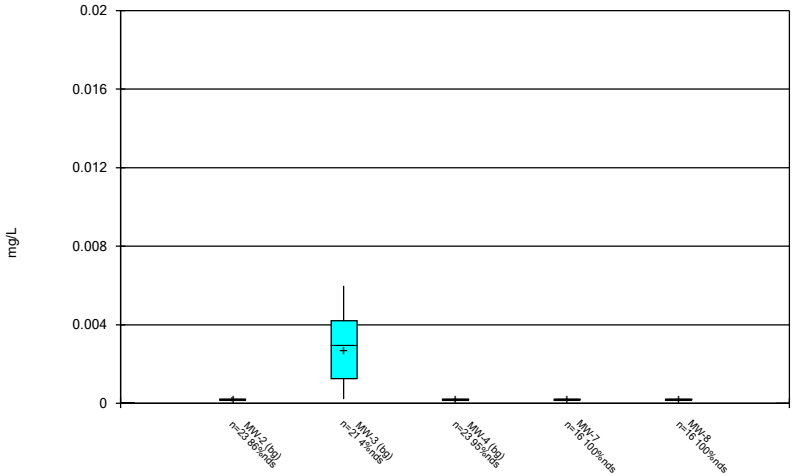
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

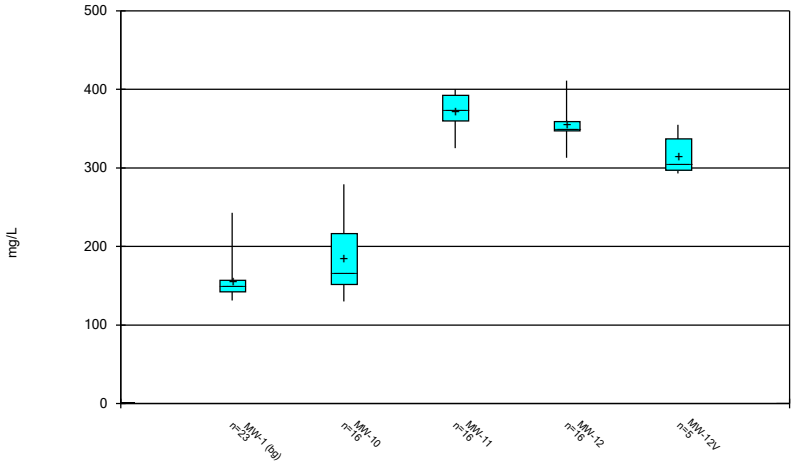
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

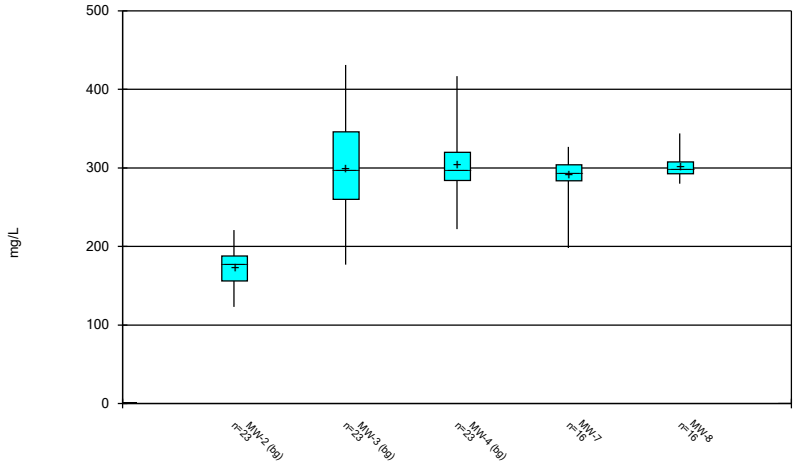
Box & Whiskers Plot



Constituent: Calcium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

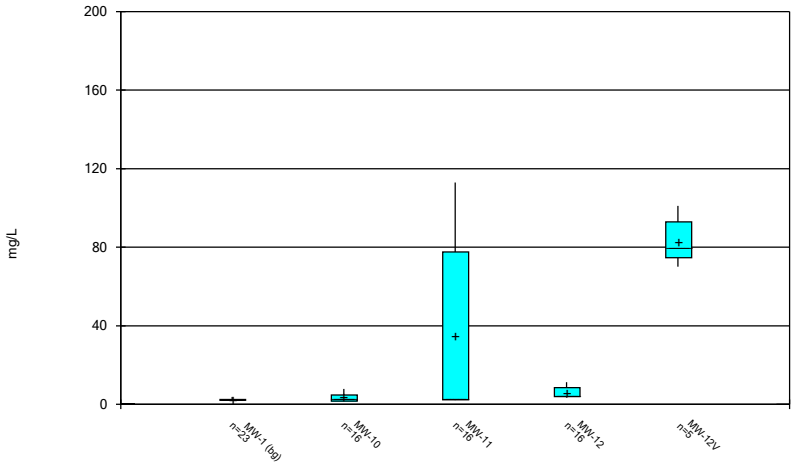
Box & Whiskers Plot



Constituent: Calcium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

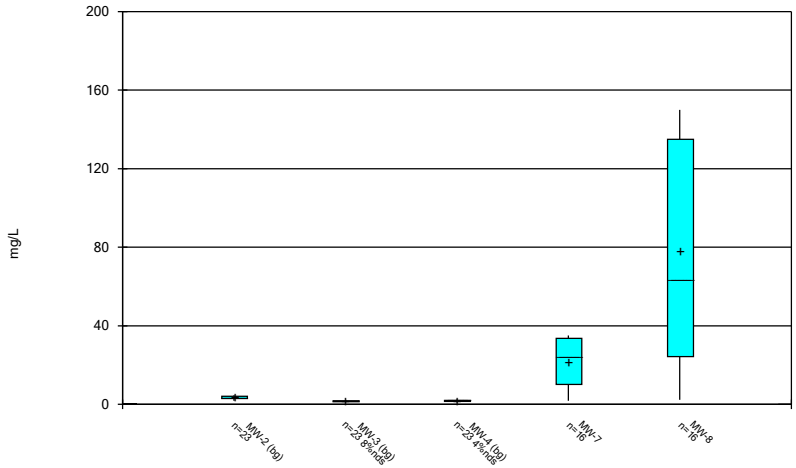
Box & Whiskers Plot



Constituent: Chloride Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

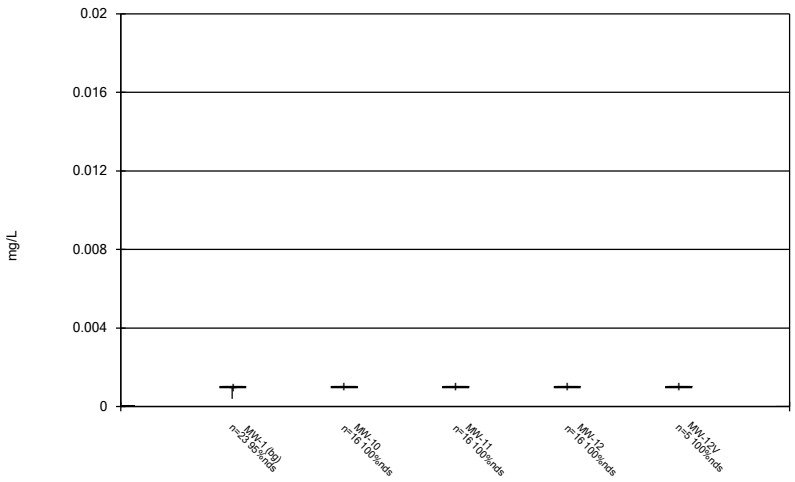
Box & Whiskers Plot



Constituent: Chloride Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

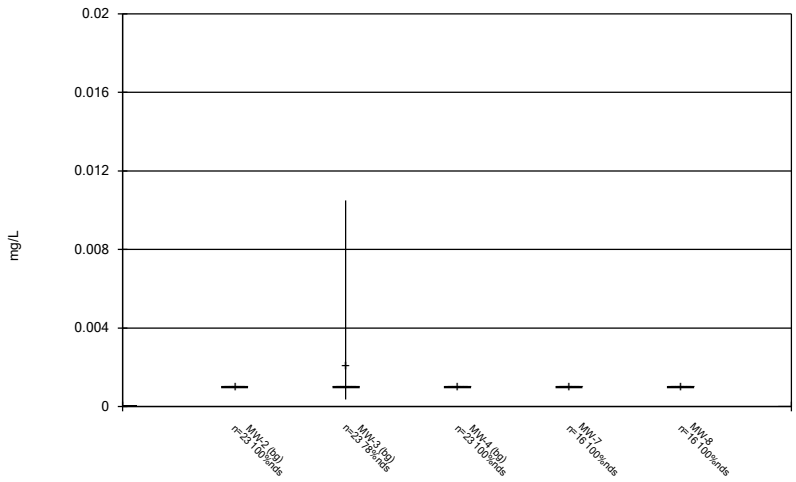
Box & Whiskers Plot



Constituent: Chromium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

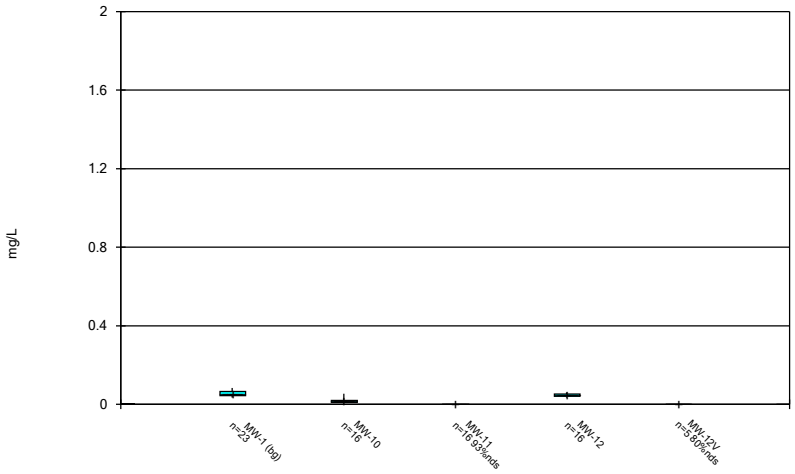
Box & Whiskers Plot



Constituent: Chromium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

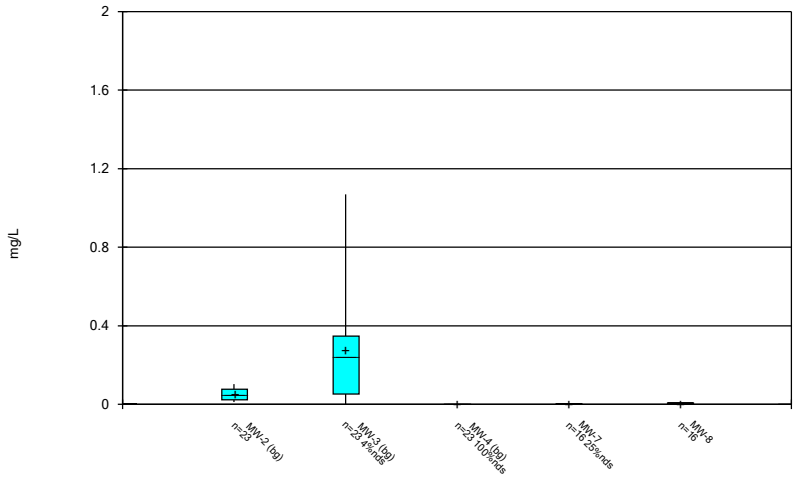
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

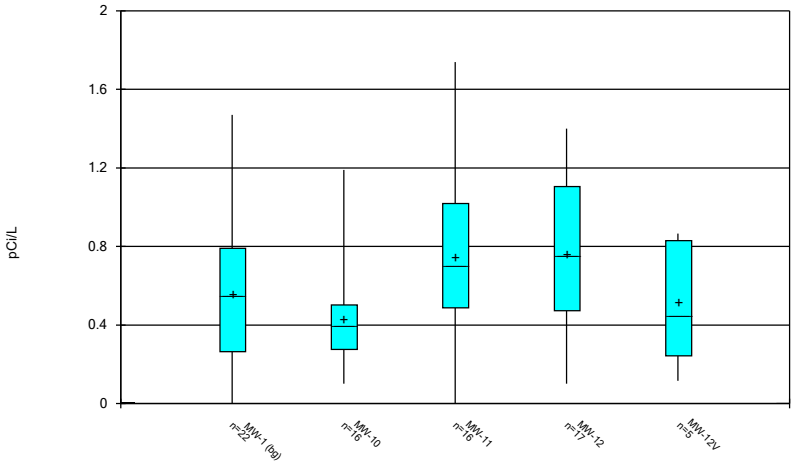
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

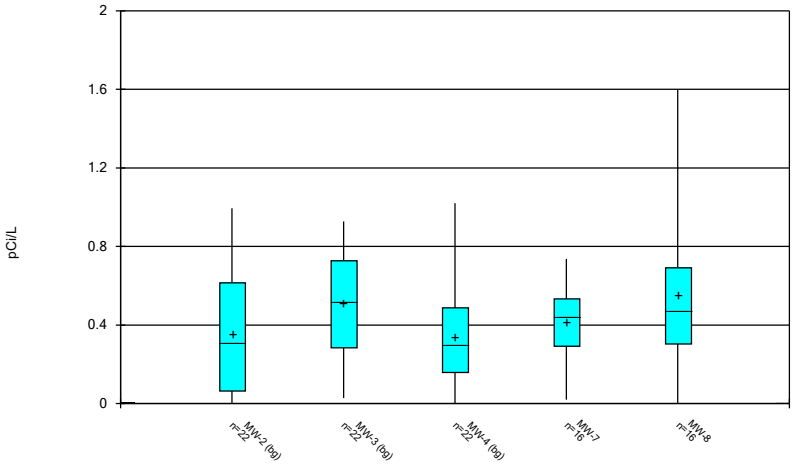
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

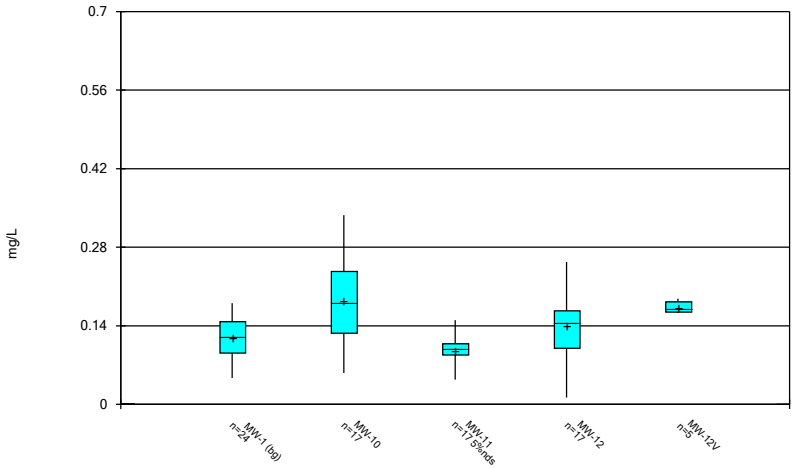
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

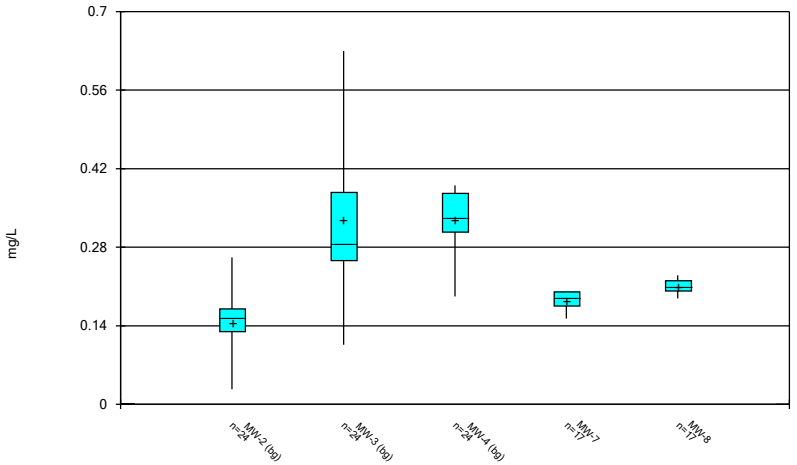
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

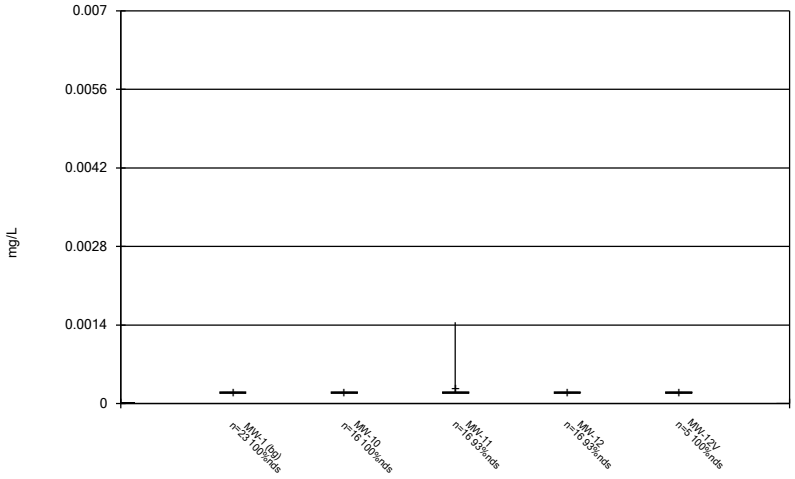
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

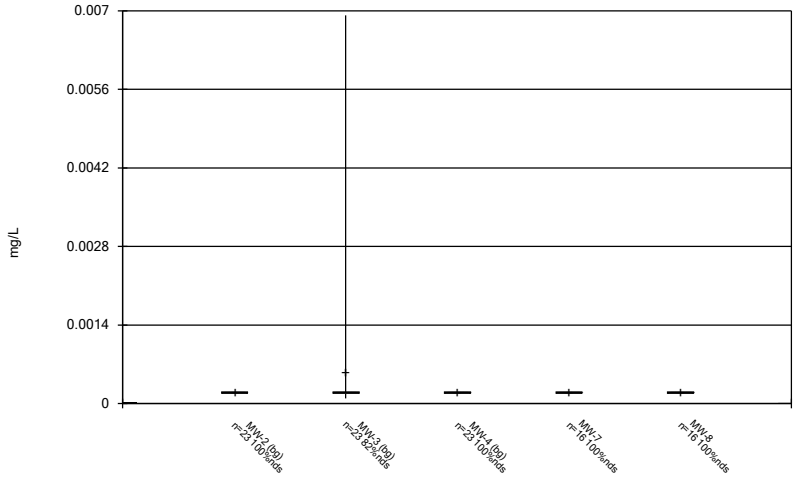
Box & Whiskers Plot



Constituent: Lead Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

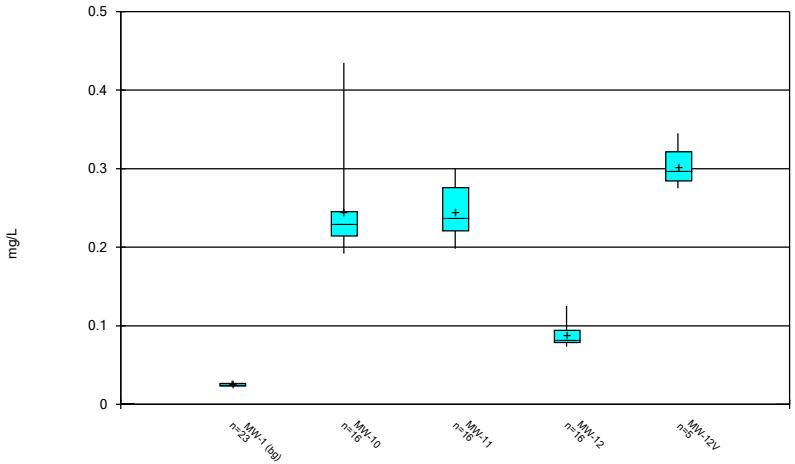
Box & Whiskers Plot



Constituent: Lead Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

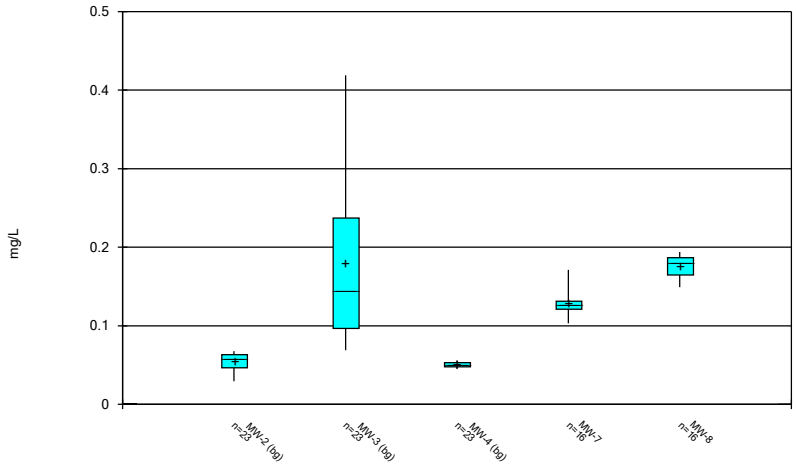
Box & Whiskers Plot



Constituent: Lithium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

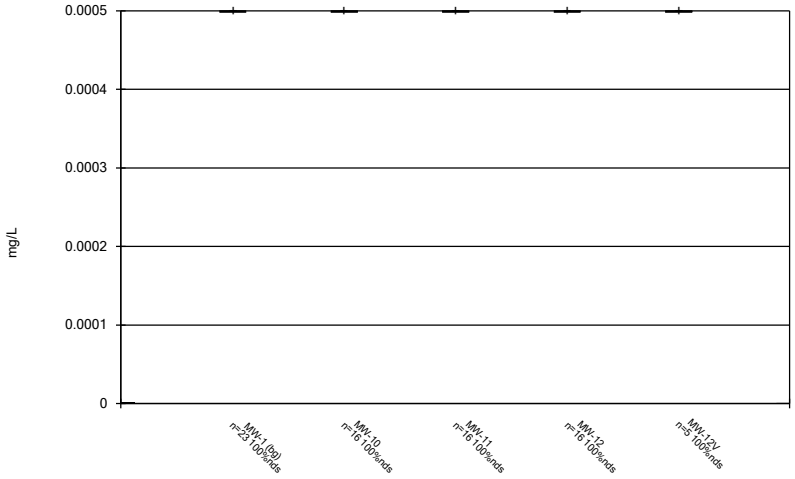
Box & Whiskers Plot



Constituent: Lithium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

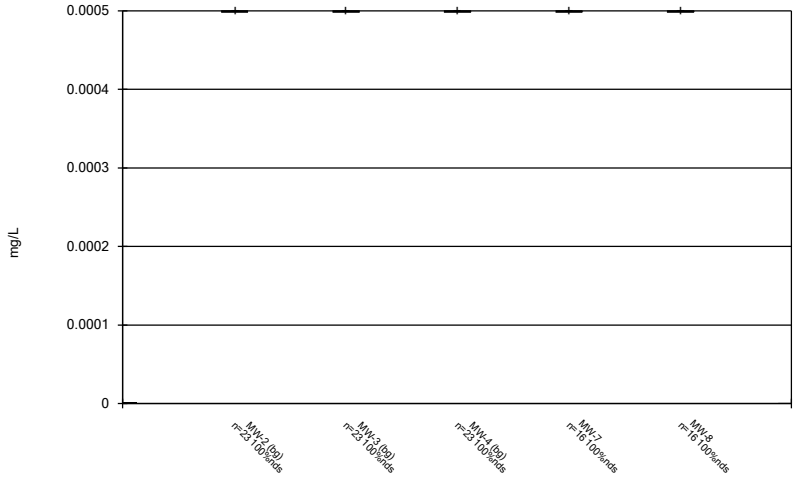
Box & Whiskers Plot



Constituent: Mercury Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

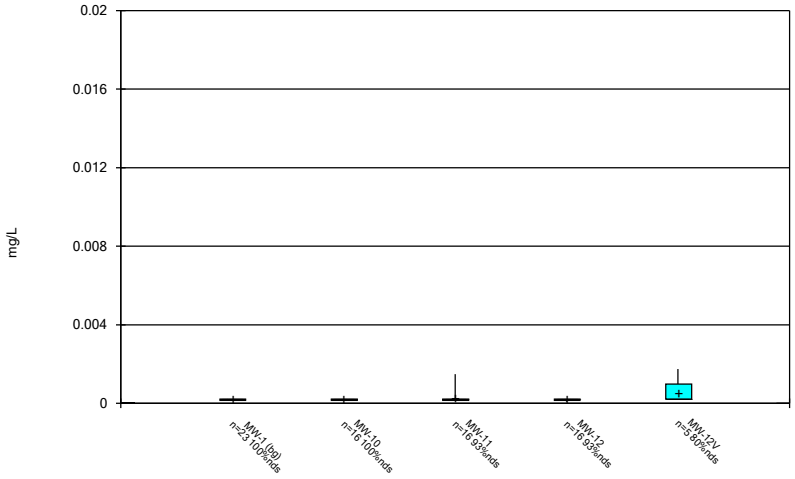
Box & Whiskers Plot



Constituent: Mercury Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

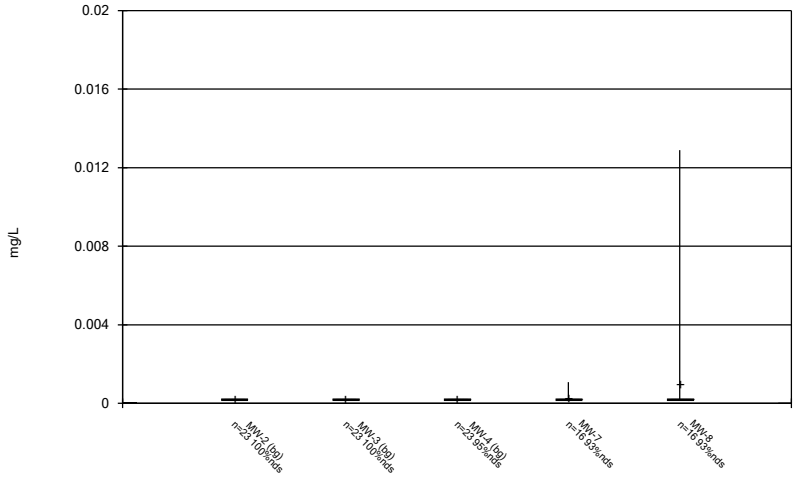
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

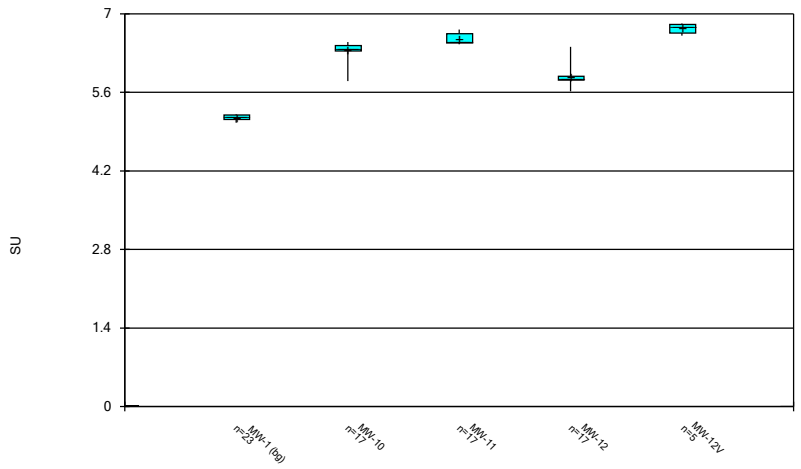
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

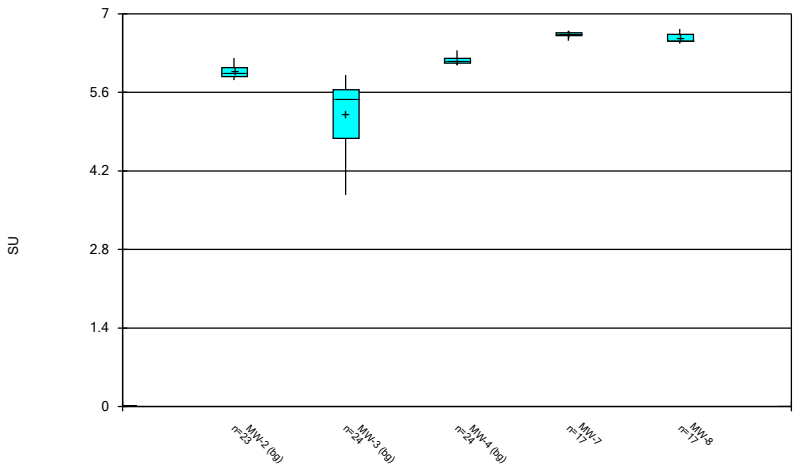
Box & Whiskers Plot



Constituent: pH Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

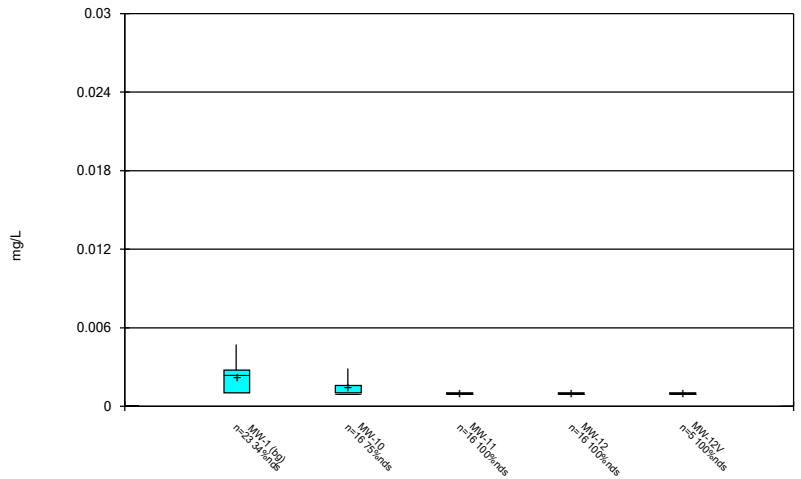
Box & Whiskers Plot



Constituent: pH Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

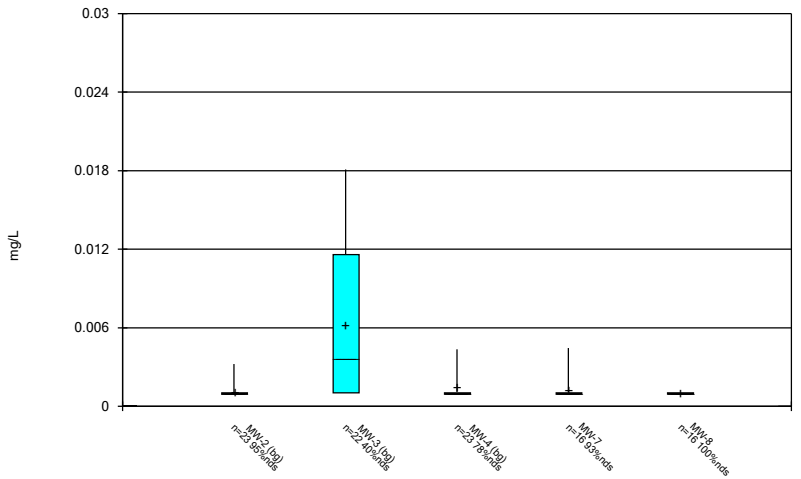
Box & Whiskers Plot



Constituent: Selenium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

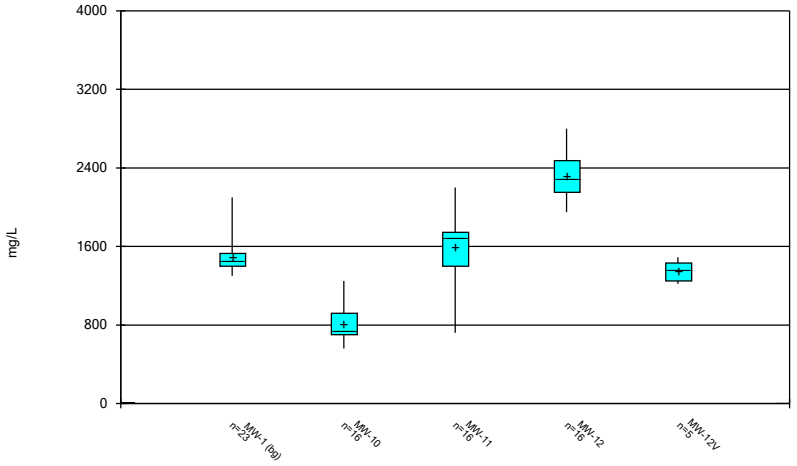
Box & Whiskers Plot



Constituent: Selenium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

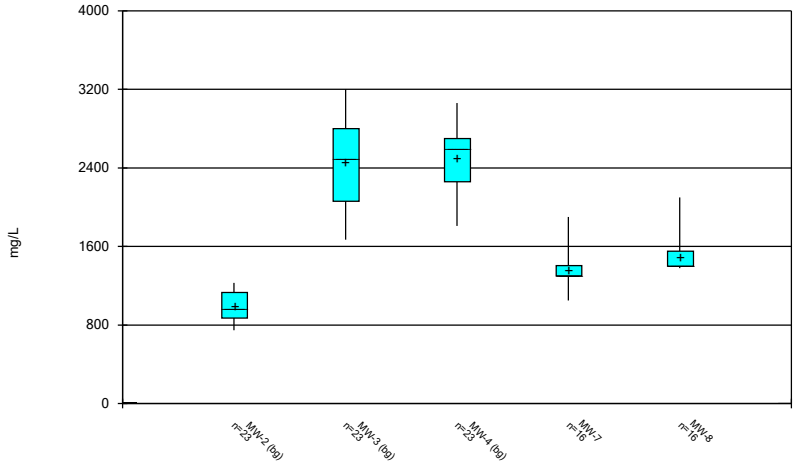
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

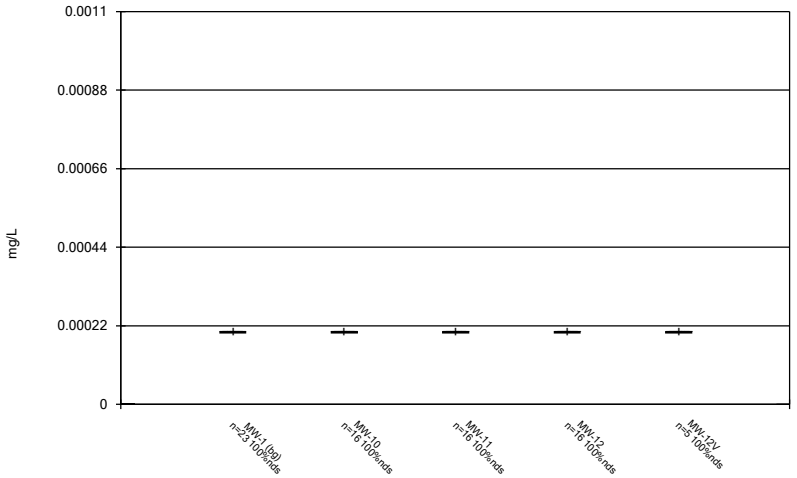
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

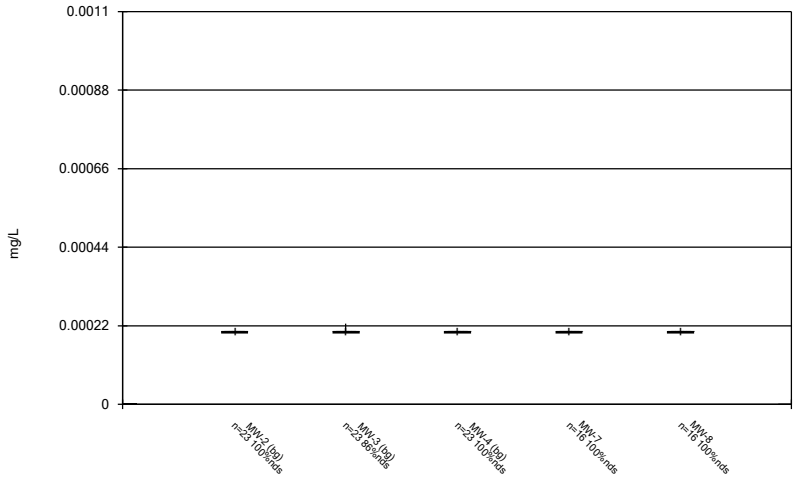
Box & Whiskers Plot



Constituent: Thallium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

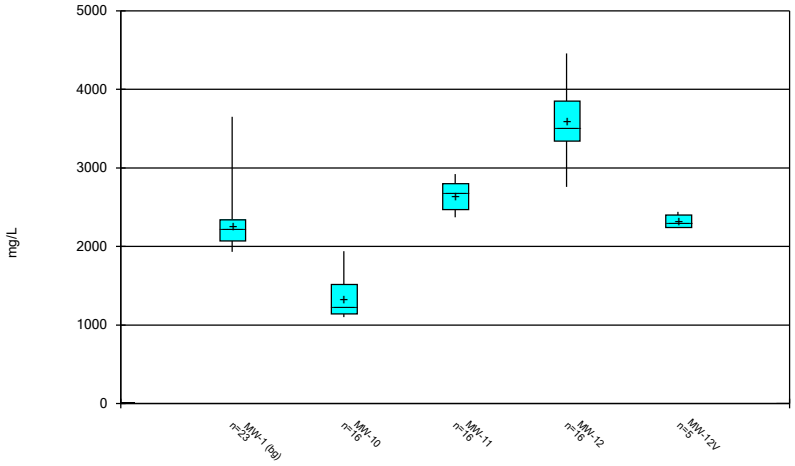
Sanitas™ v.9.6.28 . UG

Box & Whiskers Plot



Constituent: Thallium Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

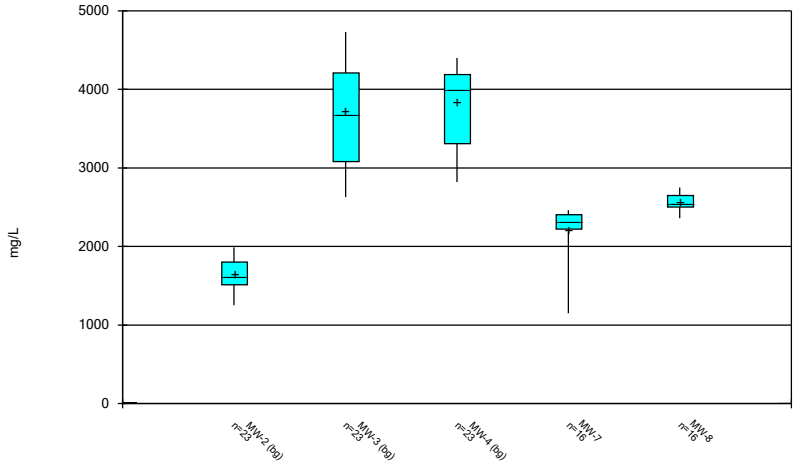
Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/18/2021 5:55 PM View: Constituents View
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

FIGURE C.

Outlier Summary

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 7:47 PM

	MW-3 Beryllium (mg/L)	MW-3 Cadmium (mg/L)	MW-3 Selenium (mg/L)
4/25/2016		0.0121 (O)	
1/18/2017	0.0169 (O)		
2/13/2018			0.0209 (O)
11/19/2018	0.0185 (O)		
7/13/2020		0.00885 (O)	

FIGURE D.

Appendix III - Interwell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 7:48 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**MW-10**	**0.0596**	**n/a**	**2/23/2021**	**0.205**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-11**	**0.0596**	**n/a**	**2/24/2021**	**0.108**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-12**	**0.0596**	**n/a**	**2/24/2021**	**0.193**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-11**	**3.879**	**n/a**	**2/24/2021**	**113**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-12**	**3.879**	**n/a**	**2/24/2021**	**11.2**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-7**	**3.879**	**n/a**	**2/23/2021**	**7.85**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-8**	**3.879**	**n/a**	**2/23/2021**	**17.9**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
pH (SU)	**MW-10**	**6.35**	**3.77**	**2/23/2021**	**6.45**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-11**	**6.35**	**3.77**	**2/24/2021**	**6.67**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-7**	**6.35**	**3.77**	**2/23/2021**	**6.7**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-8**	**6.35**	**3.77**	**2/23/2021**	**6.73**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**

Appendix III - Interwell Prediction Limits - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 7:48 PM

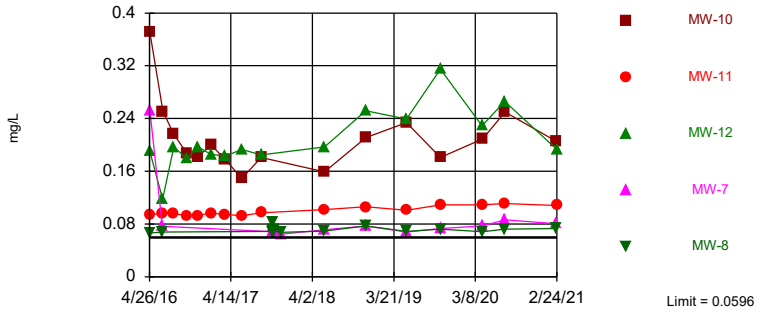
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**MW-10**	**0.0596**	**n/a**	**2/23/2021**	**0.205**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-11**	**0.0596**	**n/a**	**2/24/2021**	**0.108**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-12**	**0.0596**	**n/a**	**2/24/2021**	**0.193**	**Yes**	**92**	**n/a**	**n/a**	**18.48**	**n/a**	**n/a**	**0.0002288**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	MW-7	0.0596	n/a	2/23/2021	0.0803J	No	92	n/a	n/a	18.48	n/a	n/a	0.0002288	NP Inter (normality) 1 of 2
Boron (mg/L)	MW-8	0.0596	n/a	2/23/2021	0.0731J	No	92	n/a	n/a	18.48	n/a	n/a	0.0002288	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-10	3.879	n/a	2/23/2021	3.63	No	92	1.292	0.1543	3.261	None	x^(1/3)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	**MW-11**	**3.879**	**n/a**	**2/24/2021**	**113**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-12**	**3.879**	**n/a**	**2/24/2021**	**11.2**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-7**	**3.879**	**n/a**	**2/23/2021**	**7.85**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-8**	**3.879**	**n/a**	**2/23/2021**	**17.9**	**Yes**	**92**	**1.292**	**0.1543**	**3.261**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
pH (SU)	**MW-10**	**6.35**	**3.77**	**2/23/2021**	**6.45**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-11**	**6.35**	**3.77**	**2/24/2021**	**6.67**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	MW-12	6.35	3.77	2/24/2021	5.83	No	94	n/a	n/a	0	n/a	n/a	0.0004399	NP Inter (normality) 1 of 2
pH (SU)	**MW-7**	**6.35**	**3.77**	**2/23/2021**	**6.7**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-8**	**6.35**	**3.77**	**2/23/2021**	**6.73**	**Yes**	**94**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004399**	**NP Inter (normality) 1 of 2**

Sanitas™ v.9.6.28 . UG

Exceeds Limit: MW-10, MW-11, MW-12

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 92 background values. 18.48% NDs. Annual per-constituent alpha = 0.002286. Individual comparison alpha = 0.0002288 (1 of 2). Comparing 5 points to limit.

Constituent: Boron Analysis Run 5/16/2021 7:47 PM View: Appendix III - Interwell PLs

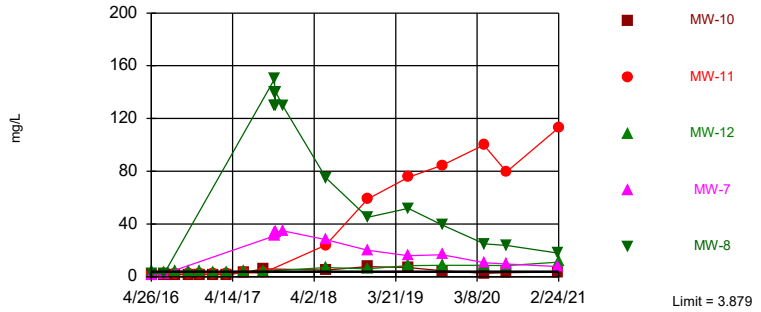
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Exceeds Limit: MW-11, MW-12, MW-7, MW-8

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=1.292, Std. Dev.=0.1543, n=92, 3.261% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9683, critical = 0.962. Kappa = 1.808 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Chloride Analysis Run 5/16/2021 7:47 PM View: Appendix III - Interwell PLs

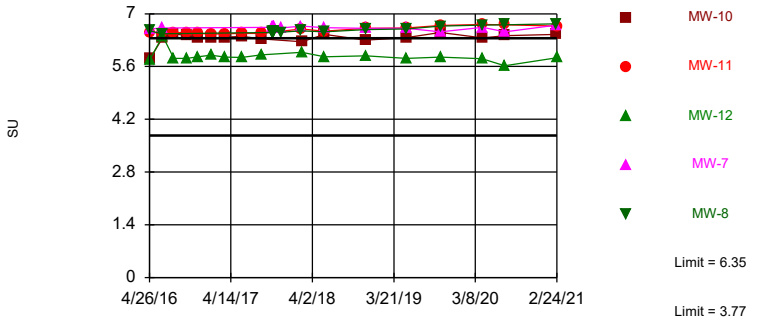
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Exceeds Limits: MW-10, MW-11, MW-7, MW-8

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 94 background values. Annual per-constituent alpha = 0.004394. Individual comparison alpha = 0.0004399 (1 of 2). Comparing 5 points to limit.

Constituent: pH Analysis Run 5/16/2021 7:47 PM View: Appendix III - Interwell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/16/2021 7:48 PM View: Appendix III - Interwell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3 (bg)	MW-4 (bg)	MW-2 (bg)	MW-1 (bg)	MW-11	MW-8	MW-10	MW-7	MW-12
4/25/2016	0.028 (J)	0.0414 (J)	0.0241 (J)						
4/26/2016				0.0231 (J)	0.094 (J)				
4/27/2016						0.0662 (J)	0.371	0.253	
4/28/2016									0.19
6/20/2016		0.0434 (J)	0.0284 (J)	0.0227 (J)					
6/21/2016						0.0681 (J)		0.0768 (J)	
6/22/2016	0.0433 (J)				0.0959 (J)				0.118
6/23/2016							0.251		
8/8/2016			0.034 (J)	0.0278 (J)					
8/9/2016	0.0429 (J)	0.0453 (J)			0.0964 (J)				
8/10/2016							0.216		0.197
8/24/2016	0.0431 (J)	0.0451 (J)	0.0316 (J)	0.0247 (J)					
10/3/2016		0.0511 (J)	0.0367 (J)	0.0307 (J)					
10/4/2016	0.04 (J)				0.0916 (J)				
10/5/2016							0.187		0.179
10/26/2016	0.0375 (J)	0.0507 (J)	0.0331 (J)	0.0241 (J)					
11/21/2016	0.0406 (J)	0.0458 (J)	0.035 (J)	0.0202 (J)	0.0929 (J)		0.182		
11/22/2016									0.197
1/17/2017			0.0259 (J)	0.0201 (J)	0.0963 (J)		0.2		
1/18/2017	0.0548 (J)	0.0445 (J)							0.186
3/21/2017					0.0947 (J)		0.178		0.183
3/22/2017	0.0344 (J)	0.0432 (J)	0.0243 (J)	0.0224 (J)					
4/18/2017	<0.1015	0.0409 (J)	0.0206 (J)	<0.1015					
5/30/2017				<0.1015	0.0926 (J)				
5/31/2017	0.0454 (J)	0.0392 (J)	0.0234 (J)				0.149		0.193
8/23/2017	0.0425 (J)	0.042 (J)	0.0267 (J)	0.0253 (J)	0.0968 (J)		0.181		0.185
10/12/2017						0.0687 (J)		0.0685 (J)	
10/13/2017						0.0831 (J)		0.0674 (J)	
10/14/2017						0.0702 (J)		0.0756 (J)	
10/15/2017						0.0702 (J)		0.0719 (J)	
10/16/2017						0.0707 (J)		0.0726 (J)	
10/17/2017						0.0695 (J)		0.0716 (J)	
11/16/2017						0.0675 (J)		0.0644 (J)	
5/22/2018			0.0251 (J)	0.0224 (J)	0.102				
5/23/2018		0.0433 (J)				0.0693 (J)		0.0715 (J)	
5/24/2018	0.0339 (J)						0.159		0.197
6/12/2018	0.0371 (J)	0.0478 (J)	0.0275 (J)	0.0214 (J)					
10/17/2018	0.0596 (J)	0.0468 (J)	0.0321 (J)	0.0216 (J)					
11/19/2018	0.0514 (J)	0.0526 (J)	0.0324 (J)	0.0237 (J)			0.211		0.252
11/20/2018					0.106	0.0771 (J)		0.0772 (J)	
4/10/2019	<0.1015	0.0438 (J)	<0.1015	0.0304 (J)					
5/14/2019	<0.1015	<0.1015	<0.1015	<0.1015					
5/15/2019					0.101 (J)	0.0689 (J)	0.234	0.0678 (J)	0.239
10/8/2019	0.0537 (J)		0.0371 (J)	<0.1015				0.073 (J)	
10/9/2019						0.0723 (J)	0.181		0.315
10/10/2019		0.0487 (J)			0.109				
10/16/2019	0.05 (J)	0.0505 (J)	0.0419 (J)	0.0385 (J)					
4/6/2020	<0.1015	0.0428 (J)	<0.1015	<0.1015	0.109				0.229
4/8/2020						0.0683 (J)	0.209	0.077 (J)	
7/13/2020	0.0366 (J)		<0.1015	<0.1015	0.111				0.266
7/14/2020		0.0441 (J)					0.25	0.0865 (J)	
7/15/2020						0.0723 (J)			

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/16/2021 7:48 PM View: Appendix III - Interwell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3 (bg)	MW-4 (bg)	MW-2 (bg)	MW-1 (bg)	MW-11	MW-8	MW-10	MW-7	MW-12
2/22/2021	<0.1015	0.0397 (J)	<0.1015	0.0307 (J)					
2/23/2021						0.0731 (J)	0.205	0.0803 (J)	
2/24/2021					0.108				0.193

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/16/2021 7:48 PM View: Appendix III - Interwell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3 (bg)	MW-4 (bg)	MW-2 (bg)	MW-1 (bg)	MW-11	MW-8	MW-10	MW-7	MW-12
4/25/2016	1.32	1.53	1.9						
4/26/2016				1.94	2.16				
4/27/2016						2.34	1.46	1.71	
4/28/2016									4.12
6/20/2016		1.85	3.43	2.09					
6/21/2016						2.29		2.04	
6/22/2016	1.46				2.16				3.44
6/23/2016							1.49		
8/8/2016			3.31	2.18					
8/9/2016	1.35	1.95			2.19				
8/10/2016							1.55		4.15
8/24/2016	1.47	2.07	3.23	2.22					
10/3/2016		2.02	3.21	2.34					
10/4/2016	1.59				2.21				
10/5/2016							1.58		4.12
10/26/2016	1.27	2.07	3.35	2.34					
11/21/2016	1.38	2.39	3.34	2.5	2.24		1.62		
11/22/2016									3.98
1/17/2017			3.58	2.68	2.23		1.61		
1/18/2017	1.34	1.9							3.6
3/21/2017					2.5		1.6 (J)		3.6
3/22/2017	2	1.5 (J)	3.4	3.7					
4/18/2017	2.2	1.6 (J)	2.6	2.4					
5/30/2017				2.6	3.2				
5/31/2017	1.5 (J)	2.1	4.4				3.2		3.9
8/23/2017	1.8 (J)	2.3	4.4	2.7	2.8		6.1		4.2
10/12/2017						150		31	
10/13/2017						130		32	
10/14/2017						140		33	
10/15/2017						130		34	
10/16/2017						140		34	
10/17/2017						140		34	
11/16/2017						130		35	
5/22/2018			3.2	2.3	24				
5/23/2018		2				75		28	
5/24/2018	1.6 (J)						5		7.1
6/12/2018	1.4 (J)	1.7 (J)	3.7	2.3					
10/17/2018	<2	1.5 (J)	4.6	1.7 (J)					
11/19/2018	<2	<2	3	1.7 (J)			7.8		6.1
11/20/2018					59	45		20	
4/10/2019	2.25	1.88	1.76	2.36					
5/14/2019	2.28	1.82	2.98	2.28					
5/15/2019					75.4	52	6.93	15.9	8.51
10/8/2019	1.36		4.26	2.31				16.8	
10/9/2019						39.2	4.51		8.73
10/10/2019		1.93			84.6				
10/16/2019	1.4	1.92	4.04	2.42					
4/6/2020	1.72	1.5	2.43	2.01	100				8.58
4/8/2020						24.9	2.64	10.6	
7/13/2020	1.34		4.05	2.1	79.6				8.35
7/14/2020		1.61					3.09	9.68	
7/15/2020						23.8			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/16/2021 7:48 PM View: Appendix III - Interwell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3 (bg)	MW-4 (bg)	MW-2 (bg)	MW-1 (bg)	MW-11	MW-8	MW-10	MW-7	MW-12
2/22/2021	2.22	1.52	1.72	2.16					
2/23/2021						17.9	3.63	7.85	
2/24/2021					113				11.2

Prediction Limit

Constituent: pH (SU) Analysis Run 5/16/2021 7:48 PM View: Appendix III - Interwell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4 (bg)	MW-3 (bg)	MW-2 (bg)	MW-11	MW-1 (bg)	MW-10	MW-8	MW-7	MW-12
4/25/2016	6.22	5.56	5.94						
4/26/2016				6.49	5.2				
4/27/2016						5.8	6.55	6.6	
4/28/2016									5.78
6/20/2016	6.21		5.96		5.18				
6/21/2016							6.47	6.62	
6/22/2016		5.57		6.51					6.41
6/23/2016						6.38			
8/8/2016			5.88		5.12				
8/9/2016	6.11	5.67		6.49					
8/10/2016						6.47			5.82
8/24/2016	6.11	5.63							
10/3/2016	6.13 (D)		5.91 (D)		5.21 (D)				
10/4/2016		5.69 (D)		6.51 (D)					
10/5/2016						6.42 (D)			5.82 (D)
10/26/2016	6.12	5.56	5.84		5.2				
11/21/2016	6.09 (D)	5.42 (D)	5.82 (D)	6.48	5.19 (D)	6.38			
11/22/2016									5.86
1/17/2017			5.87 (D)	6.46	5.17 (D)	6.35			
1/18/2017	6.09 (D)	5.11 (D)							5.9
3/21/2017				6.47		6.38			5.85
3/22/2017	6.15 (D)	4.52 (D)	6.01 (D)		5.2 (D)				
4/18/2017	6.19	5.84	6.02		5.2				
5/30/2017				6.48	5.14 (D)				
5/31/2017	6.13 (D)	4.56 (D)	5.85 (D)			6.4			5.84
8/23/2017	6.12 (D)	4.77 (D)	5.89 (D)	6.48	5.12 (D)	6.33			5.91
10/12/2017							6.5	6.64	
10/13/2017							6.51	6.64	
10/14/2017							6.53	6.66	
10/15/2017							6.53	6.67	
10/16/2017							6.54	6.67	
10/17/2017							6.54	6.66	
11/16/2017							6.51	6.62	
2/13/2018	6.22	5.67	6.21		5.18				
2/14/2018				6.6			6.55	6.67	
2/15/2018						6.26			5.98
5/22/2018			6.04	6.54	5.2				
5/23/2018	6.21						6.52	6.63	
5/24/2018		5.19				6.45			5.86
6/12/2018	6.16	4.79	5.95		5.15				
10/17/2018	6.12	4.75	5.9		5.12				
11/19/2018	6.16	3.77 (E)	6.03		5.09	6.3			5.88
11/20/2018				6.61			6.58	6.61	
4/10/2019	6.14	5.54	6.1		5.11				
5/14/2019	6.23	5.71	6.07		5.19				
5/15/2019				6.62		6.37	6.6	6.61	5.82
10/8/2019		4.98	5.96		5.12			6.52	
10/9/2019						6.5	6.67		5.85
10/10/2019	6.15			6.69					
10/16/2019	6.19	4.51	5.98		5.16				
4/6/2020	6.35	5.91	6.21	6.72	5.21				5.81
4/8/2020						6.36	6.7	6.64	

Prediction Limit

Constituent: pH (SU) Analysis Run 5/16/2021 7:48 PM View: Appendix III - Interwell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4 (bg)	MW-3 (bg)	MW-2 (bg)	MW-11	MW-1 (bg)	MW-10	MW-8	MW-7	MW-12
7/13/2020		5.16	5.84	6.71	5.14				5.62
7/14/2020	6.2					6.42		6.52	
7/15/2020							6.71		
2/22/2021	6.19	5.59	6.1		5.06				
2/23/2021						6.45	6.73	6.7	
2/24/2021				6.67					5.83

FIGURE E.

Appendix III - Intrawell Prediction Limits - All Results (No Significant)

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 7:53 PM

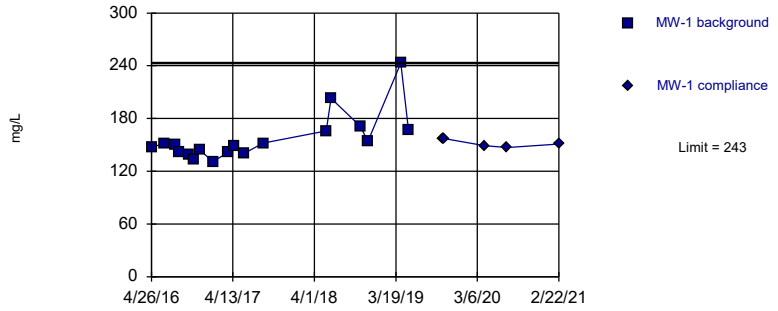
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-1	243	n/a	2/22/2021	151	No	18	n/a	n/a	0	n/a	n/a	0.005373	NP Intra (normality) 1 of 2
Calcium (mg/L)	MW-10	303.2	n/a	2/23/2021	151	No	12	190.5	48.52	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-11	420	n/a	2/24/2021	325	No	12	381.8	16.45	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-12	406.2	n/a	2/24/2021	346	No	12	353.2	22.85	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-2	220.2	n/a	2/22/2021	178	No	18	173.9	22.02	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-3	420.4	n/a	2/22/2021	312	No	18	301.6	56.48	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-4	391.5	n/a	2/22/2021	271	No	18	311.2	38.16	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-7	348.5	n/a	2/23/2021	292	No	12	2.6e7	6944823	0	None	x^3	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-8	342.9	n/a	2/23/2021	306	No	12	304.5	16.53	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-1	0.2001	n/a	2/22/2021	0.082J	No	19	0.1261	0.03556	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-10	0.3673	n/a	2/23/2021	0.202	No	13	0.1782	0.08298	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-11	0.1538	n/a	2/24/2021	0.107	No	13	0.09315	0.02661	7.692	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-12	0.2219	n/a	2/24/2021	0.172	No	13	0.1188	0.04526	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.2613	n/a	2/22/2021	0.209	No	19	0.1404	0.05808	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-3	0.6621	n/a	2/22/2021	0.246	No	19	-1.063	0.3126	0	None	ln(x)	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-4	0.4354	n/a	2/22/2021	0.357	No	19	0.1114	0.03754	0	None	x^2	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-7	0.215	n/a	2/23/2021	0.2	No	13	0.1855	0.01295	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-8	0.235	n/a	2/23/2021	0.208	No	13	0.2142	0.009112	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-1	2100	n/a	2/22/2021	1400	No	18	n/a	n/a	0	n/a	n/a	0.005373	NP Intra (normality) 1 of 2
Sulfate (mg/L)	MW-10	1288	n/a	2/23/2021	747	No	12	826.3	198.7	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-11	2179	n/a	2/24/2021	1330	No	12	1728	194.2	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-12	2781	n/a	2/24/2021	2280	No	12	2252	227.8	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-2	1269	n/a	2/22/2021	864	No	18	1003	126.2	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	3230	n/a	2/22/2021	3040	No	18	2431	379.6	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3057	n/a	2/22/2021	2040	No	18	2566	233.5	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-7	1852	n/a	2/23/2021	1320	No	12	1356	213.5	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-8	2100	n/a	2/23/2021	1420	No	12	n/a	n/a	0	n/a	n/a	0.01077	NP Intra (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-1	2557	n/a	2/22/2021	2230	No	18	2183	178	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-10	2019	n/a	2/23/2021	1110	No	12	1392	270.1	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-11	3062	n/a	2/24/2021	2370	No	12	2728	144	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-12	4100	n/a	2/24/2021	3810	No	12	3428	289.1	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-2	2067	n/a	2/22/2021	1620	No	18	1640	202.8	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	4983	n/a	2/22/2021	4670	No	18	3661	628.6	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-4	4622	n/a	2/22/2021	3190	No	18	1.6e7	2719774	0	None	x^2	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-7	2658	n/a	2/23/2021	2320	No	12	6.3e16	3.0e16	0	None	x^5	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-8	2872	n/a	2/23/2021	2550	No	12	2593	120.2	0	None	No	0.001504	Param Intra 1 of 2

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Constituent: Calcium Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

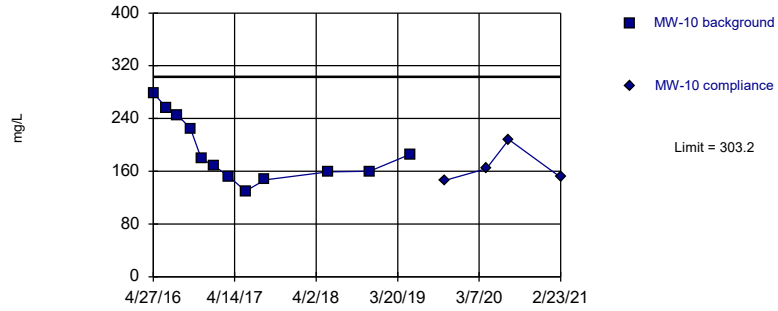
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=190.5, Std. Dev.=48.52, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.902, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

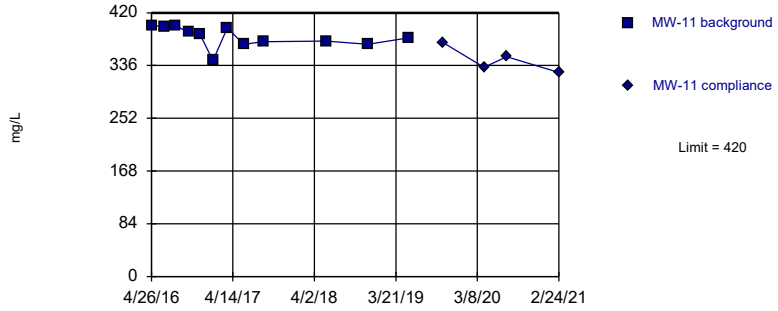
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=381.8, Std. Dev.=16.45, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9022, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

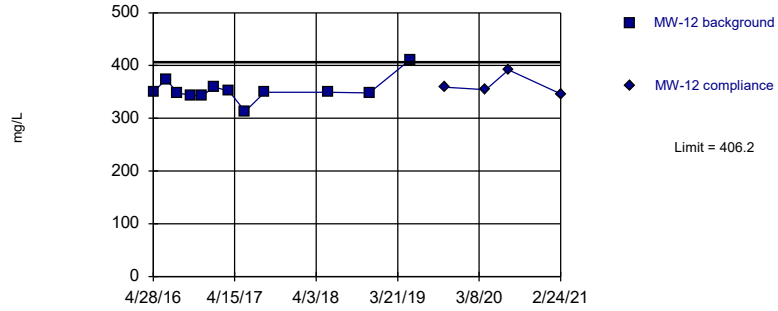
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=353.2, Std. Dev.=22.85, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8182, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

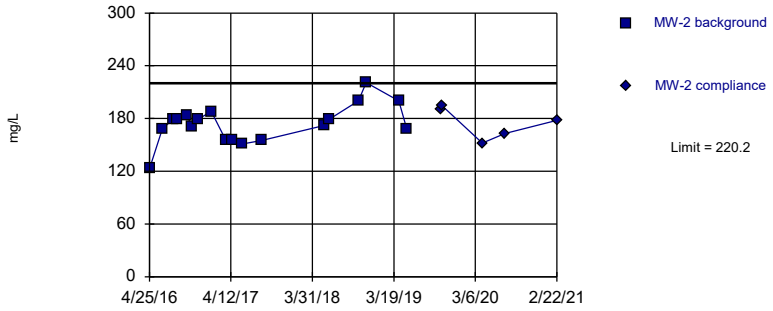
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=173.9, Std. Dev.=22.02, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9699, critical = 0.858. Kappa = 2.104 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

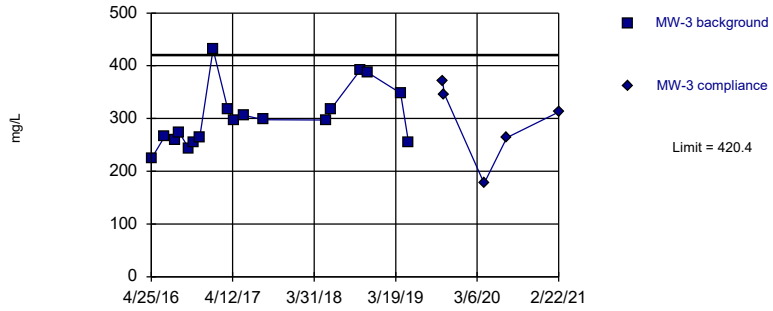
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=301.6, Std. Dev.=56.48, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9168, critical = 0.858. Kappa = 2.104 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

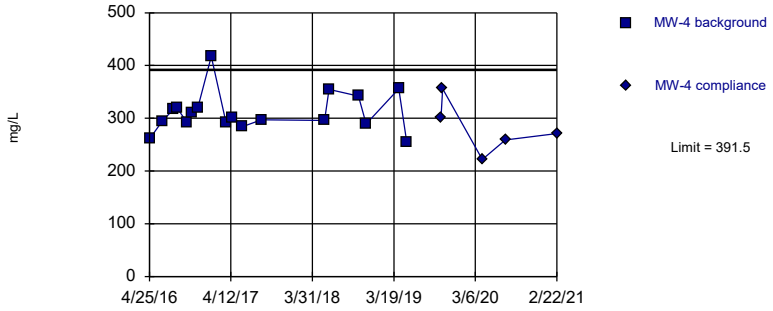
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=311.2, Std. Dev.=38.16, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9055, critical = 0.858. Kappa = 2.104 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

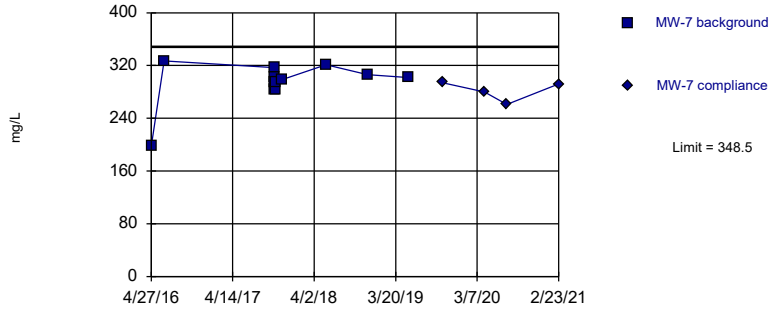
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube transformation): Mean=2.6e7, Std. Dev.=6944823, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8464, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

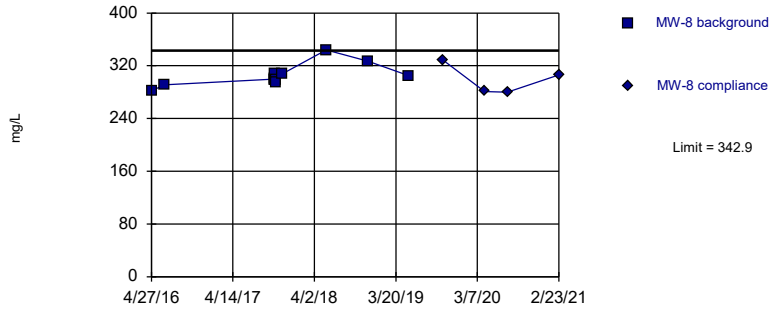
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=304.5, Std. Dev.=16.53, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8722, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

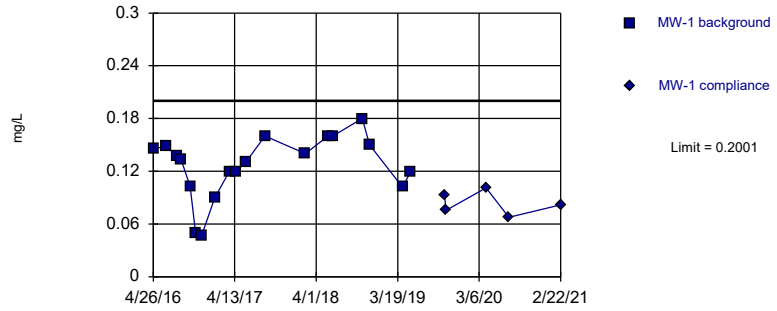
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1261, Std. Dev.=0.03556, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9188, critical = 0.863. Kappa = 2.081 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

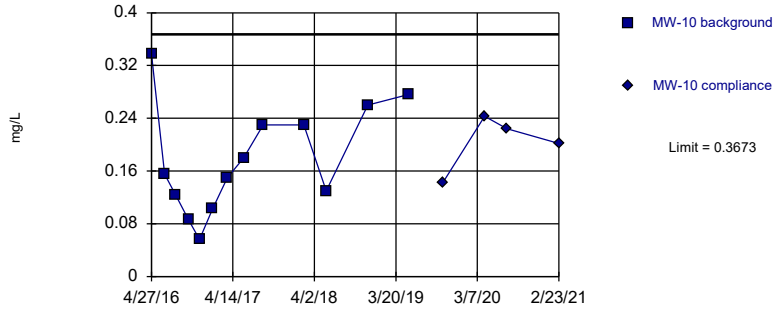
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1782, Std. Dev.=0.08298, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9658, critical = 0.814. Kappa = 2.279 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

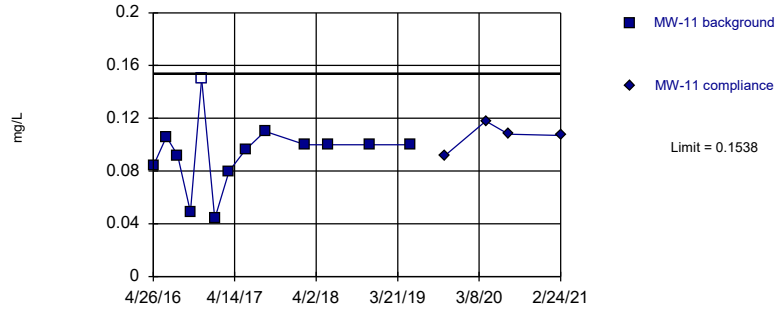
Sanitas™ v.9.6.28 . UG

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.09315, Std. Dev.=0.02661, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8943, critical = 0.814. Kappa = 2.279 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

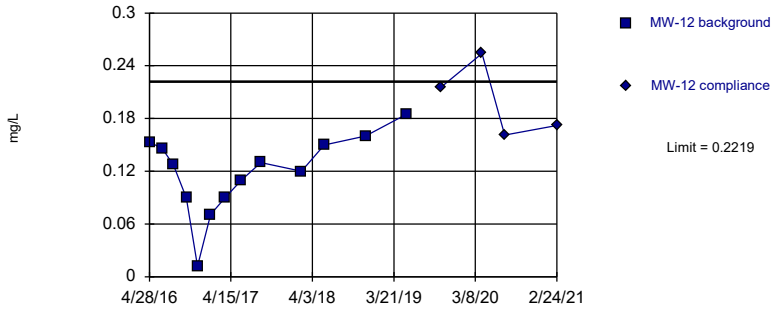
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1188, Std. Dev.=0.04526, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9427, critical = 0.814. Kappa = 2.279 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

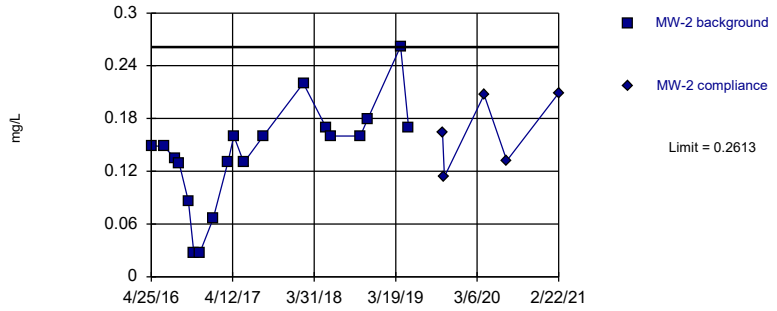
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1404, Std. Dev.=0.05808, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9263, critical = 0.863. Kappa = 2.081 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

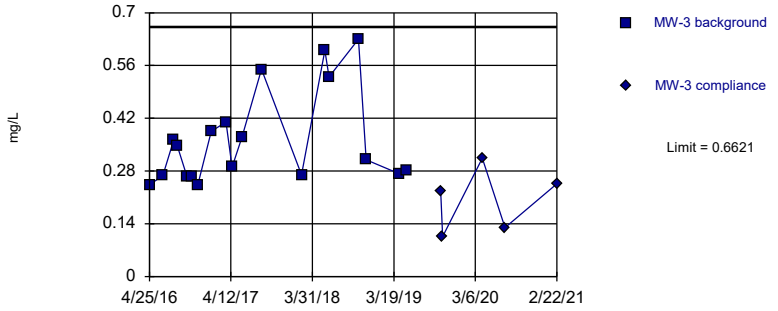
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=-1.063, Std. Dev.=0.3126, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.875, critical = 0.863. Kappa = 2.081 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

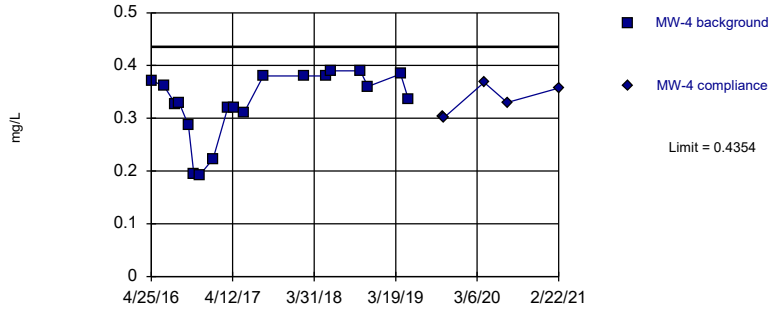
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=0.1114, Std. Dev.=0.03754, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8742, critical = 0.863. Kappa = 2.081 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

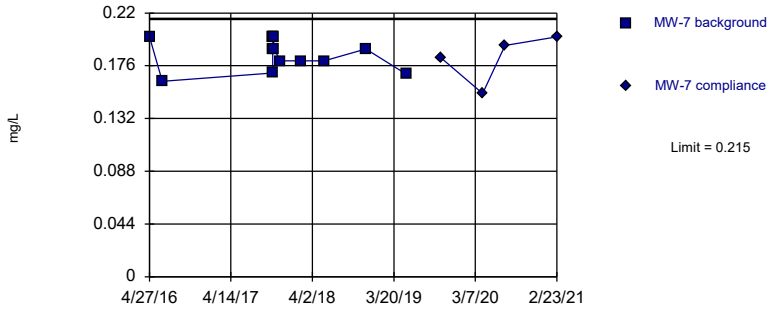
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1855, Std. Dev.=0.01295, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8949, critical = 0.814. Kappa = 2.279 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

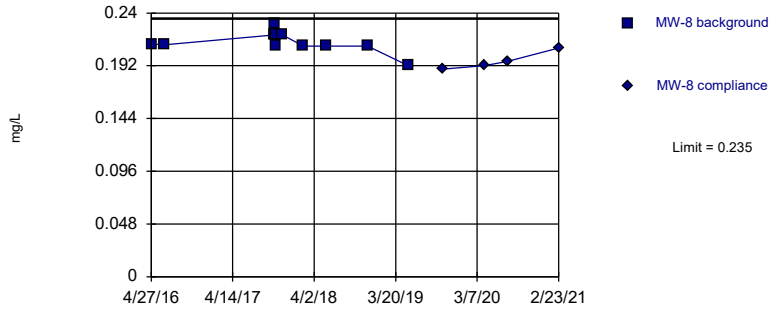
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2142, Std. Dev.=0.009112, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8671, critical = 0.814. Kappa = 2.279 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

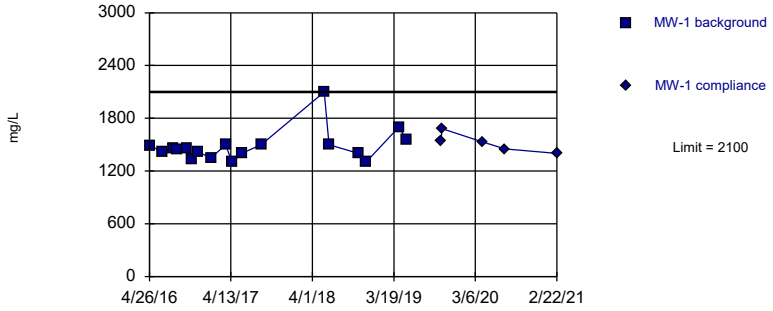
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Constituent: Sulfate Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

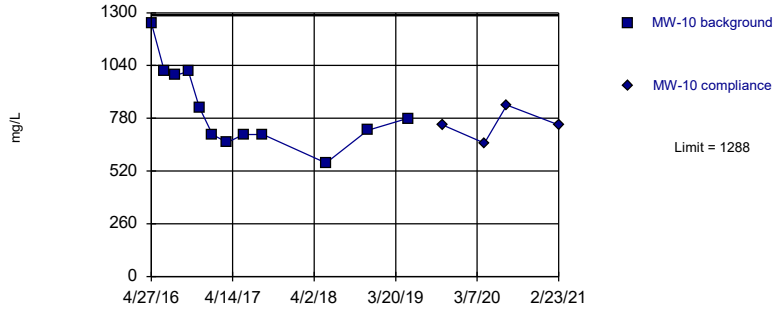
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=826.3, Std. Dev.=198.7, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9061, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

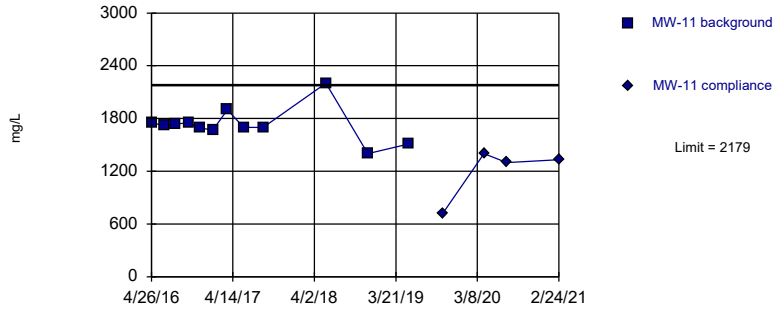
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1728, Std. Dev.=194.2, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8682, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

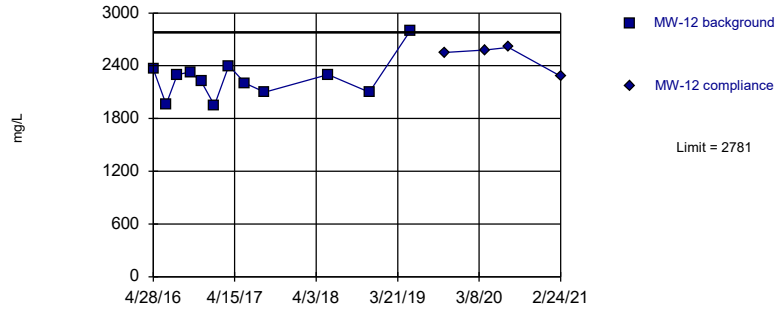
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2252, Std. Dev.=227.8, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.91, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

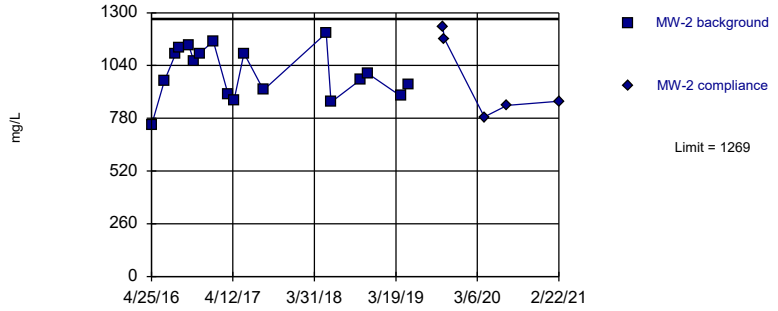
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1003, Std. Dev.=126.2, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.957, critical = 0.858. Kappa = 2.104 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

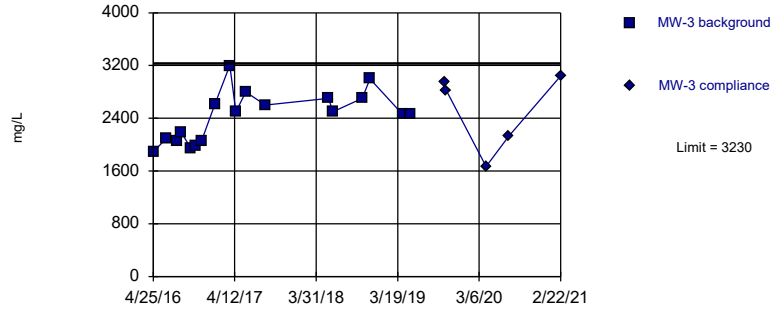
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2431, Std. Dev.=379.6, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9476, critical = 0.858. Kappa = 2.104 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

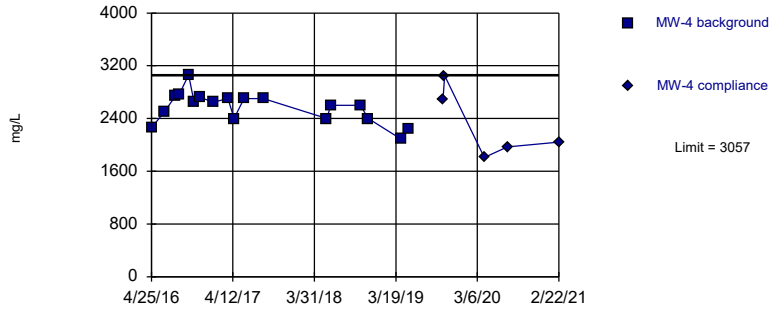
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2566, Std. Dev.=233.5, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9529, critical = 0.858. Kappa = 2.104 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

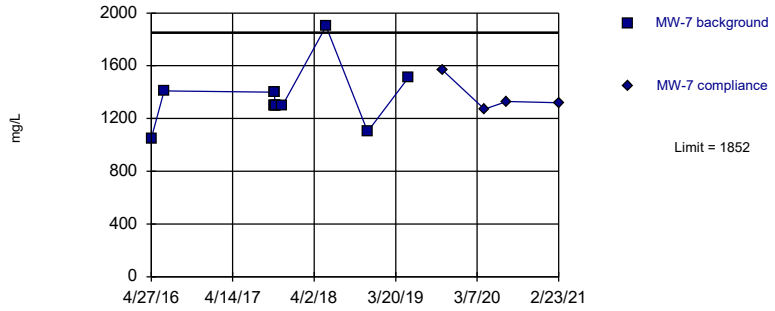
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1356, Std. Dev.=213.5, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8496, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

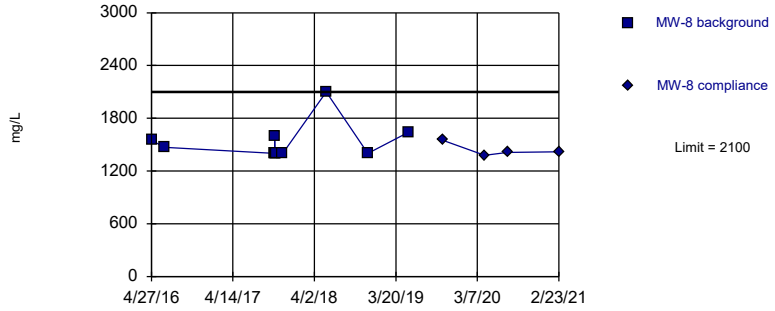
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 12 background values. Well-constituent pair annual alpha = 0.02143. Individual comparison alpha = 0.01077 (1 of 2).

Constituent: Sulfate Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

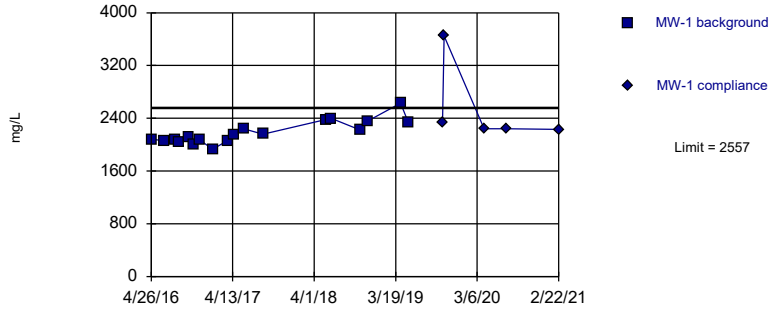
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2183, Std. Dev.=178, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9142, critical = 0.858. Kappa = 2.104 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

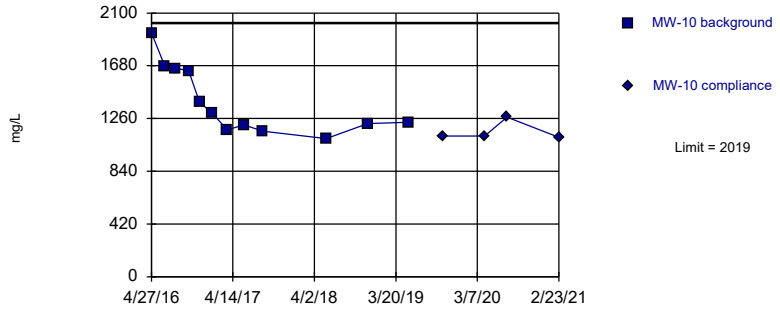
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1392, Std. Dev.=270.1, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8665, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

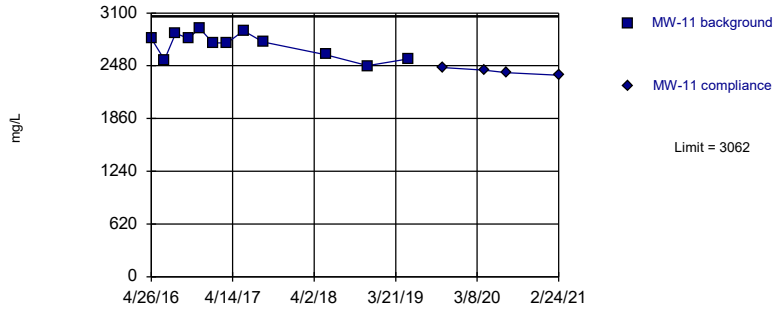
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2728, Std. Dev.=144, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9248, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

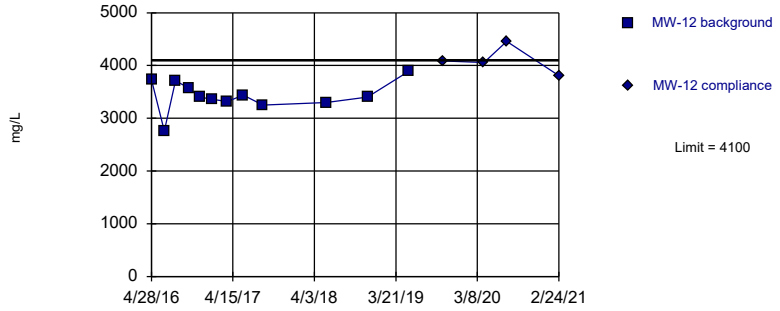
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3428, Std. Dev.=289.1, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9267, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

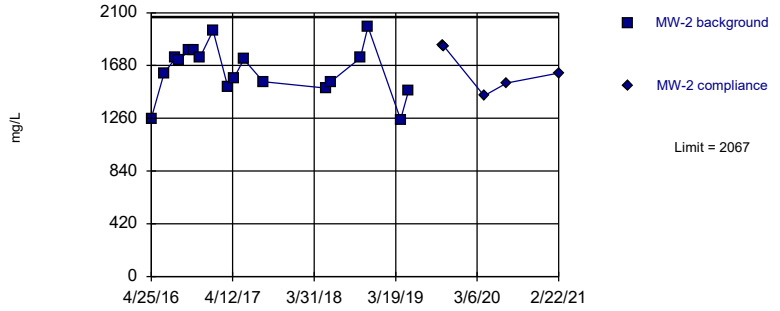
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1640, Std. Dev.=202.8, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.952, critical = 0.858. Kappa = 2.104 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

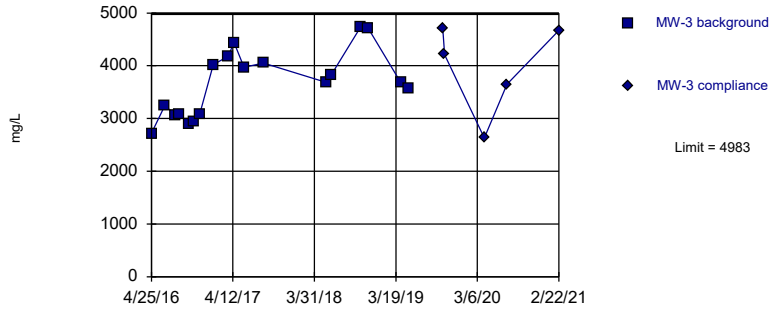
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3661, Std. Dev.=628.6, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9455, critical = 0.858. Kappa = 2.104 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

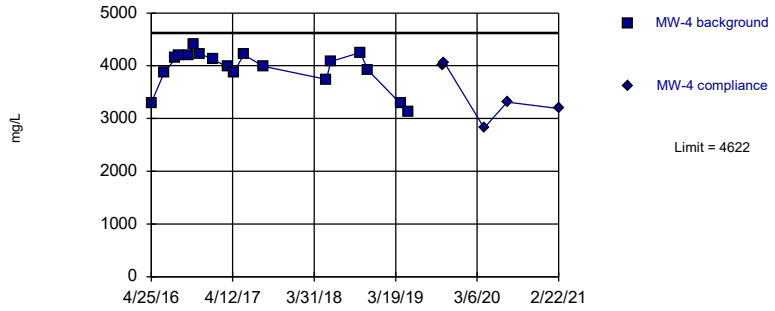
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=1.6e7, Std. Dev.=2719774, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8799, critical = 0.858. Kappa = 2.104 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

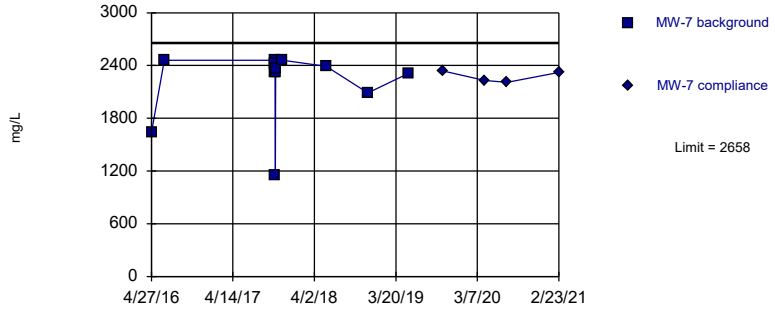
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on x^5 transformation): Mean=6.3e16, Std. Dev.=3.0e16, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8216, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

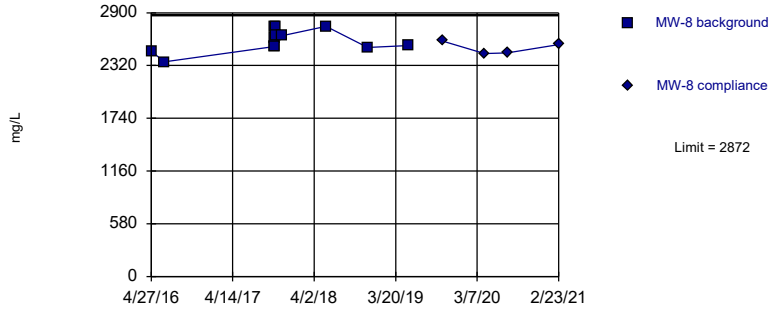
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2593, Std. Dev.=120.2, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9303, critical = 0.805. Kappa = 2.322 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 5/16/2021 7:49 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	147	
6/20/2016	152	
8/8/2016	150	
8/24/2016	142	
10/3/2016	139	
10/26/2016	133	
11/21/2016	144	
1/17/2017	131	
3/22/2017	141	
4/18/2017	149	
5/30/2017	140	
8/23/2017	152	
5/22/2018	166	
6/12/2018	203	
10/17/2018	171	
11/19/2018	154	
4/10/2019	243	
5/14/2019	167	
10/8/2019		157
10/16/2019		157
4/6/2020		149
7/13/2020		147
2/22/2021		151

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	279	
6/23/2016	256	
8/10/2016	245	
10/5/2016	225	
11/21/2016	179	
1/17/2017	168	
3/21/2017	152	
5/31/2017	130	
8/23/2017	147	
5/24/2018	159	
11/19/2018	160	
5/15/2019	186	
10/9/2019		146
4/8/2020		164
7/14/2020		208
2/23/2021		151

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	400	
6/22/2016	398	
8/9/2016	399	
10/4/2016	389	
11/21/2016	386	
1/17/2017	344	
3/21/2017	396	
5/30/2017	370	
8/23/2017	374	
5/22/2018	375	
11/20/2018	370	
5/15/2019	380	
10/10/2019		373
4/6/2020		333
7/13/2020		350
2/24/2021		325

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	349	
6/22/2016	374	
8/10/2016	348	
10/5/2016	344	
11/22/2016	342	
1/18/2017	359	
3/21/2017	352	
5/31/2017	313	
8/23/2017	349	
5/24/2018	349	
11/19/2018	348	
5/15/2019	411	
10/9/2019		359
4/6/2020		354
7/13/2020		392
2/24/2021		346

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	123	
6/20/2016	168	
8/8/2016	180	
8/24/2016	180	
10/3/2016	184	
10/26/2016	171	
11/21/2016	179	
1/17/2017	188	
3/22/2017	155	
4/18/2017	156	
5/31/2017	151	
8/23/2017	155	
5/22/2018	172	
6/12/2018	179	
10/17/2018	200	
11/19/2018	221	
4/10/2019	200	
5/14/2019	168	
10/8/2019		190
10/16/2019		194
4/6/2020		152
7/13/2020		163
2/22/2021		178

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	224	
6/22/2016	266	
8/9/2016	260	
8/24/2016	274	
10/4/2016	243	
10/26/2016	254	
11/21/2016	263	
1/18/2017	431	
3/22/2017	318	
4/18/2017	296	
5/31/2017	306	
8/23/2017	298	
5/24/2018	297	
6/12/2018	318	
10/17/2018	392	
11/19/2018	387	
4/10/2019	348	
5/14/2019	254	
10/8/2019		371
10/16/2019		346
4/6/2020		177
7/13/2020		264
2/22/2021		312

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	261	
6/20/2016	295	
8/9/2016	318	
8/24/2016	319	
10/3/2016	293	
10/26/2016	311	
11/21/2016	320	
1/18/2017	417	
3/22/2017	292	
4/18/2017	302	
5/31/2017	284	
8/23/2017	297	
5/23/2018	296	
6/12/2018	355	
10/17/2018	342	
11/19/2018	289	
4/10/2019	356	
5/14/2019	254	
10/10/2019		302
10/16/2019		356
4/6/2020		222
7/14/2020		259
2/22/2021		271

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	198	
6/21/2016	327	
10/12/2017	317	
10/13/2017	302	
10/14/2017	283	
10/15/2017	294	
10/16/2017	284	
10/17/2017	294	
11/16/2017	299	
5/23/2018	321	
11/20/2018	306	
5/15/2019	302	
10/8/2019		294
4/8/2020		280
7/14/2020		261
2/23/2021		292

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	282	
6/21/2016	291	
10/12/2017	300	
10/13/2017	298	
10/14/2017	299	
10/15/2017	307	
10/16/2017	299	
10/17/2017	294	
11/16/2017	308	
5/23/2018	344	
11/20/2018	327	
5/15/2019	305	
10/9/2019		329
4/8/2020		281
7/15/2020		280
2/23/2021		306

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	0.146 (J)	
6/20/2016	0.148 (J)	
8/8/2016	0.137 (J)	
8/24/2016	0.133 (J)	
10/3/2016	0.103 (J)	
10/26/2016	0.05 (J)	
11/21/2016	0.047 (J)	
1/17/2017	0.09 (J)	
3/22/2017	0.12	
4/18/2017	0.12	
5/30/2017	0.13	
8/23/2017	0.16	
2/13/2018	0.14 (D)	
5/22/2018	0.16	
6/12/2018	0.16	
10/17/2018	0.18	
11/19/2018	0.15	
4/10/2019	0.102	
5/14/2019	0.119	
10/8/2019		0.0924 (J)
10/16/2019		0.0756 (J)
4/6/2020		0.101
7/13/2020		0.0678 (J)
2/22/2021		0.082 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	0.337	
6/23/2016	0.155 (J)	
8/10/2016	0.123 (J)	
10/5/2016	0.086 (J)	
11/21/2016	0.056 (J)	
1/17/2017	0.103 (J)	
3/21/2017	0.15	
5/31/2017	0.18	
8/23/2017	0.23	
2/15/2018	0.23 (D)	
5/24/2018	0.13	
11/19/2018	0.26	
5/15/2019	0.276	
10/9/2019		0.142
4/8/2020		0.243
7/14/2020		0.224
2/23/2021		0.202

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	0.084 (J)	
6/22/2016	0.106 (J)	
8/9/2016	0.092 (J)	
10/4/2016	0.049 (J)	
11/21/2016	<0.3	
1/17/2017	0.044 (J)	
3/21/2017	0.08 (J)	
5/30/2017	0.096 (J)	
8/23/2017	0.11	
2/14/2018	0.1 (D)	
5/22/2018	0.1	
11/20/2018	0.1	
5/15/2019	0.1	
10/10/2019		0.0915 (J)
4/6/2020		0.118
7/13/2020		0.108
2/24/2021		0.107

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	0.153 (J)	
6/22/2016	0.146 (J)	
8/10/2016	0.127 (J)	
10/5/2016	0.09 (J)	
11/22/2016	0.012 (J)	
1/18/2017	0.071 (J)	
3/21/2017	0.09 (J)	
5/31/2017	0.11	
8/23/2017	0.13	
2/15/2018	0.12 (D)	
5/24/2018	0.15	
11/19/2018	0.16	
5/15/2019	0.185	
10/9/2019		0.215
4/6/2020		0.254
7/13/2020		0.161
2/24/2021		0.172

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	0.149 (J)	
6/20/2016	0.148 (J)	
8/8/2016	0.134 (J)	
8/24/2016	0.129 (J)	
10/3/2016	0.086 (J)	
10/26/2016	0.027 (J)	
11/21/2016	0.027 (J)	
1/17/2017	0.066 (J)	
3/22/2017	0.13	
4/18/2017	0.16	
5/31/2017	0.13	
8/23/2017	0.16	
2/13/2018	0.22 (D)	
5/22/2018	0.17	
6/12/2018	0.16	
10/17/2018	0.16	
11/19/2018	0.18	
4/10/2019	0.262	
5/14/2019	0.17	
10/8/2019		0.164
10/16/2019		0.114
4/6/2020		0.207
7/13/2020		0.132
2/22/2021		0.209

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	0.243 (J)	
6/22/2016	0.269 (J)	
8/9/2016	0.363	
8/24/2016	0.346	
10/4/2016	0.266 (J)	
10/26/2016	0.266 (J)	
11/21/2016	0.244 (J)	
1/18/2017	0.385	
3/22/2017	0.41	
4/18/2017	0.29	
5/31/2017	0.37	
8/23/2017	0.55	
2/13/2018	0.27 (D)	
5/24/2018	0.6	
6/12/2018	0.53	
10/17/2018	0.63	
11/19/2018	0.31	
4/10/2019	0.273	
5/14/2019	0.281	
10/8/2019		0.225
10/16/2019		0.106
4/6/2020		0.314
7/13/2020		0.13
2/22/2021		0.246

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	0.372	
6/20/2016	0.361	
8/9/2016	0.326	
8/24/2016	0.329	
10/3/2016	0.287 (J)	
10/26/2016	0.194 (J)	
11/21/2016	0.192 (J)	
1/18/2017	0.223 (J)	
3/22/2017	0.32	
4/18/2017	0.32	
5/31/2017	0.31	
8/23/2017	0.38	
2/13/2018	0.38 (D)	
5/23/2018	0.38	
6/12/2018	0.39	
10/17/2018	0.39	
11/19/2018	0.36	
4/10/2019	0.384	
5/14/2019	0.335	
10/10/2019		0.304
10/16/2019		0.302
4/6/2020		0.368
7/14/2020		0.33
2/22/2021		0.357

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	0.2 (J)	
6/21/2016	0.163 (J)	
10/12/2017	0.17	
10/13/2017	0.19	
10/14/2017	0.2	
10/15/2017	0.2	
10/16/2017	0.2	
10/17/2017	0.19	
11/16/2017	0.18	
2/14/2018	0.18 (D)	
5/23/2018	0.18	
11/20/2018	0.19	
5/15/2019	0.169	
10/8/2019		0.183
4/8/2020		0.153
7/14/2020		0.193
2/23/2021		0.2

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	0.212 (J)	
6/21/2016	0.211 (J)	
10/12/2017	0.22	
10/13/2017	0.23	
10/14/2017	0.22	
10/15/2017	0.22	
10/16/2017	0.22	
10/17/2017	0.21	
11/16/2017	0.22	
2/14/2018	0.21 (D)	
5/23/2018	0.21	
11/20/2018	0.21	
5/15/2019	0.192	
10/9/2019		0.189
4/8/2020		0.192
7/15/2020		0.196
2/23/2021		0.208

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	1490	
6/20/2016	1420	
8/8/2016	1460	
8/24/2016	1450	
10/3/2016	1460	
10/26/2016	1330	
11/21/2016	1420	
1/17/2017	1350	
3/22/2017	1500	
4/18/2017	1300	
5/30/2017	1400	
8/23/2017	1500	
5/22/2018	2100	
6/12/2018	1500	
10/17/2018	1400	
11/19/2018	1300	
4/10/2019	1700	
5/14/2019	1560	
10/8/2019		1540
10/16/2019		1680
4/6/2020		1530
7/13/2020		1450
2/22/2021		1400

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	1250	
6/23/2016	1010	
8/10/2016	992	
10/5/2016	1010	
11/21/2016	834	
1/17/2017	700	
3/21/2017	660	
5/31/2017	700	
8/23/2017	700	
5/24/2018	560	
11/19/2018	720	
5/15/2019	780	
10/9/2019		748
4/8/2020		658
7/14/2020		845
2/23/2021		747

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	1750	
6/22/2016	1720	
8/9/2016	1740	
10/4/2016	1750	
11/21/2016	1690	
1/17/2017	1670	
3/21/2017	1900	
5/30/2017	1700	
8/23/2017	1700	
5/22/2018	2200	
11/20/2018	1400	
5/15/2019	1510	
10/10/2019		719
4/6/2020		1400
7/13/2020		1300
2/24/2021		1330

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	2360	
6/22/2016	1960	
8/10/2016	2300	
10/5/2016	2330	
11/22/2016	2220	
1/18/2017	1950	
3/21/2017	2400	
5/31/2017	2200	
8/23/2017	2100	
5/24/2018	2300	
11/19/2018	2100	
5/15/2019	2800	
10/9/2019		2550
4/6/2020		2580
7/13/2020		2610
2/24/2021		2280

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	745	
6/20/2016	964	
8/8/2016	1100	
8/24/2016	1130	
10/3/2016	1140	
10/26/2016	1060	
11/21/2016	1100	
1/17/2017	1160	
3/22/2017	900	
4/18/2017	870	
5/31/2017	1100	
8/23/2017	920	
5/22/2018	1200	
6/12/2018	860	
10/17/2018	970	
11/19/2018	1000	
4/10/2019	889	
5/14/2019	948	
10/8/2019		1230
10/16/2019		1170
4/6/2020		786
7/13/2020		843
2/22/2021		864

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	1890	
6/22/2016	2100	
8/9/2016	2050	
8/24/2016	2190	
10/4/2016	1950	
10/26/2016	1980	
11/21/2016	2060	
1/18/2017	2620	
3/22/2017	3200	
4/18/2017	2500	
5/31/2017	2800	
8/23/2017	2600	
5/24/2018	2700	
6/12/2018	2500	
10/17/2018	2700	
11/19/2018	3000	
4/10/2019	2460	
5/14/2019	2460	
10/8/2019		2950
10/16/2019		2820
4/6/2020		1670
7/13/2020		2130
2/22/2021		3040

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	2260	
6/20/2016	2500	
8/9/2016	2750	
8/24/2016	2770	
10/3/2016	3060	
10/26/2016	2650	
11/21/2016	2720	
1/18/2017	2650	
3/22/2017	2700	
4/18/2017	2400	
5/31/2017	2700	
8/23/2017	2700	
5/23/2018	2400	
6/12/2018	2600	
10/17/2018	2600	
11/19/2018	2400	
4/10/2019	2090	
5/14/2019	2240	
10/10/2019		2690
10/16/2019		3050
4/6/2020		1810
7/14/2020		1970
2/22/2021		2040

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	1050	
6/21/2016	1410	
10/12/2017	1400	
10/13/2017	1400	
10/14/2017	1300	
10/15/2017	1300	
10/16/2017	1300	
10/17/2017	1300	
11/16/2017	1300	
5/23/2018	1900	
11/20/2018	1100	
5/15/2019	1510	
10/8/2019		1570
4/8/2020		1270
7/14/2020		1330
2/23/2021		1320

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	1550	
6/21/2016	1470	
10/12/2017	1400	
10/13/2017	1600	
10/14/2017	1400	
10/15/2017	1400	
10/16/2017	1400	
10/17/2017	1400	
11/16/2017	1400	
5/23/2018	2100	
11/20/2018	1400	
5/15/2019	1640	
10/9/2019		1550
4/8/2020		1380
7/15/2020		1410
2/23/2021		1420

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	2080 (D)	
6/20/2016	2060 (D)	
8/8/2016	2070 (D)	
8/24/2016	2040 (D)	
10/3/2016	2110 (D)	
10/26/2016	2000 (D)	
11/21/2016	2070 (D)	
1/17/2017	1930 (D)	
3/22/2017	2060 (D)	
4/18/2017	2140 (D)	
5/30/2017	2240 (D)	
8/23/2017	2160 (D)	
5/22/2018	2380 (D)	
6/12/2018	2400	
10/17/2018	2220	
11/19/2018	2360	
4/10/2019	2630	
5/14/2019	2340 (D)	
10/8/2019		2330
10/16/2019		3650
4/6/2020		2240
7/13/2020		2240
2/22/2021		2230

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	1940	
6/23/2016	1680	
8/10/2016	1660	
10/5/2016	1640	
11/21/2016	1390	
1/17/2017	1300	
3/21/2017	1170	
5/31/2017	1210	
8/23/2017	1160	
5/24/2018	1100	
11/19/2018	1220	
5/15/2019	1230	
10/9/2019		1120
4/8/2020		1120
7/14/2020		1270
2/23/2021		1110

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	2800	
6/22/2016	2550	
8/9/2016	2860	
10/4/2016	2800	
11/21/2016	2920	
1/17/2017	2750	
3/21/2017	2750	
5/30/2017	2890	
8/23/2017	2760	
5/22/2018	2610	
11/20/2018	2480	
5/15/2019	2560	
10/10/2019		2460
4/6/2020		2430
7/13/2020		2400
2/24/2021		2370

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	3730	
6/22/2016	2760	
8/10/2016	3710	
10/5/2016	3580	
11/22/2016	3400	
1/18/2017	3360	
3/21/2017	3320	
5/31/2017	3440	
8/23/2017	3250	
5/24/2018	3300	
11/19/2018	3400	
5/15/2019	3890	
10/9/2019		4090
4/6/2020		4060
7/13/2020		4460
2/24/2021		3810

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	1260 (D)	
6/20/2016	1620 (D)	
8/8/2016	1740 (D)	
8/24/2016	1720 (D)	
10/3/2016	1800 (D)	
10/26/2016	1800 (D)	
11/21/2016	1740 (D)	
1/17/2017	1960 (D)	
3/22/2017	1510 (D)	
4/18/2017	1580 (D)	
5/31/2017	1730 (D)	
8/23/2017	1550 (D)	
5/22/2018	1500 (D)	
6/12/2018	1550	
10/17/2018	1740	
11/19/2018	1990	
4/10/2019	1250 (D)	
5/14/2019	1480	
10/8/2019		1840
10/16/2019		1830
4/6/2020		1440
7/13/2020		1540
2/22/2021		1620

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	2720 (D)	
6/22/2016	3250 (D)	
8/9/2016	3050 (D)	
8/24/2016	3080 (D)	
10/4/2016	2900 (D)	
10/26/2016	2940 (D)	
11/21/2016	3090 (D)	
1/18/2017	4020 (D)	
3/22/2017	4180 (D)	
4/18/2017	4440 (D)	
5/31/2017	3970 (D)	
8/23/2017	4050 (D)	
5/24/2018	3680 (D)	
6/12/2018	3820	
10/17/2018	4730	
11/19/2018	4710	
4/10/2019	3680	
5/14/2019	3580 (D)	
10/8/2019		4720
10/16/2019		4210
4/6/2020		2630
7/13/2020		3650
2/22/2021		4670

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	3300 (D)	
6/20/2016	3870 (D)	
8/9/2016	4140 (D)	
8/24/2016	4190 (D)	
10/3/2016	4190 (D)	
10/26/2016	4400 (D)	
11/21/2016	4230 (D)	
1/18/2017	4120 (D)	
3/22/2017	3980 (D)	
4/18/2017	3880 (D)	
5/31/2017	4210 (D)	
8/23/2017	3990 (D)	
5/23/2018	3740 (D)	
6/12/2018	4080	
10/17/2018	4250	
11/19/2018	3920	
4/10/2019	3280	
5/14/2019	3130 (D)	
10/10/2019		4000
10/16/2019		4060
4/6/2020		2820
7/14/2020		3310
2/22/2021		3190

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	1640	
6/21/2016	2460	
10/12/2017	2460	
10/13/2017	2420	
10/14/2017	2320	
10/15/2017	1150	
10/16/2017	2320	
10/17/2017	2360	
11/16/2017	2460	
5/23/2018	2390	
11/20/2018	2090	
5/15/2019	2310	
10/8/2019		2340
4/8/2020		2230
7/14/2020		2210
2/23/2021		2320

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/16/2021 7:53 PM View: Appendix III - Intrawell PLs

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	2480	
6/21/2016	2360	
10/12/2017	2530	
10/13/2017	2740	
10/14/2017	2630	
10/15/2017	2530	
10/16/2017	2740	
10/17/2017	2650	
11/16/2017	2650	
5/23/2018	2750	
11/20/2018	2520	
5/15/2019	2540	
10/9/2019		2590
4/8/2020		2450
7/15/2020		2460
2/23/2021		2550

FIGURE F.

Trend Tests Summary Table - Prediction Limit Exceedances - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 8:39 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**MW-11**	**0.003801**	**77**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**MW-2 (bg)**	**0.004693**	**109**	**98**	**Yes**	**23**	**21.74**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-11**	**23.09**	**111**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-12**	**1.364**	**74**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**MW-11**	**0.05238**	**75**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**MW-8**	**0.05948**	**96**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Trend Tests Summary Table - Prediction Limit Exceedances - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/16/2021, 8:39 PM

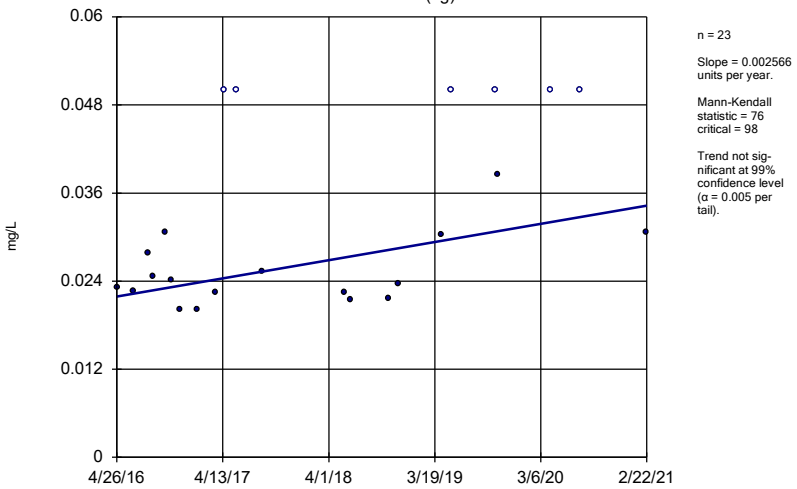
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW-1 (bg)	0.002566	76	98	No	23	26.09	n/a	n/a	0.01	NP
Boron (mg/L)	MW-10	-0.002309	-15	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-11**	**0.003801**	**77**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-12	0.01606	56	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-2 (bg)**	**0.004693**	**109**	**98**	**Yes**	**23**	**21.74**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-3 (bg)	0.002522	59	98	No	23	21.74	n/a	n/a	0.01	NP
Boron (mg/L)	MW-4 (bg)	0.0002715	11	98	No	23	4.348	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-1 (bg)	-0.01333	-10	-98	No	23	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**MW-11**	**23.09**	**111**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-12**	**1.364**	**74**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	MW-2 (bg)	0.01347	2	98	No	23	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-3 (bg)	0.04257	44	98	No	23	8.696	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-4 (bg)	-0.06663	-59	-98	No	23	4.348	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-7	-6.069	-21	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-8	-32.54	-46	-58	No	16	0	n/a	n/a	0.01	NP
pH (SU)	MW-1 (bg)	-0.01537	-79	-98	No	23	0	n/a	n/a	0.01	NP
pH (SU)	MW-10	0.01041	17	63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	**MW-11**	**0.05238**	**75**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	MW-2 (bg)	0.03796	83	98	No	23	0	n/a	n/a	0.01	NP
pH (SU)	MW-3 (bg)	-0.06383	-38	-105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-4 (bg)	0.0165	81	105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-7	0	-8	-63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	**MW-8**	**0.05948**	**96**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Sanitas™ v.9.6.28 . UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-1 (bg)



n = 23

Slope = 0.002566 units per year.

Mann-Kendall statistic = 76
critical = 98

Trend not significant at 99% confidence level (α = 0.005 per tail).

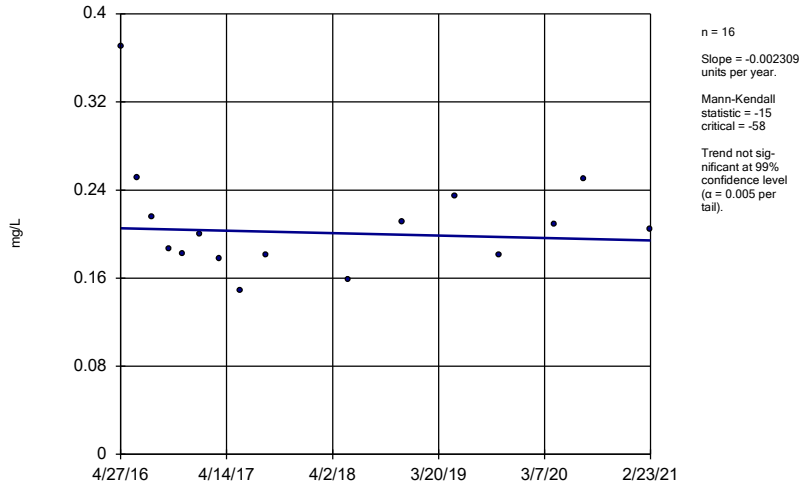
Constituent: Boron Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-10



n = 16

Slope = -0.002309 units per year.

Mann-Kendall statistic = -15
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

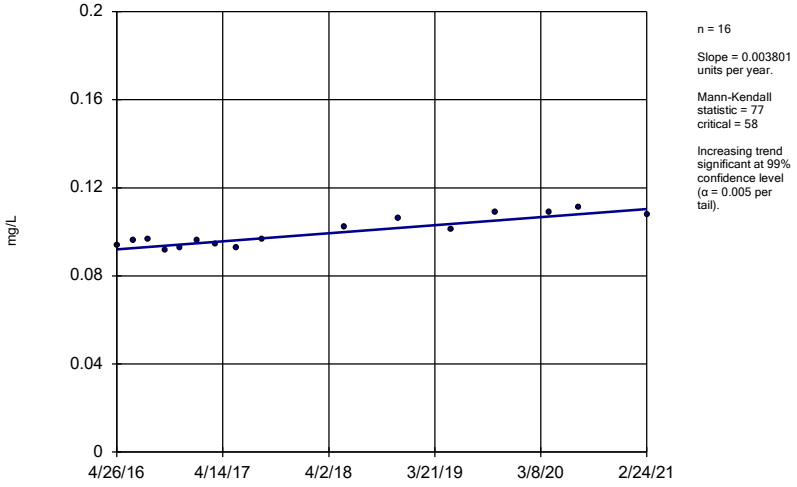
Constituent: Boron Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-11



n = 16

Slope = 0.003801 units per year.

Mann-Kendall statistic = 77
critical = 58

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

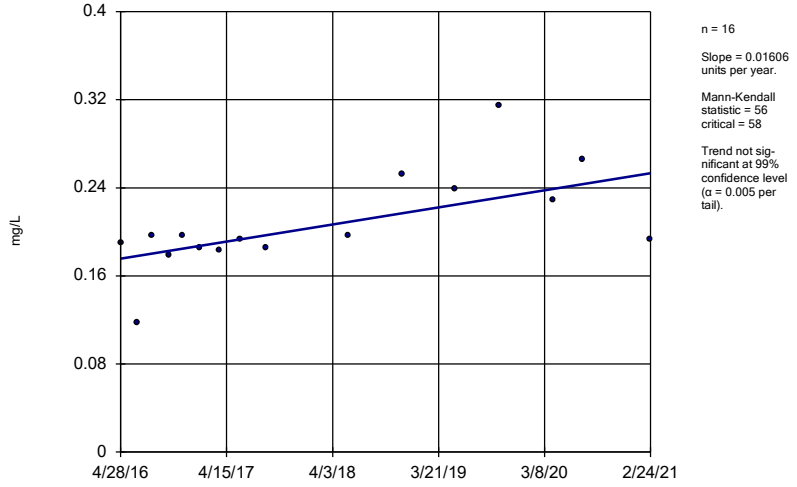
Constituent: Boron Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-12



n = 16

Slope = 0.01606 units per year.

Mann-Kendall statistic = 56
critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

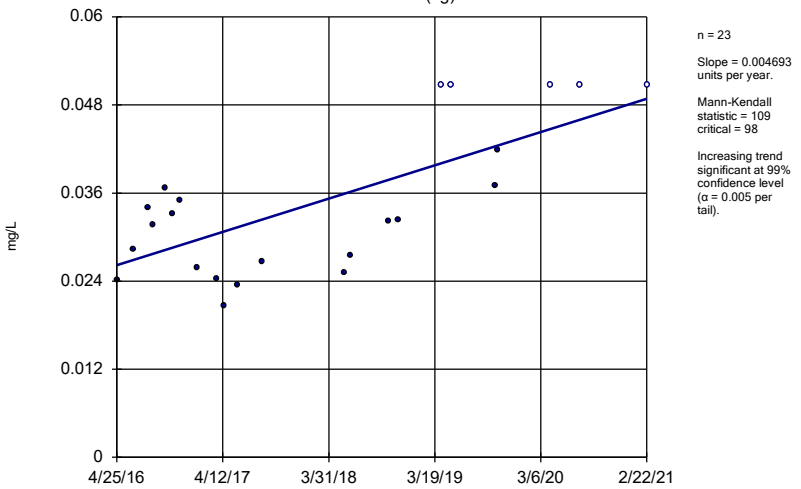
Constituent: Boron Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-2 (bg)



n = 23

Slope = 0.004693 units per year.

Mann-Kendall statistic = 109
critical = 98

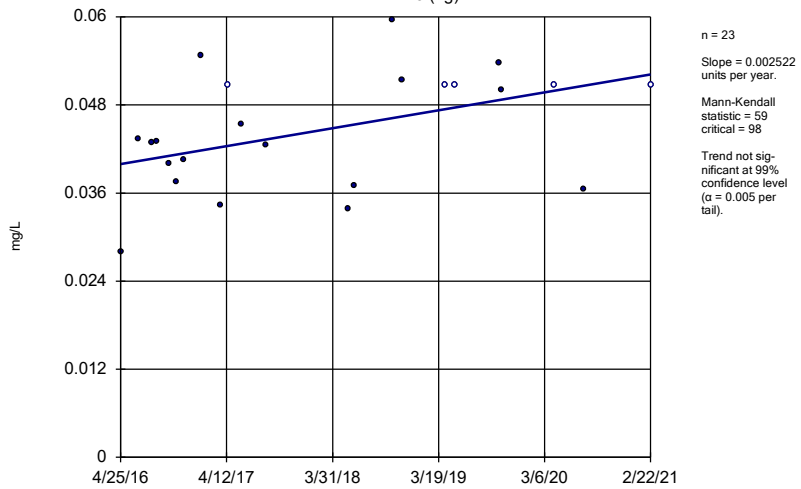
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-3 (bg)



n = 23

Slope = 0.002522 units per year.

Mann-Kendall statistic = 59
critical = 98

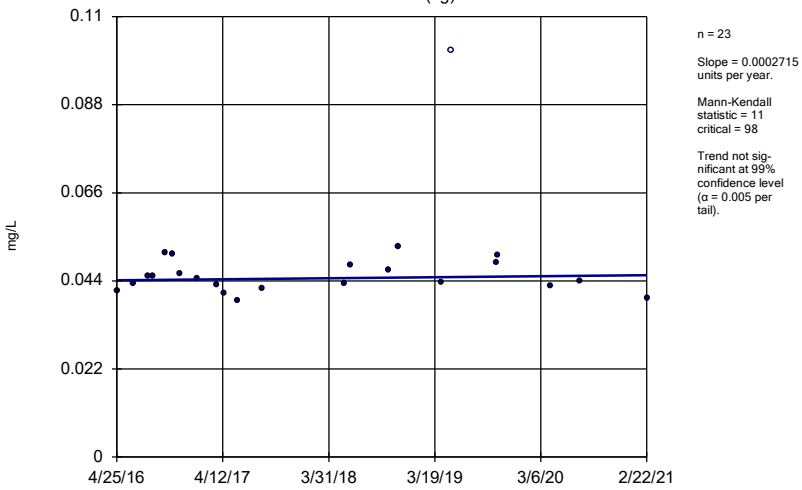
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-4 (bg)



n = 23

Slope = 0.0002715 units per year.

Mann-Kendall statistic = 11
critical = 98

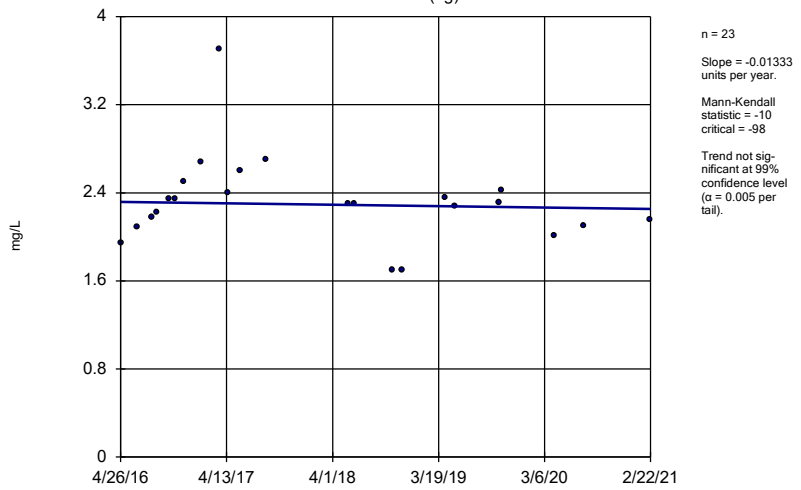
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-1 (bg)



n = 23

Slope = -0.01333 units per year.

Mann-Kendall statistic = -10
critical = -98

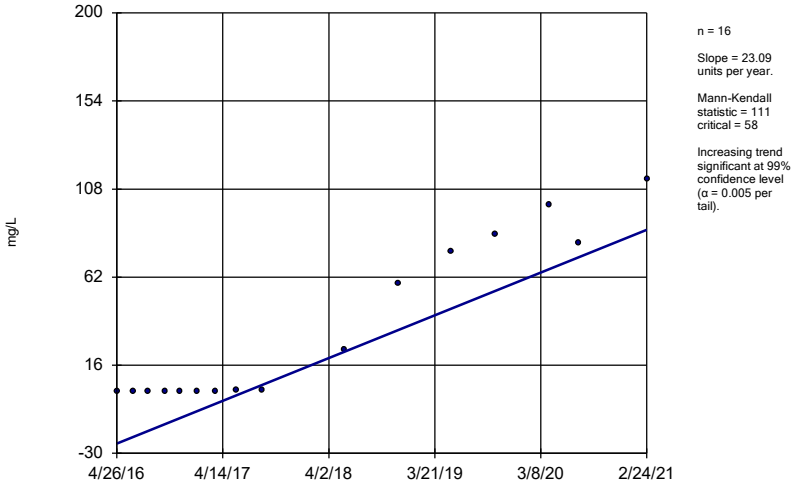
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-11



n = 16

Slope = 23.09 units per year.

Mann-Kendall statistic = 111
critical = 58

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

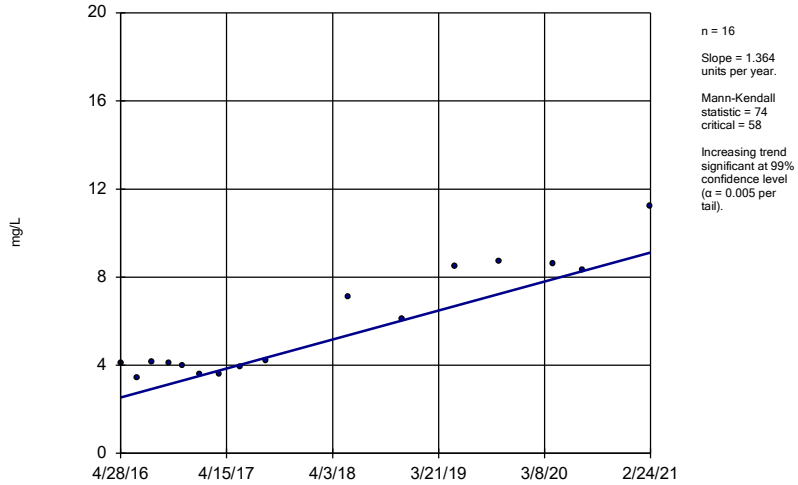
Constituent: Chloride Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-12



n = 16

Slope = 1.364 units per year.

Mann-Kendall statistic = 74
critical = 58

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

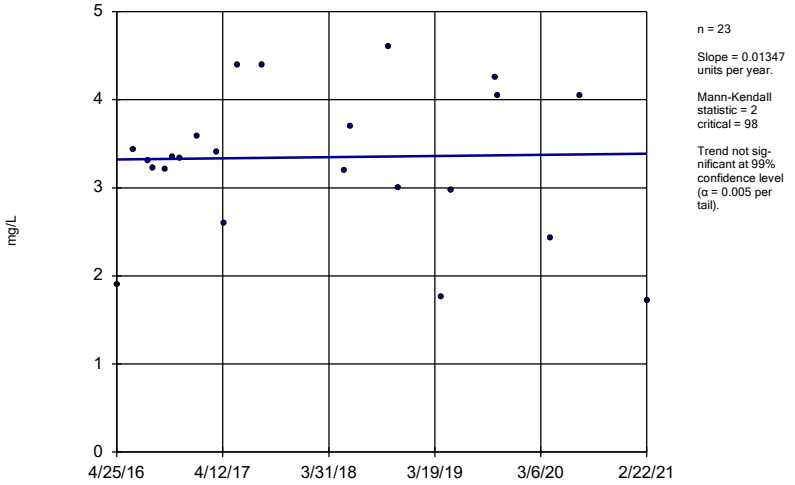
Constituent: Chloride Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-2 (bg)



n = 23

Slope = 0.01347 units per year.

Mann-Kendall statistic = 2
critical = 98

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

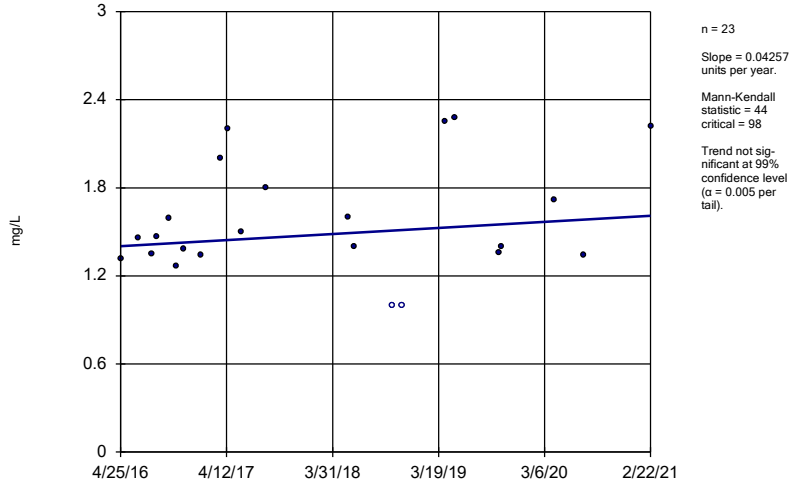
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-3 (bg)



n = 23

Slope = 0.04257 units per year.

Mann-Kendall statistic = 44
critical = 98

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

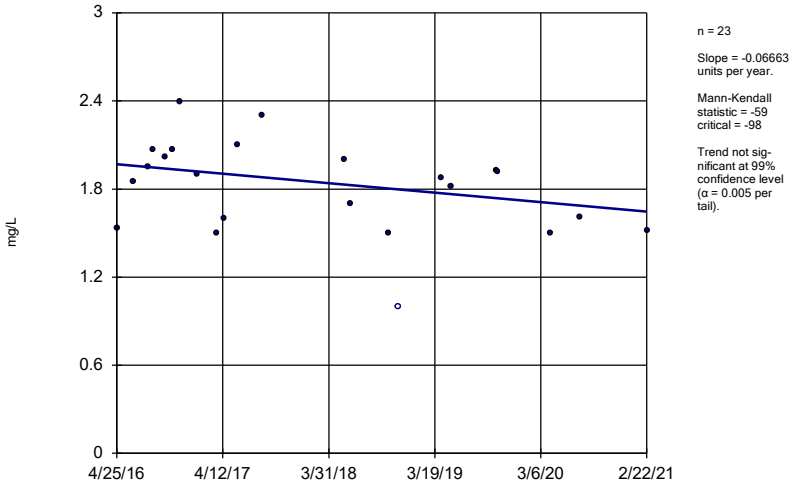
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-4 (bg)



n = 23

Slope = -0.06663 units per year.

Mann-Kendall statistic = -59
critical = -98

Trend not significant at 99% confidence level (α = 0.005 per tail).

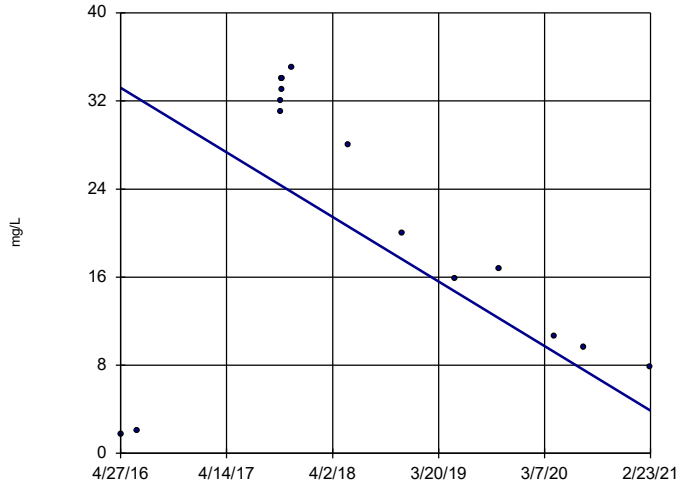
Constituent: Chloride Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-7



n = 16

Slope = -6.069 units per year.

Mann-Kendall statistic = -21
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

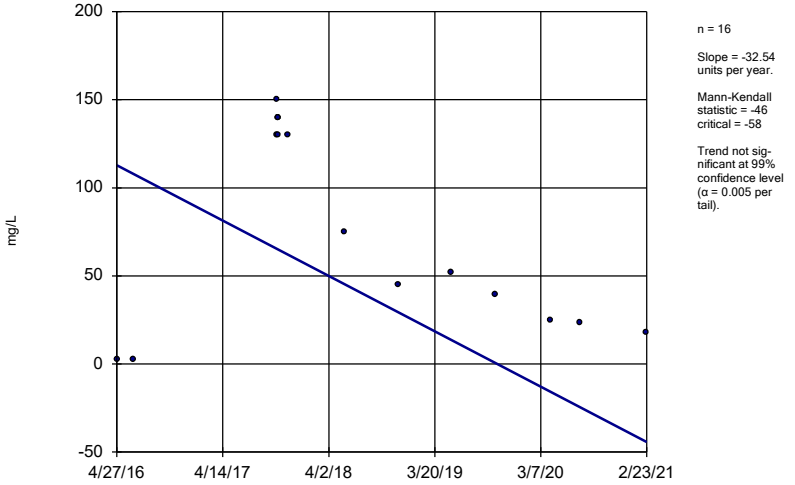
Constituent: Chloride Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-8



n = 16

Slope = -32.54 units per year.

Mann-Kendall statistic = -46
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

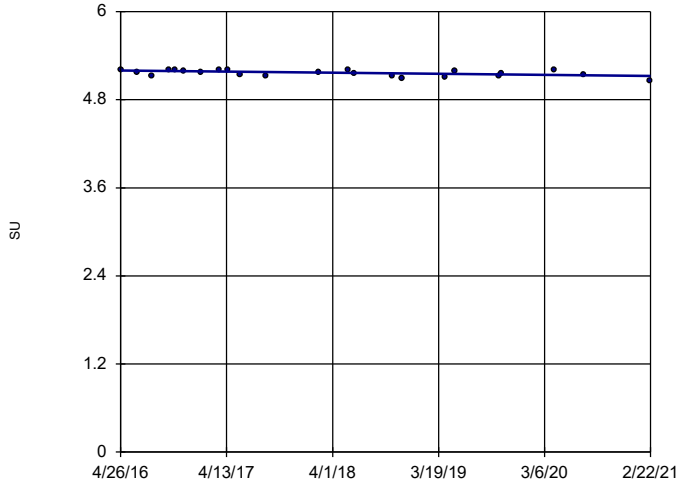
Constituent: Chloride Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-1 (bg)



n = 23

Slope = -0.01537 units per year.

Mann-Kendall statistic = -79
critical = -98

Trend not significant at 99% confidence level (α = 0.005 per tail).

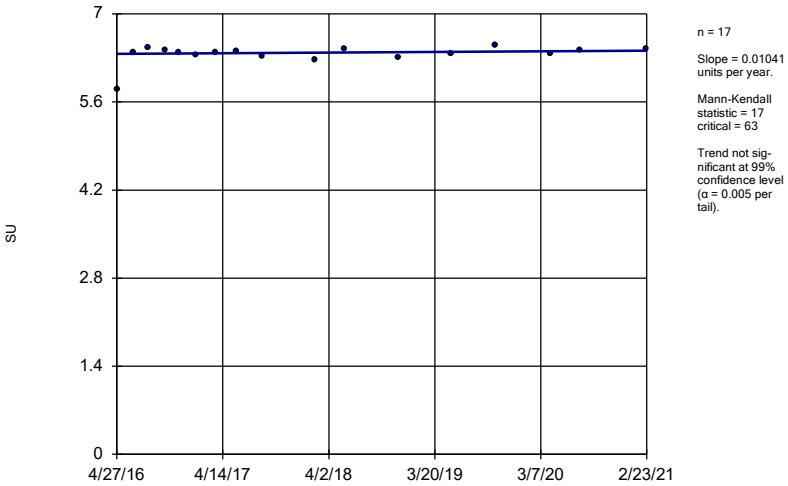
Constituent: pH Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-10



n = 17

Slope = 0.01041 units per year.

Mann-Kendall statistic = 17
critical = 63

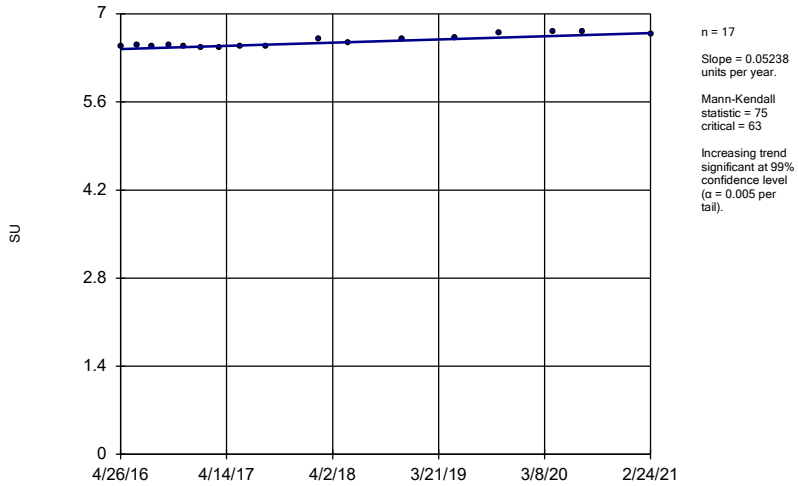
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-11



n = 17

Slope = 0.05238 units per year.

Mann-Kendall statistic = 75
critical = 63

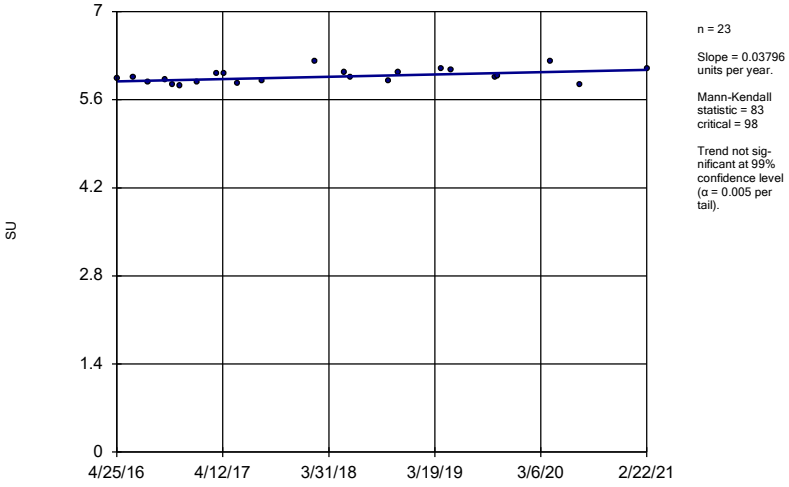
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-2 (bg)



n = 23

Slope = 0.03796 units per year.

Mann-Kendall statistic = 83
critical = 98

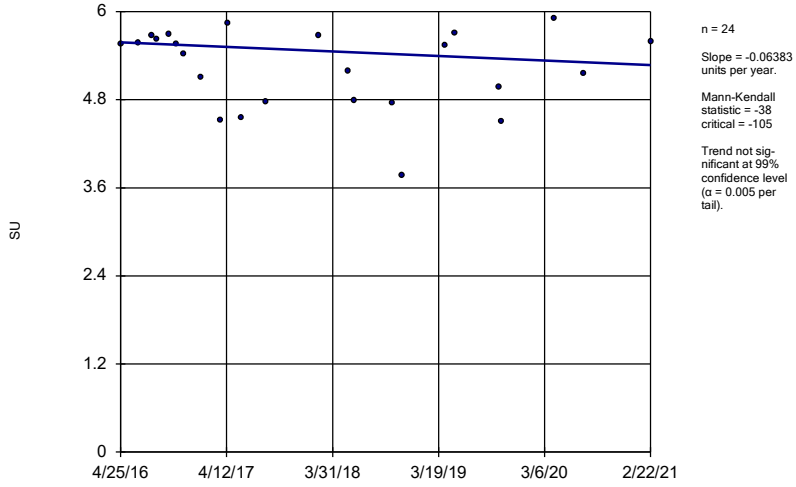
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-3 (bg)



n = 24

Slope = -0.06383 units per year.

Mann-Kendall statistic = -38
critical = -105

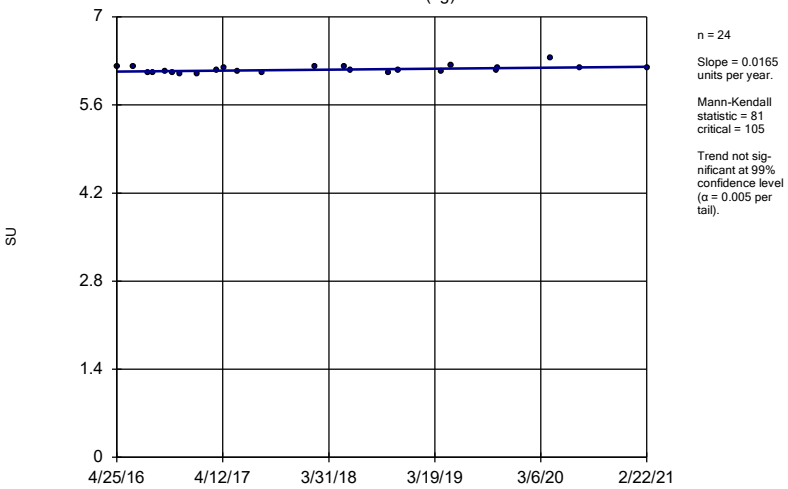
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-4 (bg)



n = 24

Slope = 0.0165 units per year.

Mann-Kendall statistic = 81
critical = 105

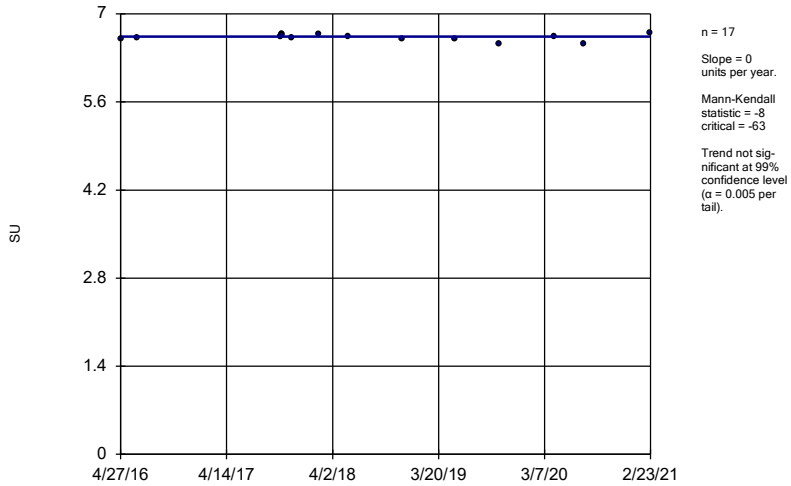
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-7



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = -8
critical = -63

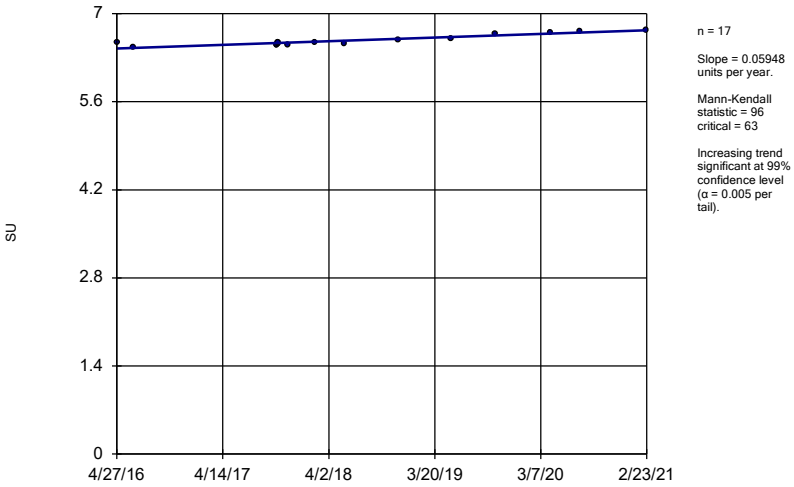
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.28 . UG

Sen's Slope Estimator

MW-8



n = 17

Slope = 0.05948 units per year.

Mann-Kendall statistic = 96
critical = 63

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 5/16/2021 8:37 PM View: Appendix III - Trend Test
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

FIGURE G.

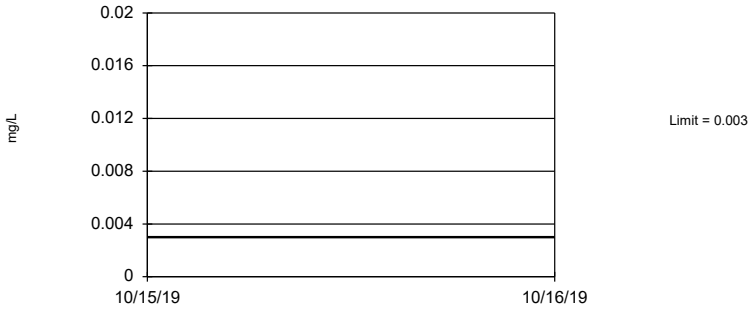
Upper Tolerance Limits - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 7/22/2020, 10:58 AM

Constituent	Upper Lim.	Lower Lim.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	80	n/a	n/a	92.5	n/a	n/a	0.01652	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	80	n/a	n/a	91.25	n/a	n/a	0.01652	NP Inter(NDs)
Barium (mg/L)	0.01527	n/a	80	-4.517	0.1705	0	None	ln(x)	0.05	Inter
Beryllium (mg/L)	0.0121	n/a	78	n/a	n/a	82.05	n/a	n/a	0.0183	NP Inter(NDs)
Cadmium (mg/L)	0.00598	n/a	78	n/a	n/a	50	n/a	n/a	0.0183	NP Inter(normal...
Chromium (mg/L)	0.0105	n/a	80	n/a	n/a	95	n/a	n/a	0.01652	NP Inter(NDs)
Cobalt (mg/L)	1.07	n/a	80	n/a	n/a	25	n/a	n/a	0.01652	NP Inter(normal...
Combined Radium 226 + 228 (pCi/L)	1.098	n/a	76	0.4542	0.3266	0	None	No	0.05	Inter
Fluoride (mg/L)	0.5302	n/a	84	0.4636	0.1353	0	None	sqrt(x)	0.05	Inter
Lead (mg/L)	0.00692	n/a	80	n/a	n/a	96.25	n/a	n/a	0.01652	NP Inter(NDs)
Lithium (mg/L)	0.419	n/a	80	n/a	n/a	0	n/a	n/a	0.01652	NP Inter(normal...
Mercury (mg/L)	0.0005	n/a	80	n/a	n/a	100	n/a	n/a	0.01652	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	80	n/a	n/a	100	n/a	n/a	0.01652	NP Inter(NDs)
Selenium (mg/L)	0.0158	n/a	79	n/a	n/a	67.09	n/a	n/a	0.01738	NP Inter(normal...
Thallium (mg/L)	0.001	n/a	80	n/a	n/a	96.25	n/a	n/a	0.01652	NP Inter(NDs)

Tolerance Limit

Interwell Non-parametric



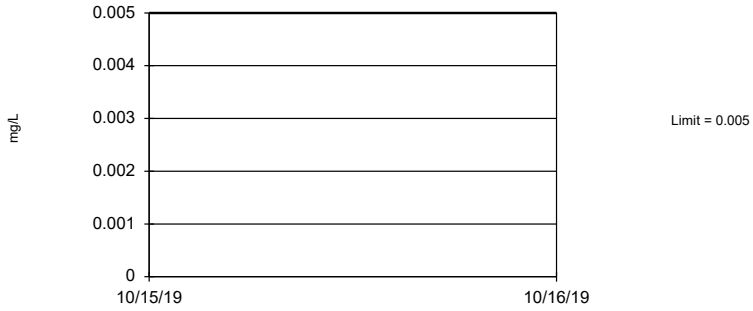
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 80 background values. 92.5% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Antimony Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



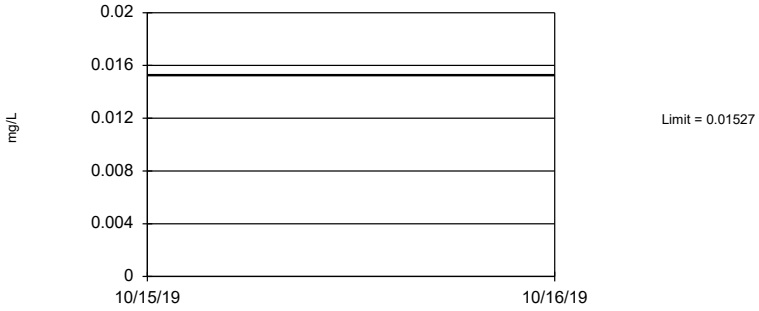
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 80 background values. 91.25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Arsenic Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Parametric



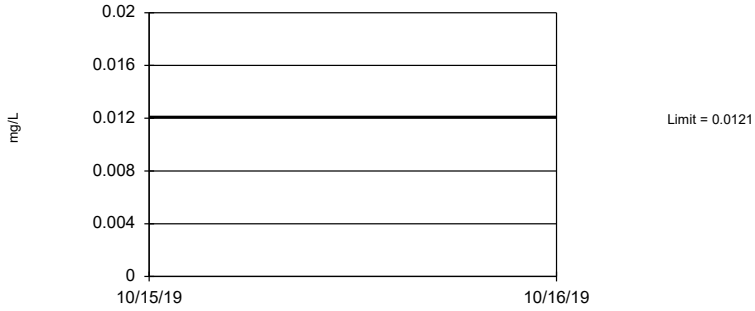
95% coverage. Background Data Summary (based on natural log transformation): Mean=-4.517, Std. Dev.=0.1705, n=80. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9594, critical = 0.957. Report alpha = 0.05.

Constituent: Barium Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 78 background values. 82.05% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0183.

Constituent: Beryllium Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric

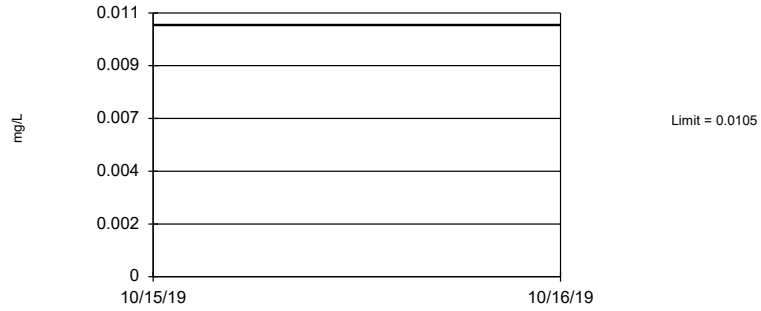
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 78 background values. 50% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0183.

Constituent: Cadmium Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



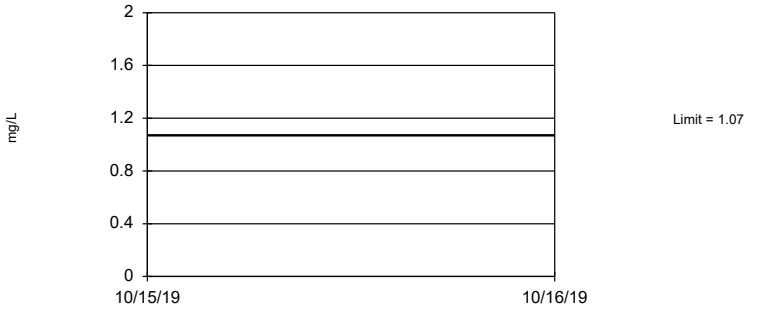
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 80 background values. 95% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Chromium Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



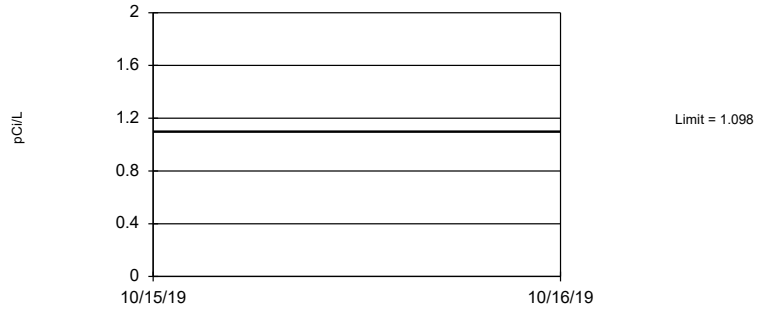
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. 25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Cobalt Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Parametric



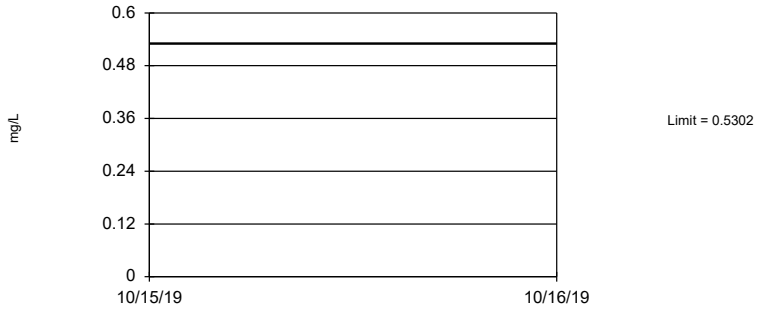
95% coverage. Background Data Summary: Mean=0.4542, Std. Dev.=0.3266, n=76. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9823, critical = 0.957. Report alpha = 0.05.

Constituent: Combined Radium 226 + 228 Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Parametric



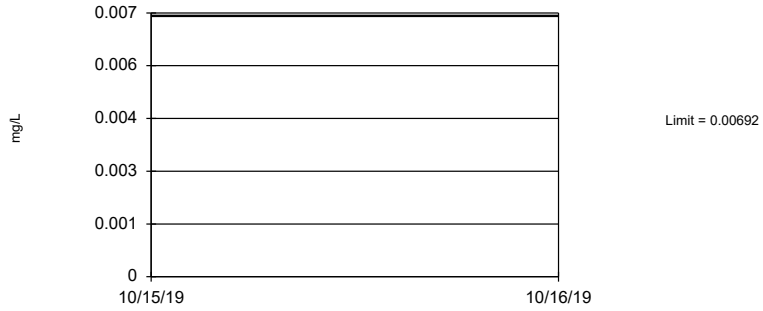
95% coverage. Background Data Summary (based on square root transformation): Mean=0.4636, Std. Dev.=0.1353, n=84. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9797, critical = 0.96. Report alpha = 0.05.

Constituent: Fluoride Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



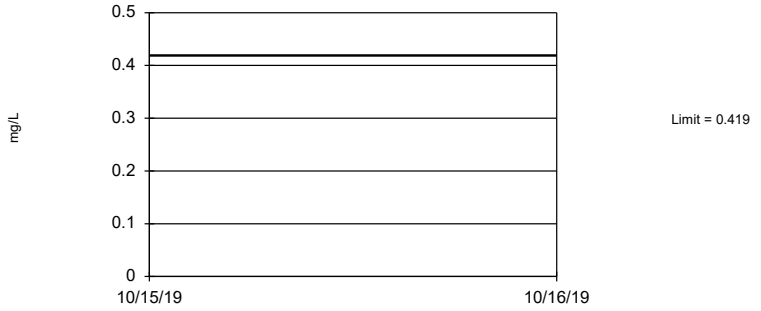
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 80 background values. 96.25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Lead Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



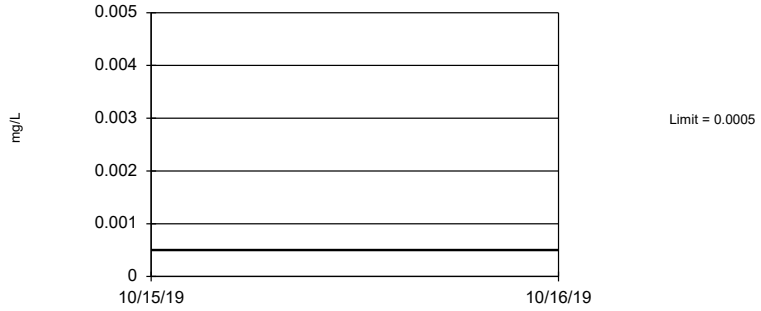
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Lithium Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



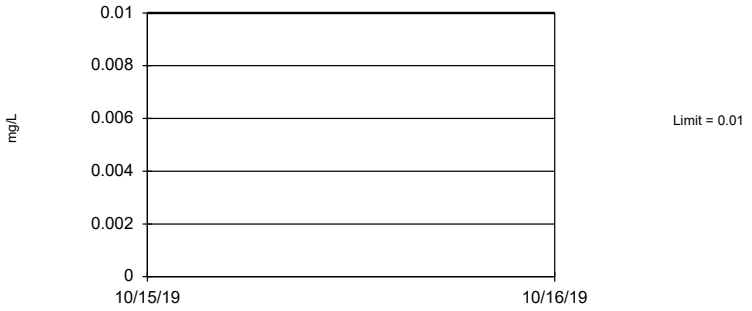
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Mercury Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric

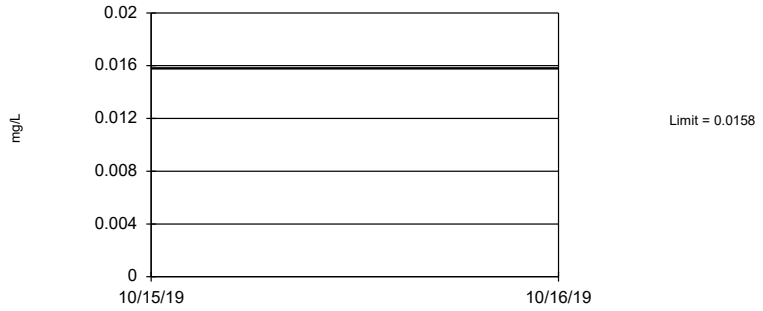


Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Molybdenum Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric

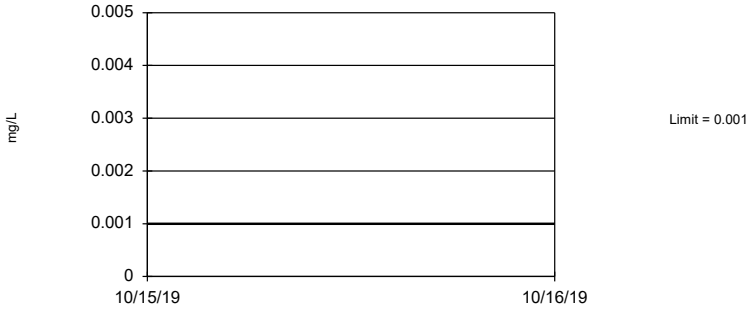


Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 79 background values. 67.09% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01738.

Constituent: Selenium Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 80 background values. 96.25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Thallium Analysis Run 7/22/2020 10:56 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

FIGURE H.

GORGAS BOTTOM ASH LF GWPS			
Analyte	**Units**	**Background**	**GWPS**
Antimony	mg/L	0.003	0.006
Arsenic	mg/L	0.005	0.01
Barium	mg/L	0.01527	2
Beryllium	mg/L	0.0121	0.004
Cadmium	mg/L	0.00598	0.005
Chromium	mg/L	0.0105	0.1
Cobalt	mg/L	1.07	1.07
Combined Radium-226/228	pCi/L	1.098	5
Fluoride	mg/L	0.5302	4
Lead	mg/L	0.00692	0.015
Lithium	mg/L	0.419	0.419
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.01	0.1
Selenium	mg/L	0.0158	0.05
Thallium	mg/L	0.001	0.002

Notes:

1. mg/L - Milligrams per liter

2. pCi/L - Picocuries per liter

3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.

4. GWPS established during second semi-annual sampling event in 2019.

FIGURE I.

Appendix IV Confidence Intervals - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/20/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	**MW-12**	**0.05912**	**0.0402**	**0.01**	**Yes**	**8**	**0.04966**	**0.008923**	**0**	**None**	**No**	**0.01**	**Param.**

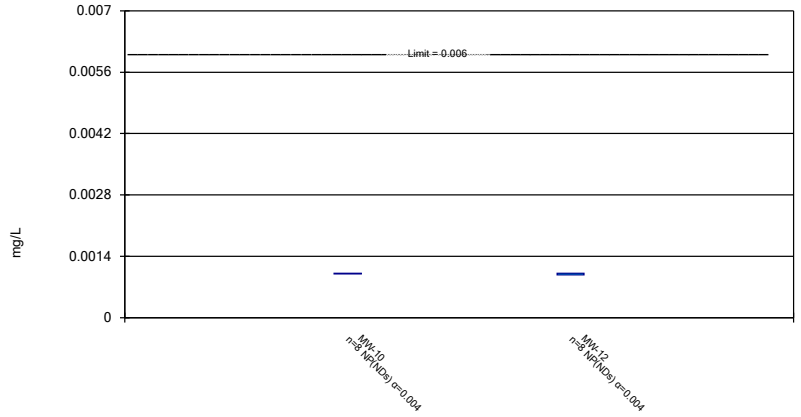
Appendix IV Confidence Intervals - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 5/20/2021, 11:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha		Method
Antimony (mg/L)	MW-10	0.001015	0.000996	0.006	No	8	0.001013	0.000006718	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-12	0.001015	0.000977	0.006	No	8	0.00101	0.00001344	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-10	0.005	0.0013	0.01	No	8	0.00327	0.001852	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	MW-11	0.005	0.000834	0.01	No	8	0.003653	0.001878	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	**MW-12**	**0.05912**	**0.0402**	**0.01**	**Yes**	**8**	**0.04966**	**0.008923**	**0**	**None**	**No**	**0.01**	**Param.**
Arsenic (mg/L)	MW-7	0.001492	0.001323	0.01	No	8	0.001408	0.00007978	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-8	0.001915	0.001145	0.01	No	8	0.00153	0.0003631	0	None	No	0.01	Param.
Barium (mg/L)	MW-10	0.0245	0.0187	2	No	8	0.0203	0.001799	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-11	0.01534	0.01331	2	No	8	0.01433	0.0009558	0	None	No	0.01	Param.
Barium (mg/L)	MW-12	0.01273	0.01119	2	No	8	0.01196	0.0007269	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.01447	0.01163	2	No	8	0.01305	0.001338	0	None	No	0.01	Param.
Barium (mg/L)	MW-8	0.01418	0.01245	2	No	8	0.01331	0.0008167	0	None	No	0.01	Param.
Beryllium (mg/L)	MW-10	0.002038	0.0008718	0.004	No	8	0.001455	0.0005502	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-10	0.001	0.000148	0.005	No	8	0.0008935	0.0003012	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-10	0.02234	0.01102	1.07	No	8	0.01668	0.005342	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-11	0.005	0.00026	1.07	No	8	0.004407	0.001676	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-12	0.0568	0.03885	1.07	No	8	0.04783	0.008472	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-7	0.005248	0.002382	1.07	No	8	0.004111	0.001367	25	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	MW-8	0.008443	0.004917	1.07	No	8	0.00668	0.001663	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-10	0.6002	0.1998	5	No	8	0.4	0.1889	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-11	1.375	0.4627	5	No	8	0.9188	0.4302	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-12	1.212	0.7273	5	No	8	0.9695	0.2285	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-7	0.7035	0.1893	5	No	8	0.4464	0.2426	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-8	0.9437	0.2933	5	No	8	0.6083	0.349	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-10	0.2694	0.1574	4	No	8	0.2134	0.05283	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-11	0.1114	0.09471	4	No	8	0.1031	0.007876	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-12	0.221	0.1333	4	No	8	0.1771	0.04138	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-7	0.1966	0.1654	4	No	8	0.181	0.01474	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-8	0.21	0.189	4	No	8	0.2009	0.009433	0	None	No	0.004	NP (normality)
Lead (mg/L)	MW-11	0.00145	0.000203	0.015	No	8	0.0003589	0.0004409	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-12	0.000203	0.000178	0.015	No	8	0.0001999	0.000008839	87.5	None	No	0.004	NP (NDs)
Lithium (mg/L)	MW-10	0.2424	0.2008	0.419	No	8	0.2216	0.01965	0	None	No	0.01	Param.
Lithium (mg/L)	MW-11	0.2882	0.2383	0.419	No	8	0.2633	0.02351	0	None	No	0.01	Param.
Lithium (mg/L)	MW-12	0.09516	0.07404	0.419	No	8	0.0846	0.009963	0	None	No	0.01	Param.
Lithium (mg/L)	MW-7	0.131	0.103	0.419	No	8	0.1236	0.009899	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-8	0.1854	0.1516	0.419	No	8	0.1685	0.01594	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-11	0.01	0.00148	0.1	No	8	0.008935	0.003012	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-12	0.01	0.000088	0.1	No	8	0.008761	0.003504	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-7	0.01	0.00107	0.1	No	8	0.008884	0.003157	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-8	0.0129	0.01	0.1	No	8	0.01036	0.001025	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-10	0.01	0.00217	0.05	No	8	0.006314	0.003946	50	None	No	0.004	NP (normality)

Non-Parametric Confidence Interval

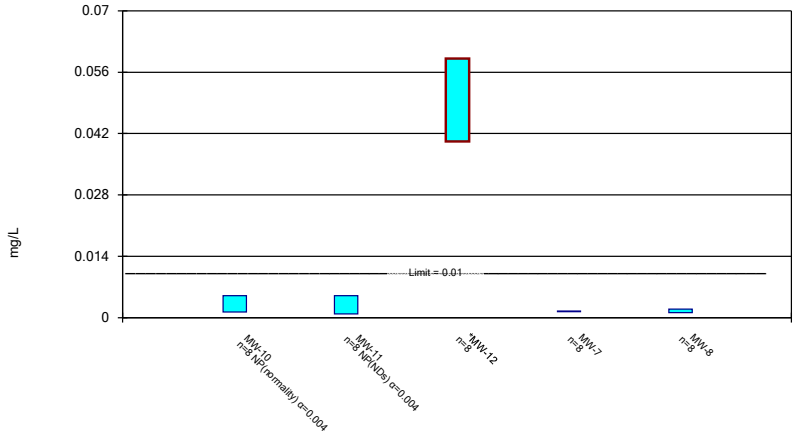
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric and Non-Parametric (NP) Confidence Interval

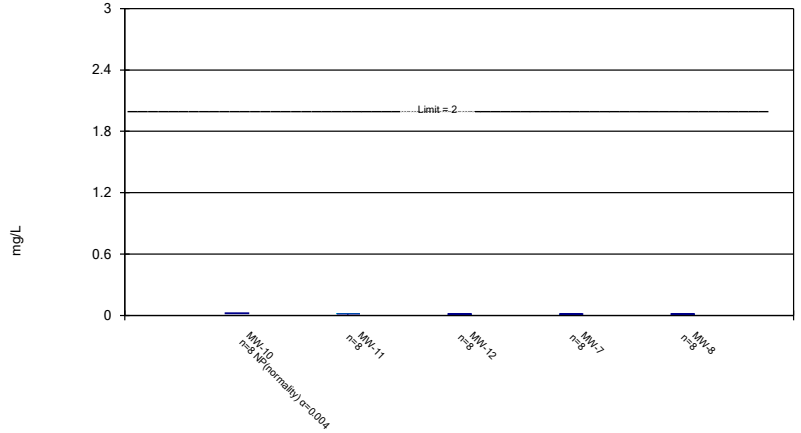
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric and Non-Parametric (NP) Confidence Interval

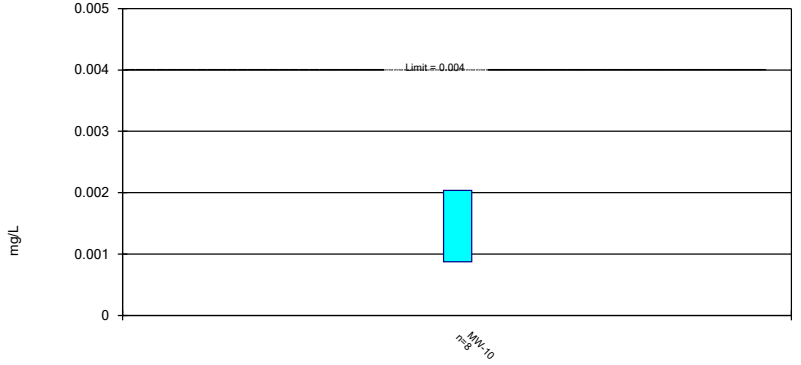
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric Confidence Interval

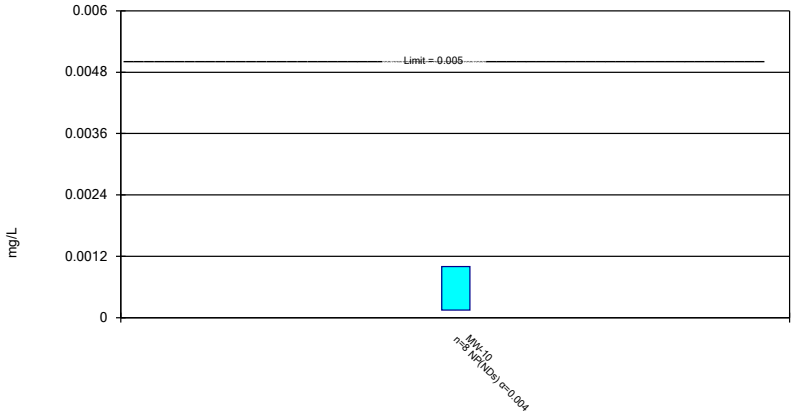
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Non-Parametric Confidence Interval

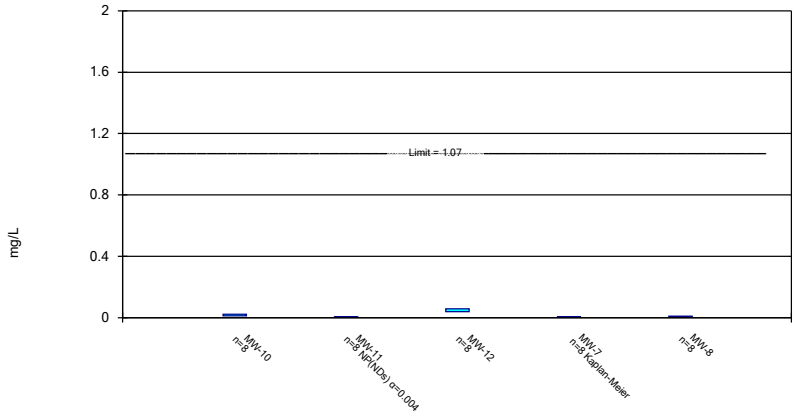
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric and Non-Parametric (NP) Confidence Interval

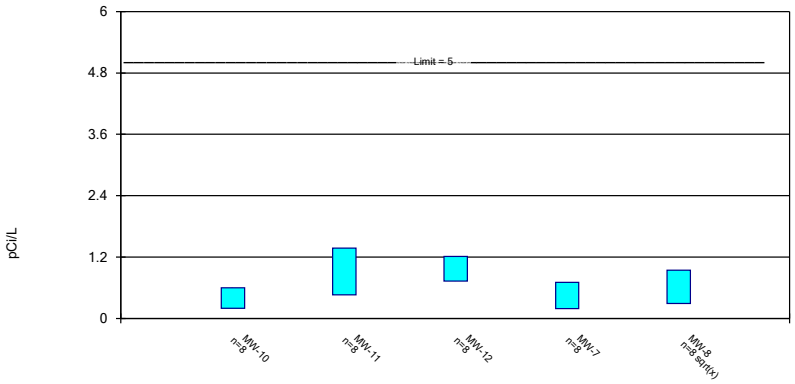
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric Confidence Interval

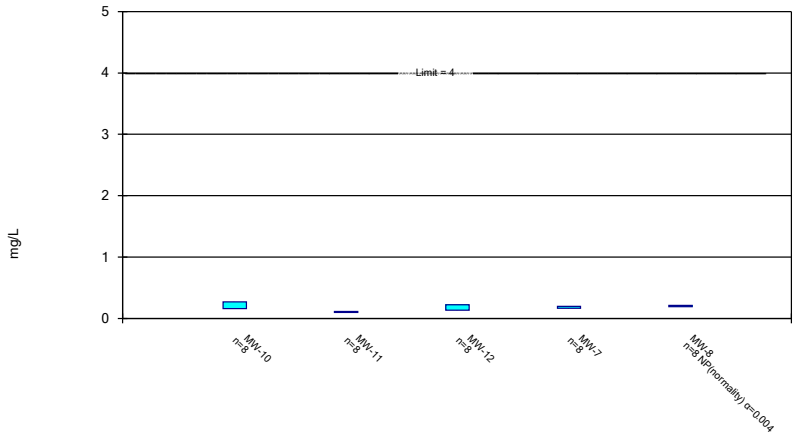
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric and Non-Parametric (NP) Confidence Interval

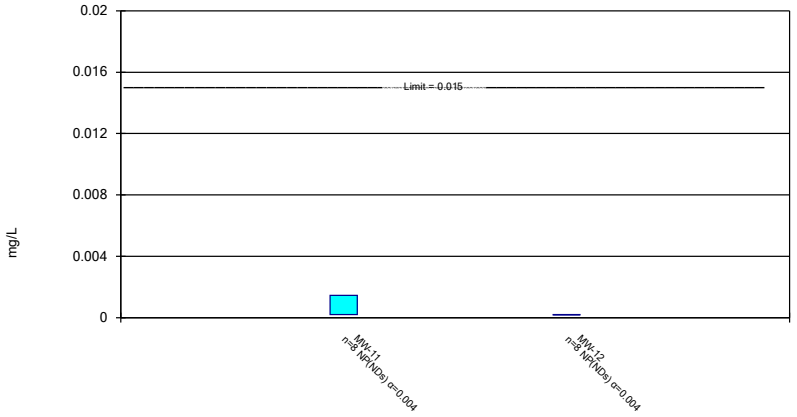
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Non-Parametric Confidence Interval

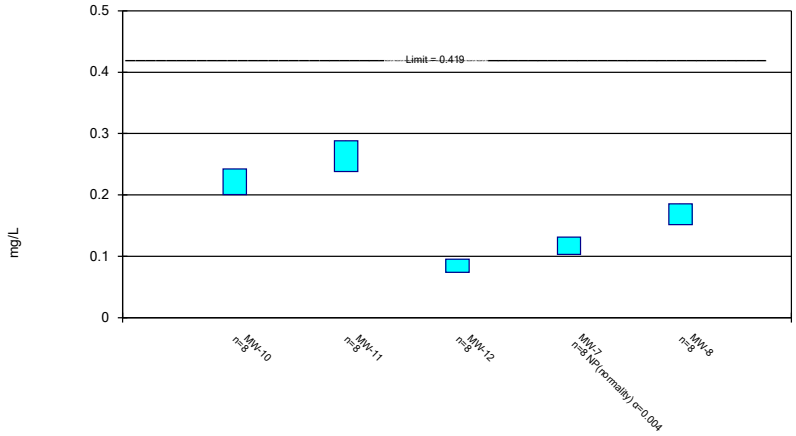
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric and Non-Parametric (NP) Confidence Interval

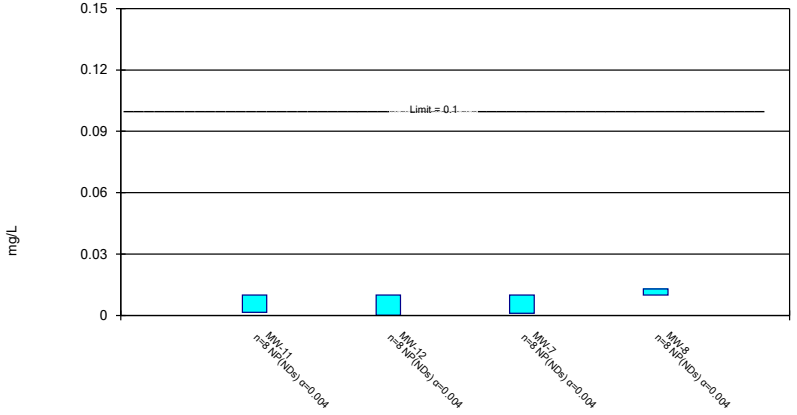
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Non-Parametric Confidence Interval

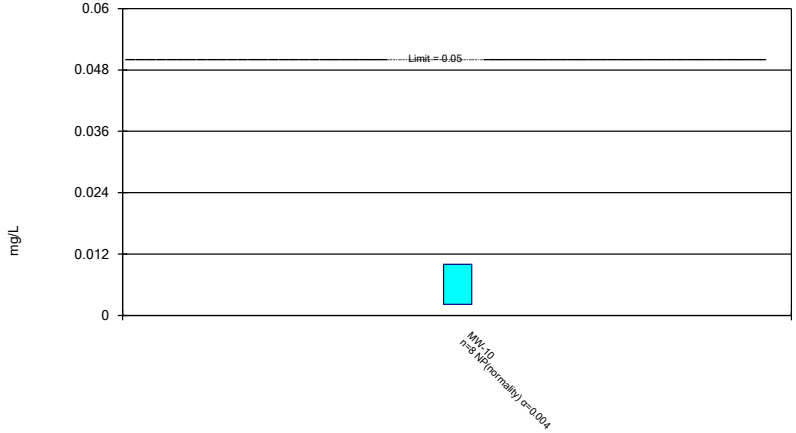
Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Selenium Analysis Run 5/20/2021 11:18 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

2nd
Semi-Annual
Monitoring Event

GROUNDWATER STATS CONSULTING

December 10, 2021

Southern Company Services
Attn: Mr. Greg Dyer
3535 Colonnade Parkway
Birmingham, AL 35243

Re: Plant Gorgas Bottom Ash Landfill
Background Update & 2nd Semi-Annual Statistical Analysis – July 2021

Dear Mr. Dyer,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the background update and statistical analysis of groundwater data for the July 2021 2nd semi-annual sample event for Alabama Power Company's Plant Gorgas Bottom Ash Landfill. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities (CCR Rule, 2015) as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began at site for the CCR program in 2016. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** MW-1, MW-2, MW-3, and MW-4
- **Downgradient wells:** MW-7, MW-8, MW-10, MW-11, and MW-12
- **Delineation well:** MW-12V

Note that data from delineation well MW-12V did not require statistics; therefore, data for this well were plotted only on time series and box plots.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was prepared according to the Statistical Analysis Plan approved by Dr. Kirk Cameron, PhD Statistician with MacStat Consulting, primary author of the USEPA Unified Guidance, and senior advisor to Groundwater Stats Consulting. The analysis was reviewed Dr. Jim Loftis, Civil & Environmental Engineering professor emeritus at Colorado State University and senior advisor to Groundwater Stats Consulting.

The CCR program consists of the constituents listed below. The terms "parameters" and "constituents" are used interchangeably.

> **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
> **Appendix IV** (Assessment Monitoring) - antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of Appendix IV downgradient well/constituent pairs containing 100% non-detects follows this letter.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). A substitution of the most recent reporting limit is used for non-detect data. Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells.

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on analysis of the spatial variability of groundwater quality data among wells upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves are provided in this report to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests that the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations. Power curves are based on the following statistical methods and site/data characteristics:

- Semi-Annual Sampling
- Intrawell Prediction Limits with 1-of-2 resample plan
- Interwell Prediction Limits with 1-of-2 resample plan
- # Background Samples (Intrawell): 15
- # Background Samples (Interwell): 96
- # Constituents: 7
- # Downgradient wells: 5

Summary of Statistical Methods – Appendix III Parameters

Based on the earlier evaluation described above, the following statistical methods were selected:

- Intrawell prediction limits, combined with a 1-of-2 resample plan for calcium, fluoride, sulfate, and TDS
- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, chloride, and pH

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the annual false positive rate associated with parametric limits is fixed at 10% as recommended by the EPA Unified Guidance (2009), the false positive rate associated with nonparametric limits is not fixed and depends upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits as appropriate.

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the intrawell case, data for all wells and constituents may be re-evaluated when a minimum of 4 new data points are available to determine whether earlier concentrations are representative of present-day groundwater

quality. In the interwell case, prediction limits are updated with upgradient well data following each sampling event after careful screening for any new outliers. While not required for this report, in some cases, deselecting the earlier portion of data may be necessary prior to construction of limits so that resulting statistical limits are conservative (lower) from a regulatory perspective and capable of rapidly detecting changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

Background Update Summaries

Fall 2019

Intrawell prediction limits, which compare the most recent compliance sample from a given well to historical data from the same well, are updated by testing for the appropriateness of consolidating new sampling observations with the screened background data and were last updated in September 2019. As discussed in the Statistical Analysis Plan (August 2020), intrawell prediction limits are used to evaluate calcium, fluoride, sulfate, and TDS at all wells due to natural spatial variation for these parameters. Historical data were evaluated for updating with newer data through May 2019 through the use of time series graphs and Tukey's outlier test to identify potential outliers when necessary, as well as the Mann Whitney test for equality of medians. This process is described below for the 2021 update and requires a minimum of four new data points. During the 2019 screening, all background data sets for constituents using intrawell prediction limits were updated through May 2019 and a summary of these results was included with the Mann Whitney test section in that report.

Interwell prediction limits are used to compare the most recent sample from each downgradient well to statistical limits constructed from pooled upgradient well data for boron, chloride, and pH. As mentioned above, these limits are updated following each sampling event after careful screening for new outliers. Data from upgradient wells are also periodically re-screened for newly developing trends, which may require adjustment of the background period to eliminate the trend. No adjustments were required in upgradient wells for constituents evaluated using interwell prediction limits.

Fall 2021

Outlier Analysis

Prior to constructing prediction limits, proposed background data--through February 2021 for intrawell parameters and through July 2021 for interwell parameters--were

reviewed through the use of time series graphs to identify any newly suspected outliers at all wells for calcium, fluoride, sulfate, and TDS, and at upgradient wells for boron, chloride, and pH. When values are identified as outliers, these measurements are flagged with "o" and excluded to reduce variation, better represent background conditions, and provide limits that are conservative (i.e. lower) from a regulatory perspective.

During this analysis, a high non-detect value was flagged as an outlier for boron in upgradient well MW-4. Additionally, high detected values for boron in downgradient well MW-7, sulfate at upgradient well MW-1 and downgradient wells MW-7 and MW-8, and TDS in upgradient well MW-1 were flagged as outliers since these values were not representative of remaining concentrations within their respective wells. As mentioned above, flagged data are displayed in a lighter font and as a disconnected symbol on the time series reports, as well as in a lighter font on the accompanying data pages. A summary of flagged outliers follows this report (Figure C).

Intrawell - Mann-Whitney

For constituents requiring intrawell prediction limits, the Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through May 2019 to compliance data through February 2021 (Figure D). When no statistically significant difference in medians between the two groups is found at a 99% confidence level, background data may be updated with newer compliance data. Statistically significant differences (either an increase or decrease in median concentrations) were found between the two groups for the following well/constituent pairs:

Increase

- Fluoride: MW-12
- TDS: MW-12

Decrease

- Fluoride: MW-8
- Sulfate: MW-11
- TDS: MW-11

Typically, when the test concludes that the medians of the two groups are statistically significantly different, particularly in the downgradient wells, the background data are not updated to include the newer data unless it can be reasonably justified that the change in concentrations reflects a naturally occurring shift unrelated to practices at the site. In studies such as the current one, in which at least one of the segments being compared is of short duration, the comparison is complicated by the fact that normal short-term variation may be mistaken for long-term change in medians.

For well/constituent pairs with statistically significant decreases in medians, the background datasets were updated with new measurements at lower concentrations in order to construct statistical limits that are conservative (i.e., lower) from a regulatory perspective and be representative of present-day groundwater quality.

Regarding well/constituent pairs with statistically significant increases in medians, the group of new measurements for TDS in downgradient MW-12 were similar to those observed historically in upgradient wells and are relatively stable. Therefore, these records were updated with more recent data. For fluoride in well MW-12, however, some of the compliance samples are elevated compared to historical concentrations within this well. In order to maintain statistical limits that are conservative (i.e., lower) from a regulatory perspective, this record was not updated with more recent measurements and will be re-evaluated during the next background update.

A summary of the Mann-Whitney results follows this letter, and the test results are included with the Mann Whitney test section at the end of this report. All records will be re-evaluated during the next background update when a minimum of 4 compliance samples are available. A list of well/constituent pairs with a truncated portion of their record follows this letter. All other records were updated with compliance data through February 2021.

Interwell – Trend Test Evaluation

The Sen's Slope/Mann Kendall trend test was used to evaluate the entire record of data from upgradient wells for parameters utilizing interwell prediction limits. When statistically significant increasing trends are identified in upgradient wells, the earlier portion of data may require deselection prior to construction of interwell statistical limits if the trending data would result in statistical limits that are not conservative from a regulatory perspective.

No statistically significant trends were noted in upgradient wells except for an increasing trend for boron in upgradient well MW-2. The increasing trend, however, is a result of historic trace values earlier in the record followed by non-detect values. Therefore, no adjustments were required at this time. A summary of the results follows this letter (Figure E).

Evaluation of Appendix III Parameters – July 2021

Prediction Limits

Intrawell prediction limits, combined with a 1-of-2 resample plan, were constructed for calcium, fluoride, sulfate, and TDS using screened background data through February 2021 at each well. (Figure F). Intrawell limits constructed from carefully screened background data from within each well serve to provide statistical limits that are representative of the background data population, and that will rapidly identify a change in more recent compliance data from within a given well. This statistical method removes the element of variation across wells and eliminates the chance of mistaking natural spatial variation for a release from the facility. The July 2021 observation is compared to its respective background from the same well to determine whether initial exceedances are present.

Interwell prediction limits combined with a 1-of-2 verification strategy were constructed for boron, chloride, and pH (Figure G). Interwell prediction limits pool upgradient well data through July 2021 to establish a background limit for an individual constituent. The July 2021 sample from each downgradient well is compared to the background limit to determine whether initial exceedances are present.

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified, and further research is required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If a resample falls within the statistical limit, the initial exceedance is considered to be a false positive result; therefore, no further action is necessary.

Complete prediction limits results and a summary of exceedances follow this letter. Exceedances were identified for the following well/constituent pairs:

Intrawell:

- Fluoride: MW-7, MW-8, and MW-11

Interwell:

- Boron: MW-10, MW-11, and MW-12
- Chloride: MW-7, MW-8, MW-11, and MW-12
- pH: MW-7, MW-8, MW-10, and MW-11

Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure H). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. The existence of similar trends in both upgradient and downgradient wells is an indication of natural variability in groundwater that is unrelated to practices at the site. A summary of the trend test results follows this letter. No statistically significant decreasing trends were identified. Statistically significant increasing trends were identified for the following well/constituent pairs:

Increasing

- Boron: MW-2 (upgradient) and MW-11
- Chloride: MW-11 and MW-12
- Fluoride: MW-2 (upgradient)
- pH: MW-8 and MW-11

Decreasing

- None

Evaluation of Appendix IV Parameters – July 2021

Data from upgradient wells for Appendix IV parameters were assessed for outliers during this analysis. In addition to previously flagged outliers, high values for cobalt and lead in upgradient well MW-3 were flagged in order to construct statistical limits that are conservative (i.e., lower) from a regulatory perspective. A previously flagged value of selenium (0.0209 mg/L) was unflagged in well MW-3. A summary of flagged outliers follows this report (Figure C).

In accordance with Alabama Department of Environmental Management (ADEM), the Groundwater Protections Standards (GWPS) were updated during this 2021 2nd semi-annual statistical analysis. The GWPS will be updated again during the 2023 2nd semi-annual statistical analysis. The methodology used to create these GWPS is described below.

Interwell Upper Tolerance Limits

First, background limits were determined using tolerance limits constructed from pooled upgradient well data through July 2021 (Figure I). The tolerance limits contain a known

fraction (coverage) of the background population with a known level of confidence. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. As requested by ADEM to eliminate variation among upgradient well data, nonparametric tolerance limits, which use the highest value in background as the statistical limit, were constructed.

Groundwater Protection Standards

These background limits were then compared to the Maximum Contaminant Levels (MCLs) for each parameter, and the higher of the two was used as the GWPS (Figure J) in the confidence interval comparisons described below. Exceptions are noted in Figure J for beryllium and cadmium. For these two parameters, the MCL's were used as the GWPS rather than the higher background UTLs to maintain the more conservative standard.

Confidence Intervals

Confidence intervals were then constructed on downgradient wells using a maximum of the most recent 8 samples through July 2021 for each of the Appendix IV parameters (Figure K). These intervals were constructed as either parametric or nonparametric confidence intervals depending on the data distribution and percentage of non-detects. When data followed a normal or transformed-normal distribution, parametric confidence intervals were used for Appendix IV parameters. Nonparametric confidence intervals, which use the highest and lowest values in background as interval limits, were constructed when data did not follow a normal or transformed-normal distribution or when there were greater than 50% non-detects.

As mentioned above, well/constituent pairs containing 100% non-detects for the most recent 8 samples did not require statistics; therefore, they were deselected prior to construction of confidence intervals. A list of deselected well/constituent pairs follows this report. Each confidence interval was compared with the corresponding GWPS. Only when the entire confidence interval is above the GWPS is the well/constituent pair considered to exceed its respective standard. Both a tabular summary and graphical presentation of the confidence interval results follow this letter. No confidence interval exceedances were noted except for arsenic in well MW-12.

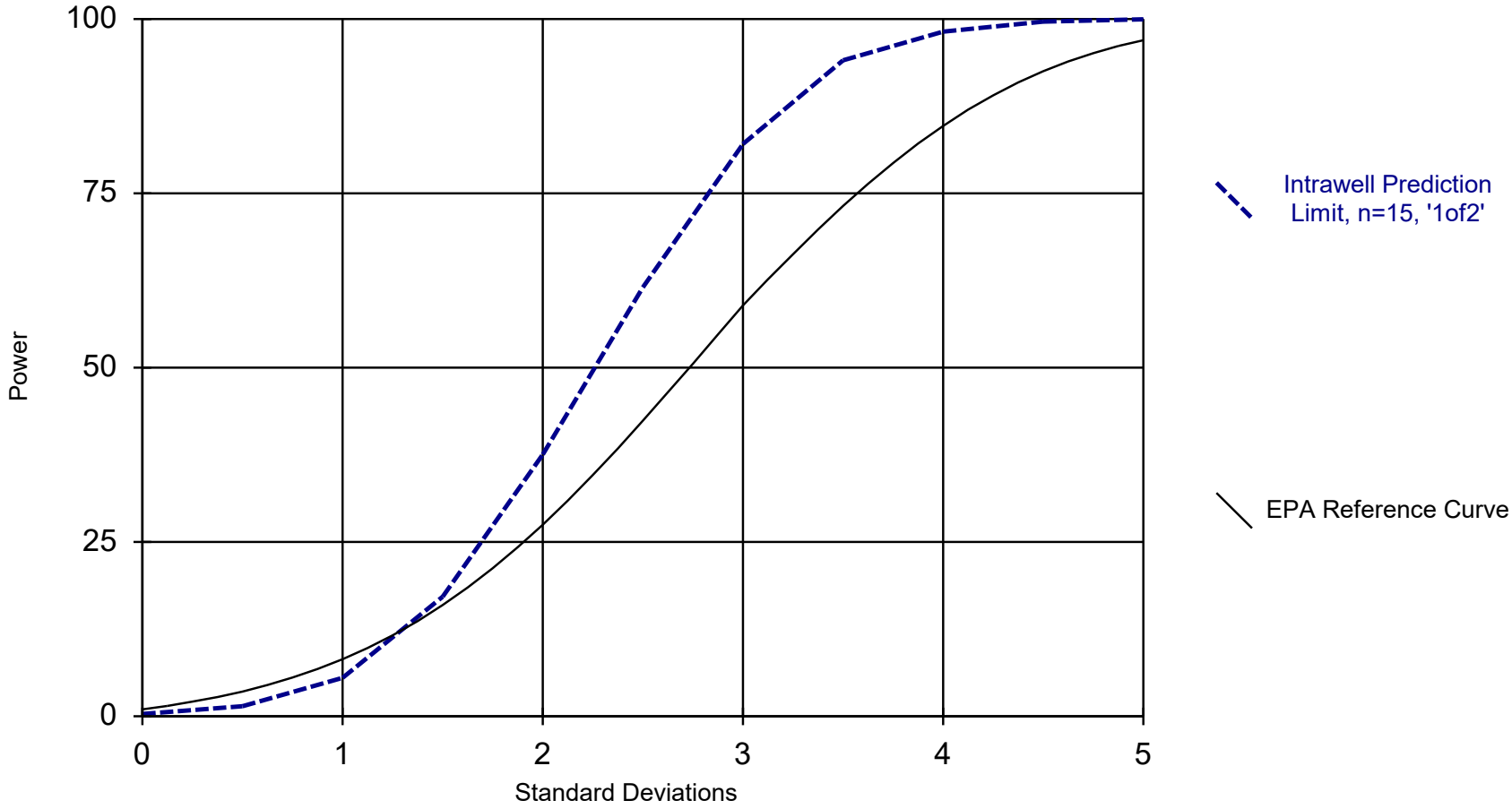
Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Gorgas Bottom Ash Landfill. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

Andrew Collins
Project Manager

Kristina Rayner
Groundwater Statistician

Intrawell Power Curve

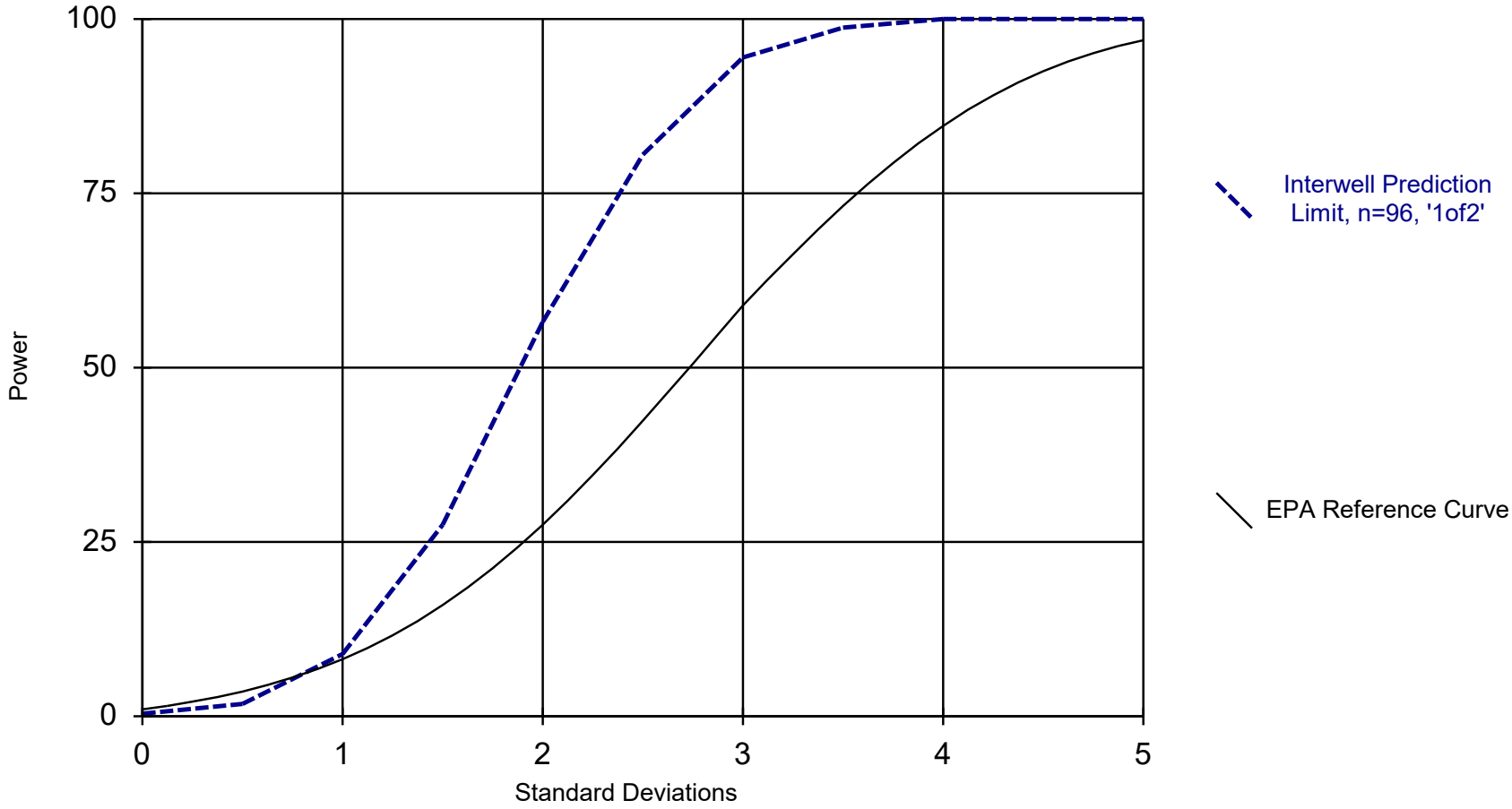


Kappa = 2.193, based on 5 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 11/11/2021 10:30 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Interwell Power Curve



Kappa = 1.808, based on 5 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 11/11/2021 10:30 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

100% Non-Detects: Appendix IV Downgradient

Analysis Run 11/11/2021 9:25 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Antimony (mg/L)
MW-11, MW-7, MW-8

Beryllium (mg/L)
MW-11, MW-12, MW-7, MW-8

Cadmium (mg/L)
MW-11, MW-12, MW-7, MW-8

Chromium (mg/L)
MW-11, MW-7, MW-8

Lead (mg/L)
MW-7

Mercury (mg/L)
MW-10, MW-11, MW-12, MW-7, MW-8

Selenium (mg/L)
MW-11, MW-12, MW-7, MW-8

Thallium (mg/L)
MW-10, MW-11, MW-12, MW-7, MW-8

Date Ranges

Date: 11/11/2021 9:06 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Fluoride (mg/L)

MW-12 background:4/28/2016-5/15/2019

Welch's t-test/Mann-Whitney - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 11/10/2021, 11:00 PM

Constituent	Well	Calc.	0.01	Method
Fluoride (mg/L)	**MW-12**	**2.662**	**Yes**	**Mann-W**
Fluoride (mg/L)	**MW-8**	**-2.771**	**Yes**	**Mann-W**
Sulfate (mg/L)	**MW-11**	**-2.917**	**Yes**	**Mann-W**
Total Dissolved Solids (mg/L)	**MW-11**	**-2.975**	**Yes**	**Mann-W**
Total Dissolved Solids (mg/L)	**MW-12**	**2.731**	**Yes**	**Mann-W**

Welch's t-test/Mann-Whitney - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 11/10/2021, 11:00 PM

Constituent	Well	Calc.	0.01	Method
Calcium (mg/L)	MW-1 (bg)	0.485	No	Mann-W
Calcium (mg/L)	MW-10	-1.031	No	Mann-W
Calcium (mg/L)	MW-11	-2.488	No	Mann-W
Calcium (mg/L)	MW-12	0.9745	No	Mann-W
Calcium (mg/L)	MW-2 (bg)	0.03731	No	Mann-W
Calcium (mg/L)	MW-3 (bg)	0.1119	No	Mann-W
Calcium (mg/L)	MW-4 (bg)	-1.23	No	Mann-W
Calcium (mg/L)	MW-7	-1.887	No	Mann-W
Calcium (mg/L)	MW-8	-0.6675	No	Mann-W
Fluoride (mg/L)	MW-1 (bg)	-2.562	No	Mann-W
Fluoride (mg/L)	MW-10	0.5098	No	Mann-W
Fluoride (mg/L)	MW-11	1.31	No	Mann-W
Fluoride (mg/L)	**MW-12**	**2.662**	**Yes**	**Mann-W**
Fluoride (mg/L)	MW-2 (bg)	0.7841	No	Mann-W
Fluoride (mg/L)	MW-3 (bg)	-2.56	No	Mann-W
Fluoride (mg/L)	MW-4 (bg)	-0.6406	No	Mann-W
Fluoride (mg/L)	MW-7	-0.05761	No	Mann-W
Fluoride (mg/L)	**MW-8**	**-2.771**	**Yes**	**Mann-W**
Sulfate (mg/L)	MW-1 (bg)	1.297	No	Mann-W
Sulfate (mg/L)	MW-10	-0.426	No	Mann-W
Sulfate (mg/L)	**MW-11**	**-2.917**	**Yes**	**Mann-W**
Sulfate (mg/L)	MW-12	1.761	No	Mann-W
Sulfate (mg/L)	MW-2 (bg)	-0.485	No	Mann-W
Sulfate (mg/L)	MW-3 (bg)	0.7086	No	Mann-W
Sulfate (mg/L)	MW-4 (bg)	-1.308	No	Mann-W
Sulfate (mg/L)	MW-7	0.5988	No	Mann-W
Sulfate (mg/L)	MW-8	0	No	Mann-W
Total Dissolved Solids (mg/L)	MW-1 (bg)	1.151	No	Mann-W
Total Dissolved Solids (mg/L)	MW-10	-1.881	No	Mann-W
Total Dissolved Solids (mg/L)	**MW-11**	**-2.975**	**Yes**	**Mann-W**
Total Dissolved Solids (mg/L)	**MW-12**	**2.731**	**Yes**	**Mann-W**
Total Dissolved Solids (mg/L)	MW-2 (bg)	0.1493	No	Mann-W
Total Dissolved Solids (mg/L)	MW-3 (bg)	0.7828	No	Mann-W
Total Dissolved Solids (mg/L)	MW-4 (bg)	-1.752	No	Mann-W
Total Dissolved Solids (mg/L)	MW-7	-0.9149	No	Mann-W
Total Dissolved Solids (mg/L)	MW-8	-1.276	No	Mann-W

Upgradient Wells Trend Tests - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**MW-2 (bg)**	**0.00734**	**127**	**105**	**Yes**	**24**	**25**	**n/a**	**n/a**	**0.01**	**NP**

Upgradient Wells Trend Tests - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW-1 (bg)	0.003051	93	105	No	24	29.17	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-2 (bg)**	**0.00734**	**127**	**105**	**Yes**	**24**	**25**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-3 (bg)	0.006876	97	105	No	24	25	n/a	n/a	0.01	NP
Boron (mg/L)	MW-4 (bg)	-0.000257	-17	-98	No	23	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-1 (bg)	-0.0204	-17	-105	No	24	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-2 (bg)	-0.05131	-15	-105	No	24	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-3 (bg)	0.06882	59	105	No	24	8.333	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-4 (bg)	-0.06862	-70	-105	No	24	4.167	n/a	n/a	0.01	NP
pH (SU)	MW-1 (bg)	-0.01437	-88	-105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-2 (bg)	0.04162	102	105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-3 (bg)	-0.01603	-16	-111	No	25	0	n/a	n/a	0.01	NP
pH (SU)	MW-4 (bg)	0.01244	57	111	No	25	0	n/a	n/a	0.01	NP

Appendix III Intrawell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 11/11/2021, 9:09 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	**MW-11**	**0.1477**	**n/a**	**7/21/2021**	**0.16**	**Yes**	**17**	**0.09621**	**0.0242**	**5.882**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**
Fluoride (mg/L)	**MW-7**	**0.2155**	**n/a**	**7/20/2021**	**0.286**	**Yes**	**17**	**0.1848**	**0.01443**	**0**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**
Fluoride (mg/L)	**MW-8**	**0.2349**	**n/a**	**7/20/2021**	**0.262**	**Yes**	**17**	**0.21**	**0.01171**	**0**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**

Appendix III Intrawell Prediction Limits - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 11/11/2021, 9:09 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-1	243	n/a	7/12/2021	149	No	23	n/a	n/a	0	n/a	n/a	0.003415	NP Intra (normality) 1 of 2
Calcium (mg/L)	MW-10	280.7	n/a	7/20/2021	149	No	16	184.7	44.65	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-11	423.3	n/a	7/21/2021	322	No	16	372.6	23.56	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-12	402.8	n/a	7/20/2021	330	No	16	355.6	21.98	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-2	216.2	n/a	7/12/2021	159	No	23	174.2	20.8	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-3	420.1	n/a	7/12/2021	252	No	23	300	59.54	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-4	388.9	n/a	7/12/2021	242	No	23	304.8	41.68	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-7	345.2	n/a	7/20/2021	254	No	16	85434	15683	0	None	x^2	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-8	341.3	n/a	7/20/2021	281	No	16	303.1	17.76	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-1	0.1903	n/a	7/12/2021	0.125	No	24	0.1172	0.03644	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-10	0.3437	n/a	7/20/2021	0.268	No	17	0.1839	0.0751	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	**MW-11**	**0.1477**	**n/a**	**7/21/2021**	**0.16**	**Yes**	**17**	**0.09621**	**0.0242**	**5.882**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**
Fluoride (mg/L)	MW-12	0.2219	n/a	7/20/2021	0.219	No	13	0.1188	0.04526	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.2565	n/a	7/12/2021	0.196	No	24	0.1456	0.05538	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-3	0.5975	n/a	7/12/2021	0.287	No	24	0.3299	0.1336	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-4	0.4243	n/a	7/12/2021	0.35	No	24	0.1114	0.03425	0	None	x^2	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	**MW-7**	**0.2155**	**n/a**	**7/20/2021**	**0.286**	**Yes**	**17**	**0.1848**	**0.01443**	**0**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**
Fluoride (mg/L)	**MW-8**	**0.2349**	**n/a**	**7/20/2021**	**0.262**	**Yes**	**17**	**0.21**	**0.01171**	**0**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**
Sulfate (mg/L)	MW-1	1672	n/a	7/12/2021	1560	No	22	1461	104.1	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-10	1188	n/a	7/20/2021	665	No	16	807.1	176.9	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-11	2292	n/a	7/21/2021	1420	No	16	1592	325.4	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-12	2822	n/a	7/20/2021	2500	No	16	2315	235.6	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-2	1284	n/a	7/12/2021	763	No	23	997.8	141.7	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	3300	n/a	7/12/2021	2380	No	23	2451	421.1	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3165	n/a	7/12/2021	1930	No	23	2511	324	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-7	1614	n/a	7/20/2021	1170	No	15	1324	132.3	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-8	1640	n/a	7/20/2021	1500	No	15	n/a	n/a	0	n/a	n/a	0.007533	NP Intra (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-1	2530	n/a	7/12/2021	2210	No	22	2197	164	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-10	1925	n/a	7/20/2021	1080	No	16	7.179	0.1783	0	None	ln(x)	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-11	3052	n/a	7/21/2021	2210	No	16	2649	187.2	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-12	4477	n/a	7/20/2021	3680	No	16	3598	408.9	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-2	2034	n/a	7/12/2021	1390	No	23	1643	193.7	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	5097	n/a	7/12/2021	3510	No	23	3729	678.1	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-4	4623	n/a	7/12/2021	3000	No	23	1.5e7	3201096	0	None	x^2	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-7	2598	n/a	7/20/2021	2110	No	16	6.3e16	2.6e16	0	None	x^5	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-8	2817	n/a	7/20/2021	2420	No	16	2573	113.3	0	None	No	0.001504	Param Intra 1 of 2

Appendix III Interwell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 12:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**MW-10**	**0.0596**	**n/a**	**7/20/2021**	**0.201**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-11**	**0.0596**	**n/a**	**7/21/2021**	**0.104**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-12**	**0.0596**	**n/a**	**7/20/2021**	**0.227**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-11**	**3.837**	**n/a**	**7/21/2021**	**73.8**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-12**	**3.837**	**n/a**	**7/20/2021**	**9.85**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-7**	**3.837**	**n/a**	**7/20/2021**	**6.35**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-8**	**3.837**	**n/a**	**7/20/2021**	**14.3**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
pH (SU)	**MW-10**	**6.35**	**3.77**	**7/20/2021**	**6.46**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-11**	**6.35**	**3.77**	**7/21/2021**	**6.74**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-7**	**6.35**	**3.77**	**7/20/2021**	**6.58**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-8**	**6.35**	**3.77**	**7/20/2021**	**6.64**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**

Appendix III Interwell Prediction Limits - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 12:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**MW-10**	**0.0596**	**n/a**	**7/20/2021**	**0.201**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-11**	**0.0596**	**n/a**	**7/21/2021**	**0.104**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-12**	**0.0596**	**n/a**	**7/20/2021**	**0.227**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	MW-7	0.0596	n/a	7/20/2021	0.0721J	No	95	n/a	n/a	20	n/a	n/a	0.0002155	NP Inter (normality) 1 of 2
Boron (mg/L)	MW-8	0.0596	n/a	7/20/2021	0.0656J	No	95	n/a	n/a	20	n/a	n/a	0.0002155	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-10	3.837	n/a	7/20/2021	3.64	No	96	1.291	0.1517	3.125	None	x^(1/3)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	**MW-11**	**3.837**	**n/a**	**7/21/2021**	**73.8**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-12**	**3.837**	**n/a**	**7/20/2021**	**9.85**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-7**	**3.837**	**n/a**	**7/20/2021**	**6.35**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-8**	**3.837**	**n/a**	**7/20/2021**	**14.3**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
pH (SU)	**MW-10**	**6.35**	**3.77**	**7/20/2021**	**6.46**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-11**	**6.35**	**3.77**	**7/21/2021**	**6.74**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	MW-12	6.35	3.77	7/20/2021	5.53	No	98	n/a	n/a	0	n/a	n/a	0.0004044	NP Inter (normality) 1 of 2
pH (SU)	**MW-7**	**6.35**	**3.77**	**7/20/2021**	**6.58**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-8**	**6.35**	**3.77**	**7/20/2021**	**6.64**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**

Appendix III Trend Tests - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:21 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**MW-11**	**0.003449**	**83**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**MW-2 (bg)**	**0.004722**	**127**	**105**	**Yes**	**24**	**25**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-11**	**20.55**	**117**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-12**	**1.362**	**88**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Fluoride (mg/L)	**MW-2 (bg)**	**0.01443**	**123**	**111**	**Yes**	**25**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**MW-11**	**0.05218**	**92**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**MW-8**	**0.05301**	**105**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix III Trend Tests - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:21 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW-1 (bg)	0.003051	93	105	No	24	29.17	n/a	n/a	0.01	NP
Boron (mg/L)	MW-10	-0.002309	-15	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-11**	**0.003449**	**83**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-12	0.013	62	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-2 (bg)**	**0.004722**	**127**	**105**	**Yes**	**24**	**25**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-3 (bg)	0.002231	69	105	No	24	25	n/a	n/a	0.01	NP
Boron (mg/L)	MW-4 (bg)	-0.000257	-17	-98	No	23	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-1 (bg)	-0.0204	-17	-105	No	24	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**MW-11**	**20.55**	**117**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-12**	**1.362**	**88**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	MW-2 (bg)	-0.05131	-15	-105	No	24	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-3 (bg)	0.06882	59	105	No	24	8.333	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-4 (bg)	-0.06862	-70	-105	No	24	4.167	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-7	-6.069	-33	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-8	-30.38	-58	-63	No	17	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-1 (bg)	-0.006304	-46	-111	No	25	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-11	0.004859	57	68	No	18	5.556	n/a	n/a	0.01	NP
Fluoride (mg/L)	**MW-2 (bg)**	**0.01443**	**123**	**111**	**Yes**	**25**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Fluoride (mg/L)	MW-3 (bg)	-0.007263	-15	-111	No	25	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-4 (bg)	0.005907	41	111	No	25	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-7	0	7	68	No	18	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-8	-0.003792	-58	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	MW-1 (bg)	-0.01437	-88	-105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-10	0.01449	30	68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	**MW-11**	**0.05218**	**92**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	MW-2 (bg)	0.04162	102	105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-3 (bg)	-0.01603	-16	-111	No	25	0	n/a	n/a	0.01	NP
pH (SU)	MW-4 (bg)	0.01244	57	111	No	25	0	n/a	n/a	0.01	NP
pH (SU)	MW-7	-0.008049	-21	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	**MW-8**	**0.05301**	**105**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Upper Tolerance Limits Summary Table

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:45 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.00143	n/a	n/a	n/a	96	n/a	n/a	93.75	n/a	n/a	0.007269	NP Inter
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	96	n/a	n/a	83.33	n/a	n/a	0.007269	NP Inter
Barium (mg/L)	n/a	0.0165	n/a	n/a	n/a	96	n/a	n/a	0	n/a	n/a	0.007269	NP Inter
Beryllium (mg/L)	n/a	0.0121	n/a	n/a	n/a	94	n/a	n/a	84.04	n/a	n/a	0.008054	NP Inter
Cadmium (mg/L)	n/a	0.00598	n/a	n/a	n/a	94	n/a	n/a	45.74	n/a	n/a	0.008054	NP Inter
Chromium (mg/L)	n/a	0.0105	n/a	n/a	n/a	96	n/a	n/a	89.58	n/a	n/a	0.007269	NP Inter
Cobalt (mg/L)	n/a	0.49	n/a	n/a	n/a	94	n/a	n/a	26.6	n/a	n/a	0.008054	NP Inter
Combined Radium 226 + 228 (pCi/L)	n/a	1.47	n/a	n/a	n/a	92	n/a	n/a	0	n/a	n/a	0.008924	NP Inter
Fluoride (mg/L)	n/a	0.63	n/a	n/a	n/a	100	n/a	n/a	0	n/a	n/a	0.005921	NP Inter
Lead (mg/L)	n/a	0.00108	n/a	n/a	n/a	95	n/a	n/a	95.79	n/a	n/a	0.007651	NP Inter
Lithium (mg/L)	n/a	0.419	n/a	n/a	n/a	96	n/a	n/a	0	n/a	n/a	0.007269	NP Inter
Mercury (mg/L)	n/a	0.0005	n/a	n/a	n/a	96	n/a	n/a	100	n/a	n/a	0.007269	NP Inter
Molybdenum (mg/L)	n/a	0.0002	n/a	n/a	n/a	96	n/a	n/a	97.92	n/a	n/a	0.007269	NP Inter
Selenium (mg/L)	n/a	0.0209	n/a	n/a	n/a	96	n/a	n/a	60.42	n/a	n/a	0.007269	NP Inter
Thallium (mg/L)	n/a	0.000226	n/a	n/a	n/a	96	n/a	n/a	96.88	n/a	n/a	0.007269	NP Inter

GORGAS BALF GWPS			
Analyte	**Units**	**Background**	**GWPS**
Antimony	mg/L	0.00143	0.006
Arsenic	mg/L	0.005	0.01
Barium	mg/L	0.0165	2
Beryllium	mg/L	0.0121	0.004
Cadmium	mg/L	0.00598	0.005
Chromium	mg/L	0.0105	0.1
Cobalt	mg/L	0.49	0.49
Combined Radium-226/228	pCi/L	1.47	5
Fluoride	mg/L	0.63	4
Lead	mg/L	0.00108	0.015
Lithium	mg/L	0.419	0.419
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.0002	0.1
Selenium	mg/L	0.0209	0.05
Thallium	mg/L	0.000226	0.002

Notes:

1. mg/L - Milligrams per liter

2. pCi/L - Picocuries per liter

3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.

4. GWPS established during second semi-annual sampling event in 2021.

Confidence Intervals - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:51 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	**MW-12**	**0.0626**	**0.04478**	**0.01**	**Yes**	**8**	**0.05369**	**0.008406**	**0**	**None**	**No**	**0.01**	**Param.**

Confidence Intervals - All Results

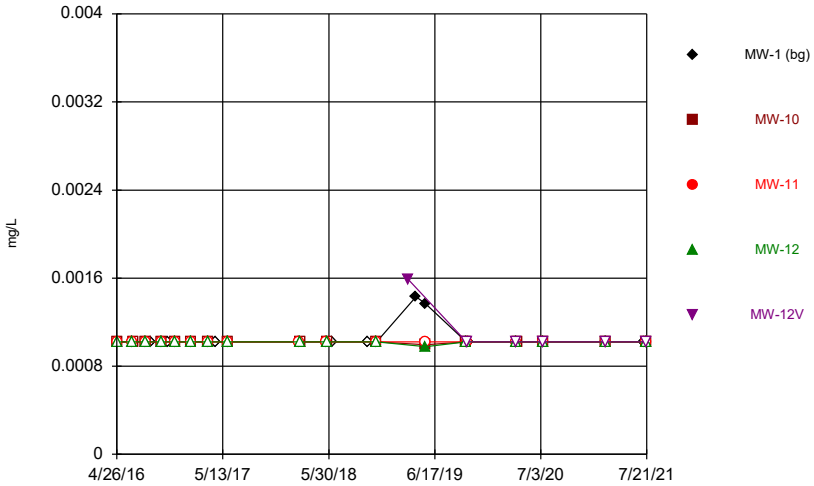
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:51 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	MW-10	0.00102	0.000996	0.006	No	8	0.001017	0.000008485	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-12	0.00102	0.000977	0.006	No	8	0.001015	0.0000152	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-10	0.005	0.00102	0.01	No	8	0.002772	0.001856	37.5	None	No	0.004	NP (normality)
Arsenic (mg/L)	MW-11	0.005	0.000834	0.01	No	8	0.003552	0.002015	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	**MW-12**	**0.0626**	**0.04478**	**0.01**	**Yes**	**8**	**0.05369**	**0.008406**	**0**	**None**	**No**	**0.01**	**Param.**
Arsenic (mg/L)	MW-7	0.001559	0.001339	0.01	No	8	0.001449	0.0001038	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-8	0.001824	0.001051	0.01	No	8	0.001438	0.0003642	0	None	No	0.01	Param.
Barium (mg/L)	MW-10	0.0245	0.0187	2	No	8	0.02041	0.001799	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-11	0.01572	0.01343	2	No	8	0.01458	0.001082	0	None	No	0.01	Param.
Barium (mg/L)	MW-12	0.01277	0.01133	2	No	8	0.01205	0.0006761	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.01472	0.01196	2	No	8	0.01334	0.001303	0	None	No	0.01	Param.
Barium (mg/L)	MW-8	0.0143	0.0122	2	No	8	0.0135	0.0008018	0	None	No	0.004	NP (normality)
Beryllium (mg/L)	MW-10	0.001742	0.0008183	0.004	No	8	0.00128	0.0004356	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-10	0.001	0.00008	0.005	No	8	0.0007785	0.0004105	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-10	0.001015	0.00021	0.1	No	8	0.0009144	0.0002846	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-12	0.001015	0.00028	0.1	No	8	0.0009231	0.0002599	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-10	0.02144	0.01022	0.49	No	8	0.01583	0.005297	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-11	0.005	0.00025	0.49	No	8	0.003814	0.002197	75	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-12	0.05605	0.04277	0.49	No	8	0.04941	0.006263	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-7	0.005712	0.002663	0.49	No	8	0.004187	0.001438	12.5	None	No	0.01	Param.
Cobalt (mg/L)	MW-8	0.008493	0.005549	0.49	No	8	0.007021	0.001389	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-10	0.5644	0.1841	5	No	8	0.3743	0.1794	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-11	1.116	0.5245	5	No	8	0.8201	0.2789	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-12	1.248	0.7475	5	No	8	0.9976	0.2359	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-7	0.6249	0.1729	5	No	8	0.3989	0.2132	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-8	0.8997	0.2834	5	No	8	0.5816	0.3549	0	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	MW-10	0.2776	0.1586	4	No	8	0.2181	0.05614	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-11	0.16	0.0915	4	No	8	0.1106	0.02144	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-12	0.228	0.151	4	No	8	0.1895	0.03635	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-7	0.286	0.153	4	No	8	0.1943	0.03989	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-8	0.262	0.189	4	No	8	0.2074	0.02372	0	None	No	0.004	NP (normality)
Lead (mg/L)	MW-10	0.0002	0.00008	0.015	No	8	0.000185	0.00004243	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-11	0.00145	0.0002	0.015	No	8	0.0003562	0.0004419	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-12	0.00023	0.000178	0.015	No	8	0.000201	0.00001402	75	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-8	0.0002	0.00009	0.015	No	8	0.0001862	0.00003889	87.5	None	No	0.004	NP (NDs)
Lithium (mg/L)	MW-10	0.2398	0.1949	0.419	No	8	0.2174	0.02119	0	None	No	0.01	Param.
Lithium (mg/L)	MW-11	0.2893	0.2467	0.419	No	8	0.268	0.02011	0	None	No	0.01	Param.
Lithium (mg/L)	MW-12	0.08799	0.07444	0.419	No	8	0.08121	0.006391	0	None	No	0.01	Param.
Lithium (mg/L)	MW-7	0.1334	0.1051	0.419	No	8	0.1193	0.01332	0	None	No	0.01	Param.
Lithium (mg/L)	MW-8	0.1812	0.1478	0.419	No	8	0.1645	0.01579	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-10	0.000203	0.00008	0.1	No	8	0.0001876	0.00004349	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-11	0.00148	0.000203	0.1	No	8	0.0004998	0.0005516	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-12	0.000203	0.000088	0.1	No	8	0.0001845	0.00004067	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-7	0.00107	0.000203	0.1	No	8	0.0003935	0.0003572	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-8	0.0129	0.000203	0.1	No	8	0.001806	0.004483	75	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-10	0.01	0.00098	0.05	No	8	0.006096	0.004212	50	None	No	0.004	NP (normality)

FIGURE A.

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

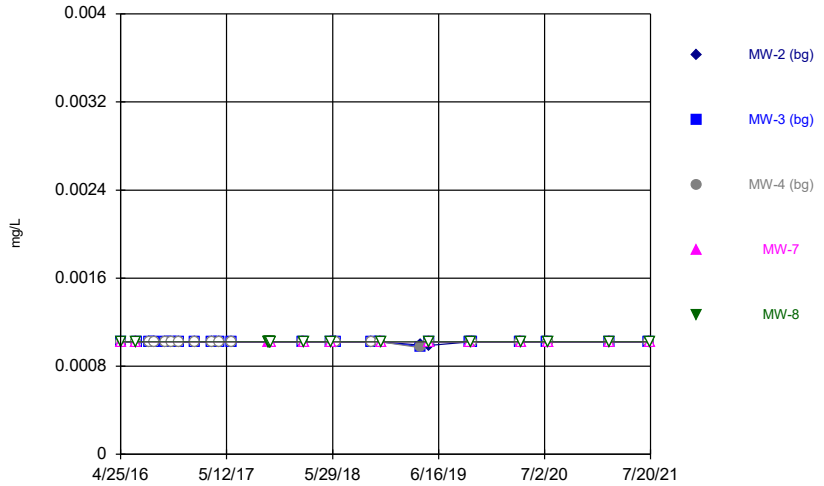
Time Series



Constituent: Antimony Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

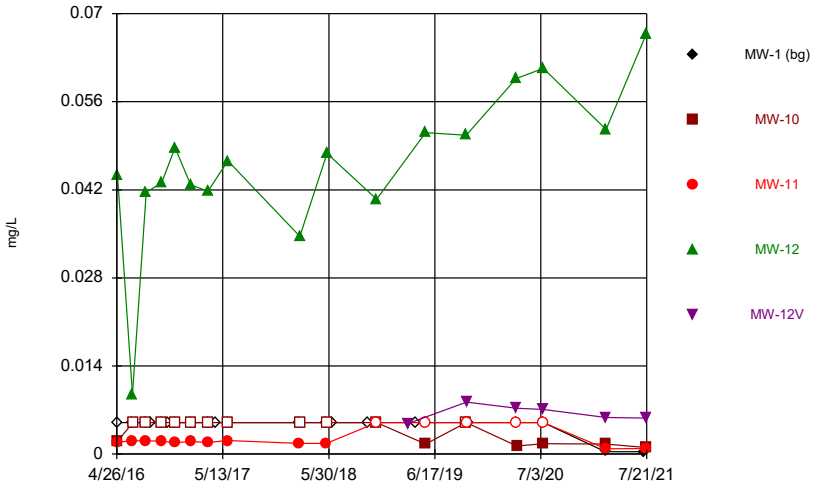
Time Series



Constituent: Antimony Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

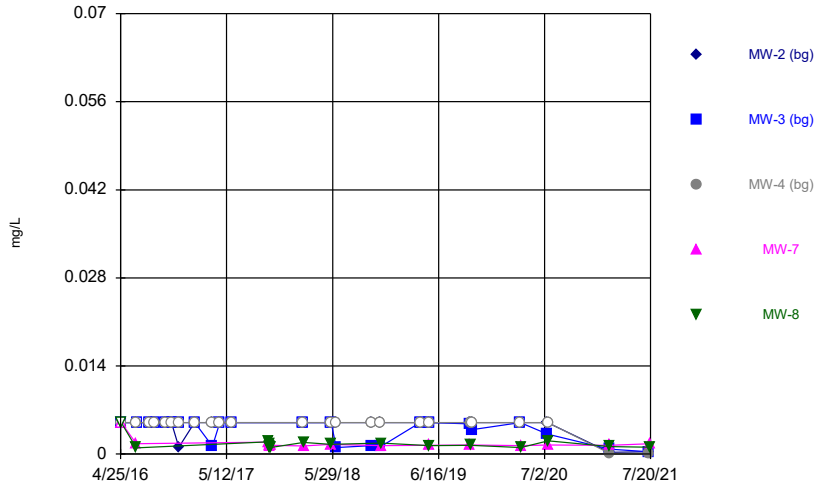
Time Series



Constituent: Arsenic Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

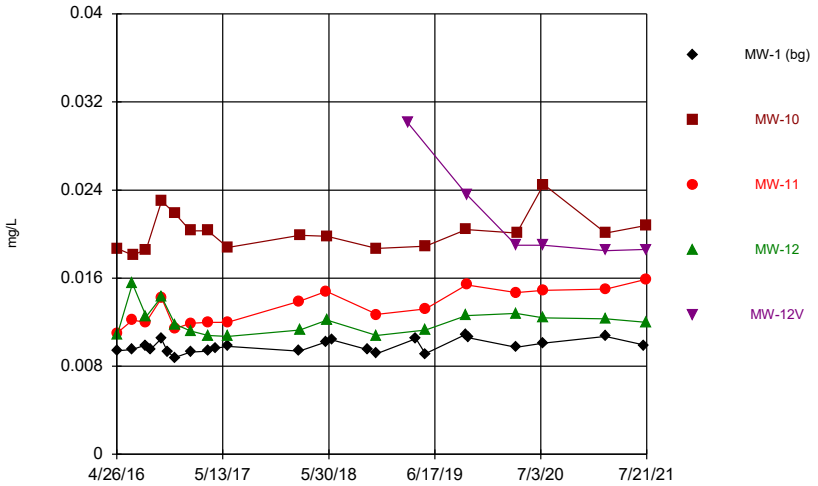
Time Series



Constituent: Arsenic Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series

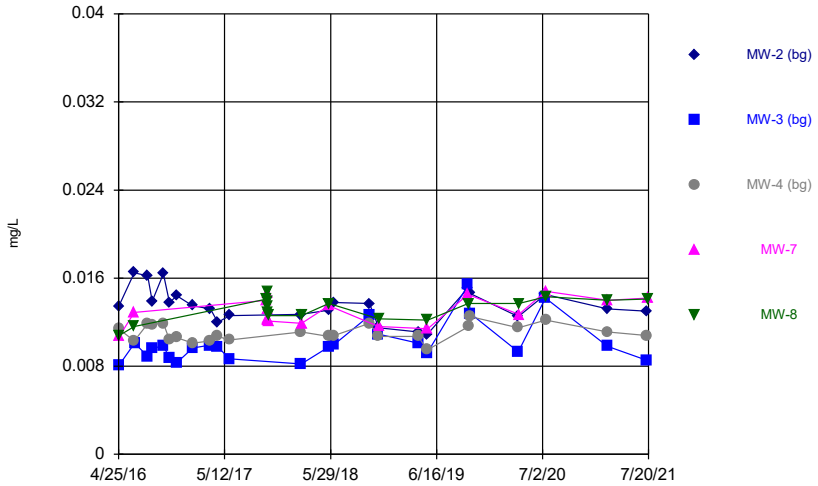


Constituent: Barium Analysis Run 12/2/2021 9:39 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series



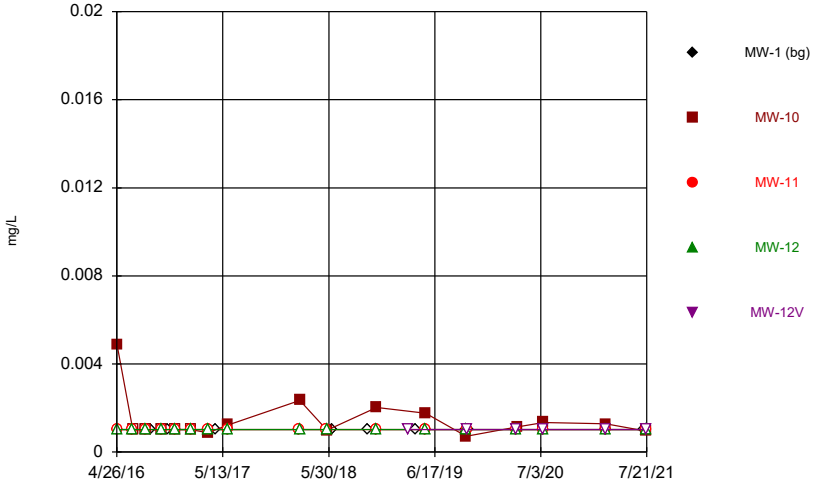
Constituent: Barium Analysis Run 12/2/2021 9:39 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series



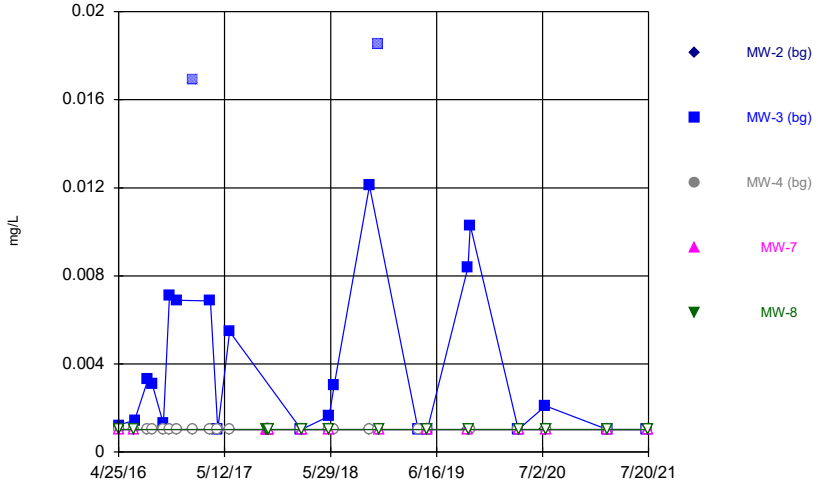
Constituent: Beryllium Analysis Run 12/2/2021 9:39 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series

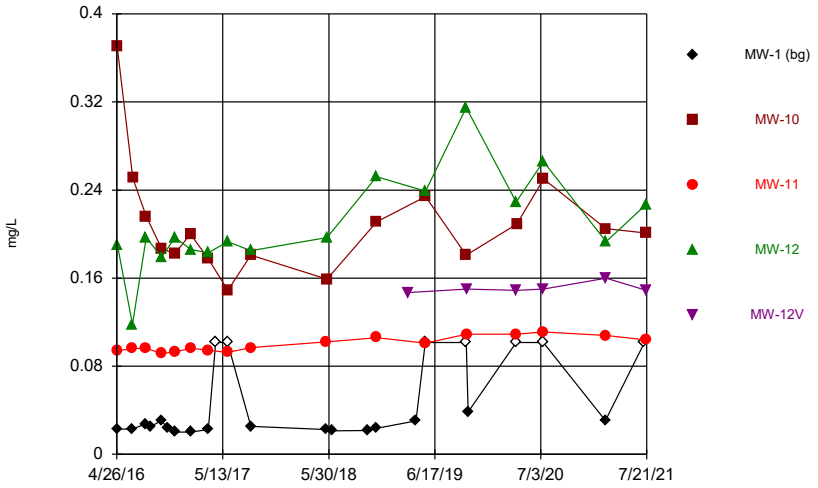


Constituent: Beryllium Analysis Run 12/2/2021 9:39 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

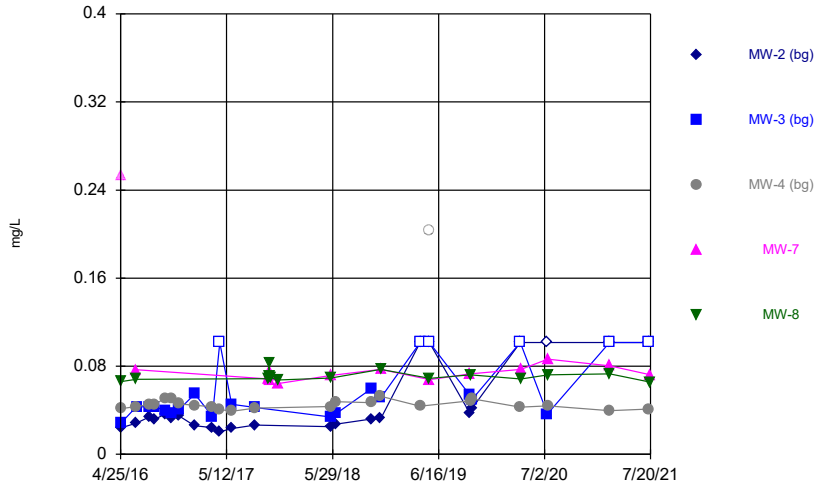
Time Series



Constituent: Boron Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

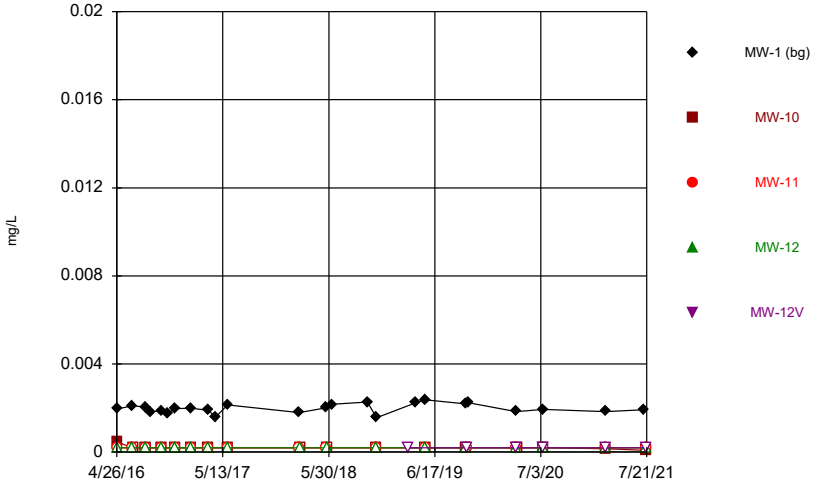
Time Series



Constituent: Boron Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

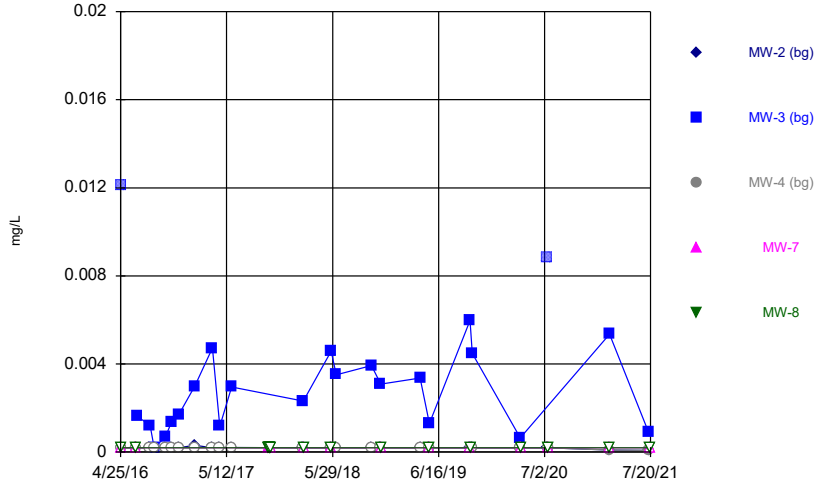
Time Series



Constituent: Cadmium Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

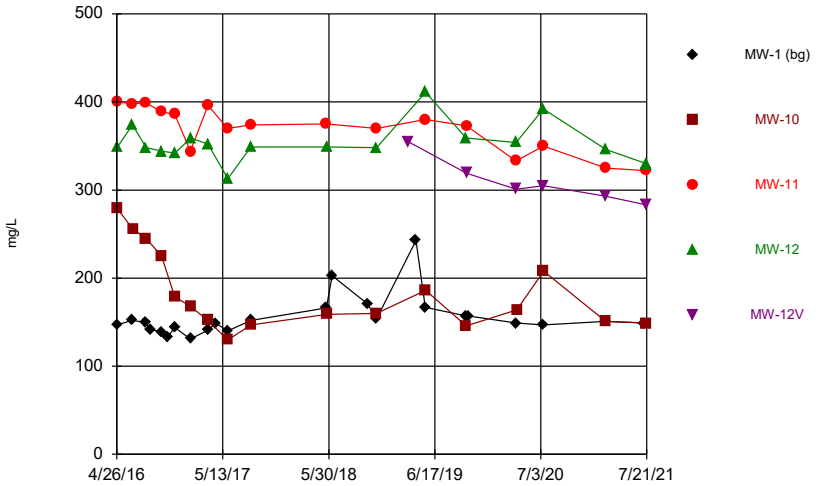
Time Series



Constituent: Cadmium Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series

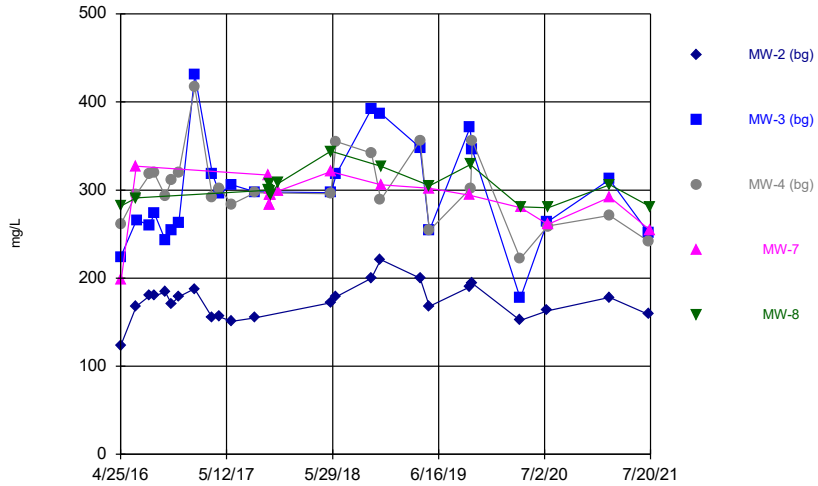


Constituent: Calcium Analysis Run 12/2/2021 9:39 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series

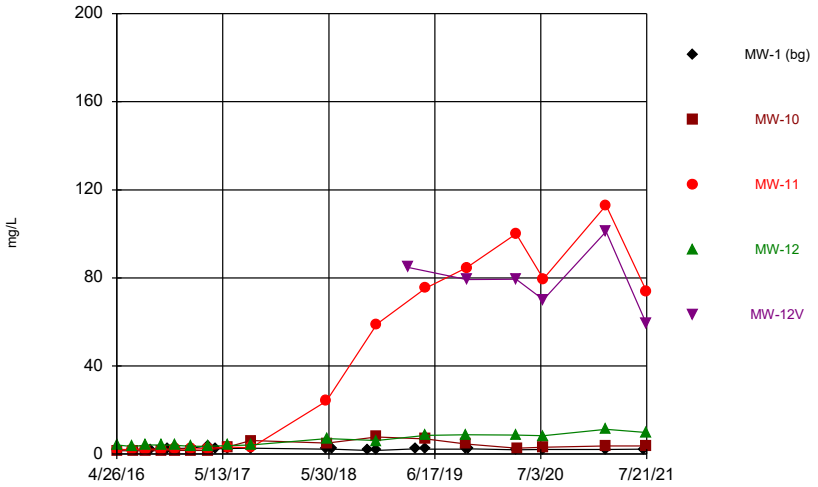


Constituent: Calcium Analysis Run 12/2/2021 9:39 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series



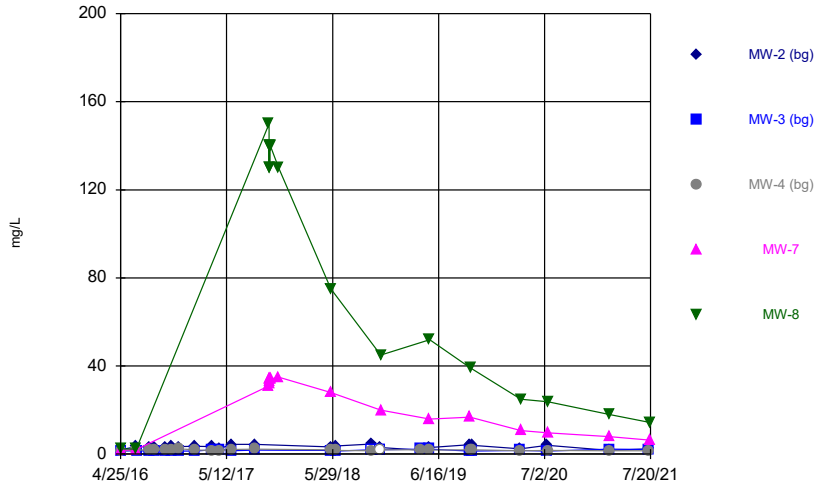
Constituent: Chloride Analysis Run 12/2/2021 9:39 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series

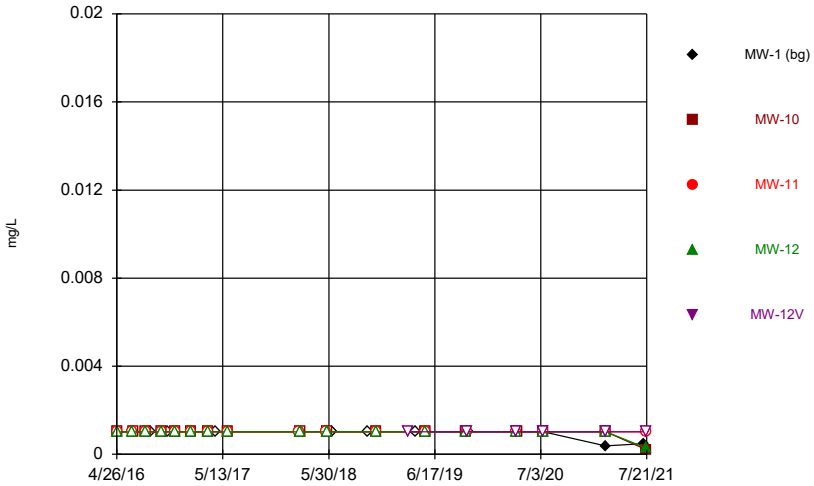


Constituent: Chloride Analysis Run 12/2/2021 9:39 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

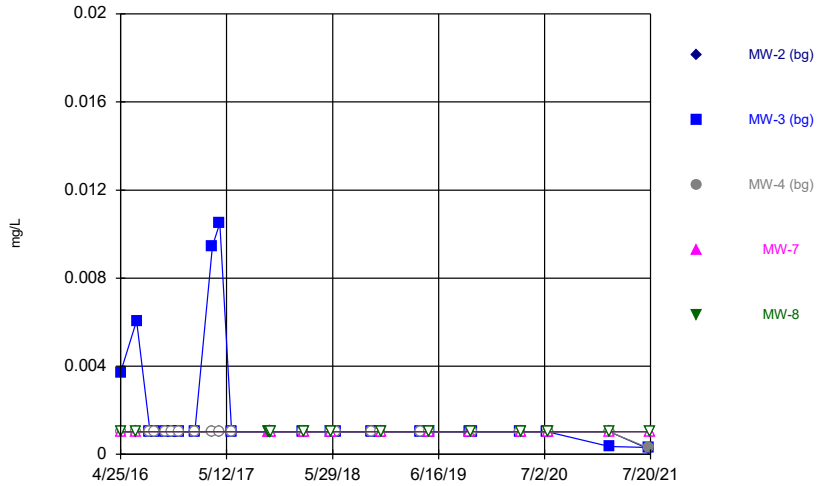
Time Series



Constituent: Chromium Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

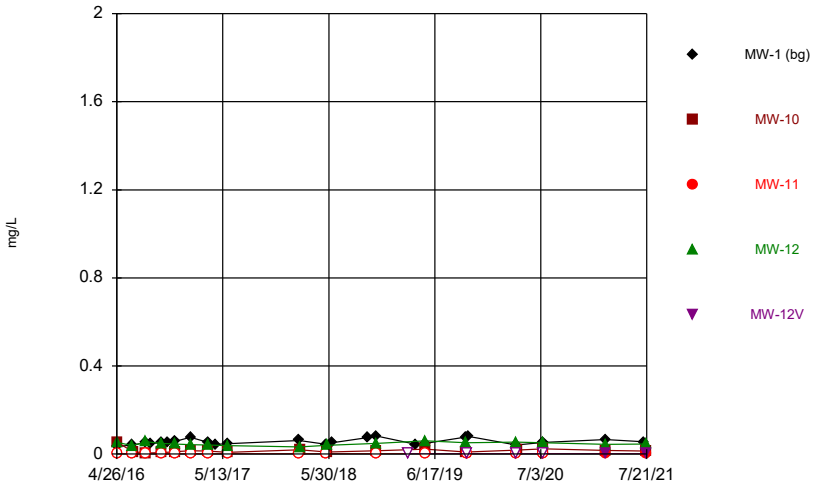
Time Series



Constituent: Chromium Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

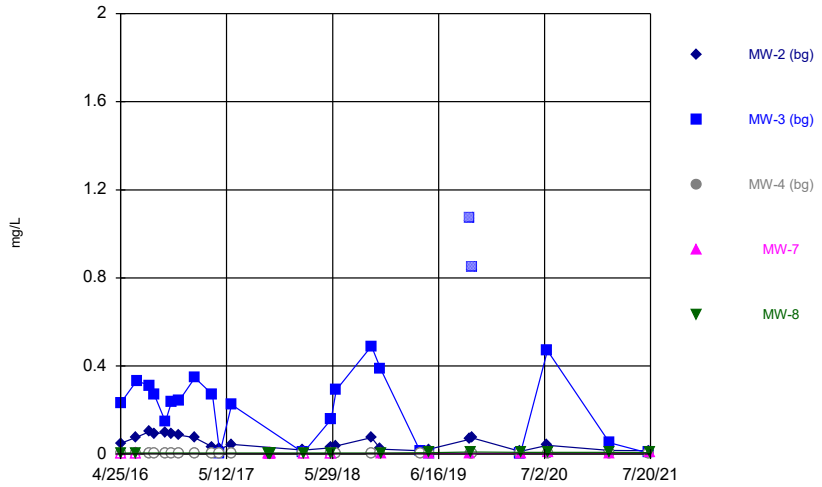
Time Series



Constituent: Cobalt Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

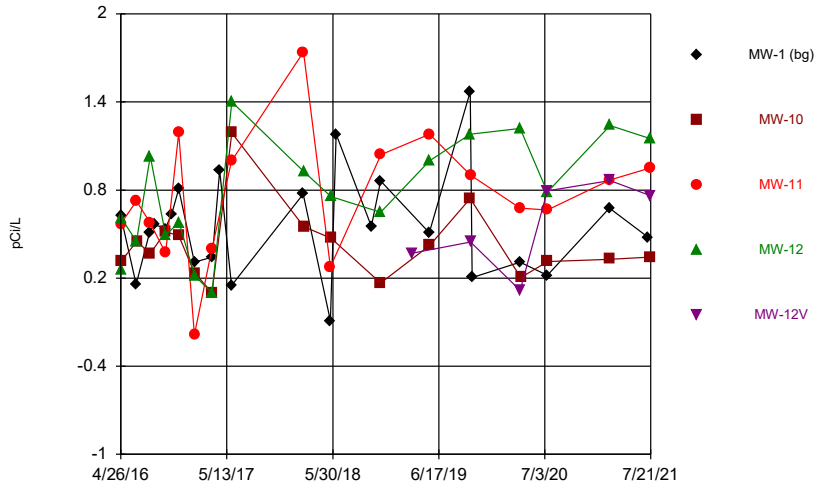
Time Series



Constituent: Cobalt Analysis Run 12/2/2021 9:39 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series

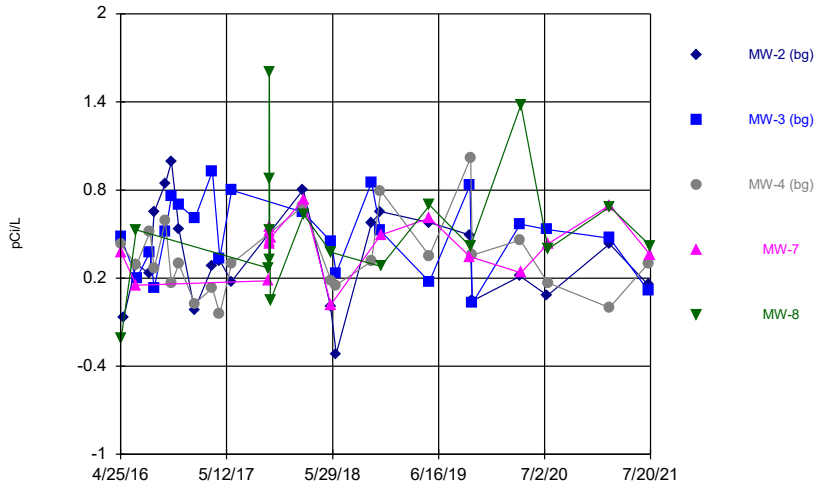


Constituent: Combined Radium 226 + 228 Analysis Run 12/2/2021 9:39 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series



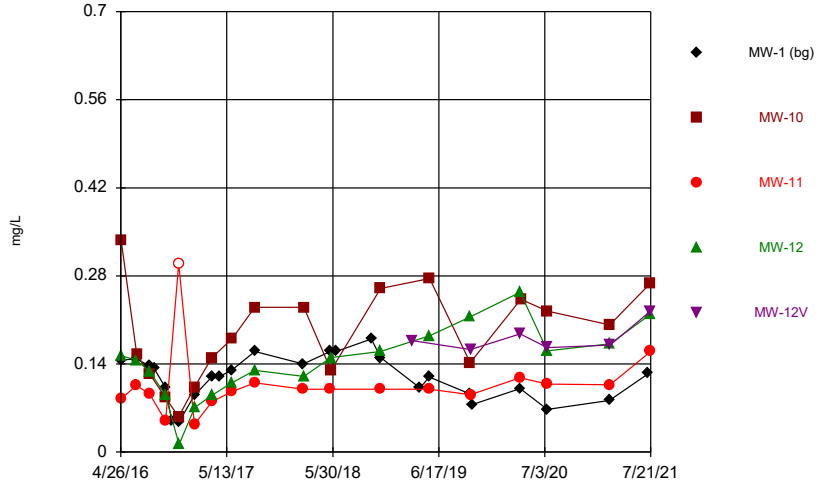
Constituent: Combined Radium 226 + 228 Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series

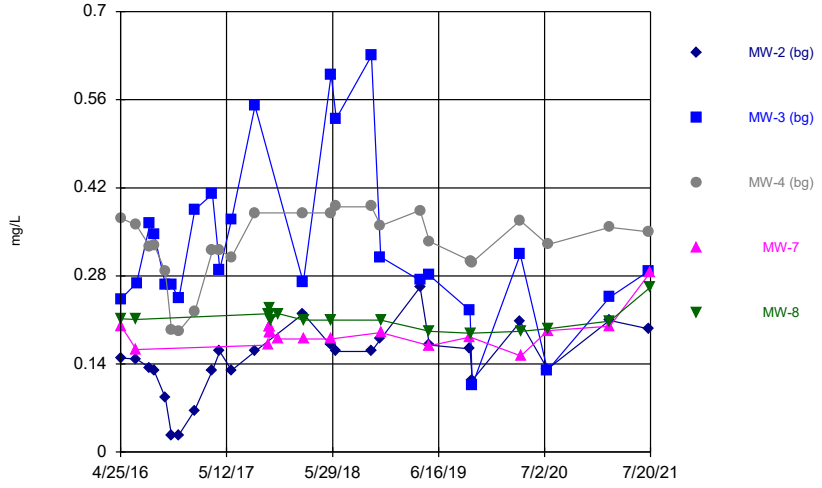


Constituent: Fluoride Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series

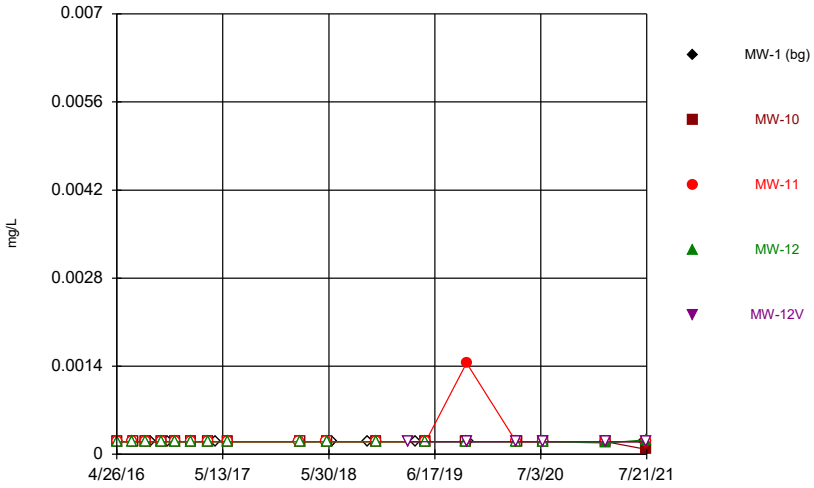


Constituent: Fluoride Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

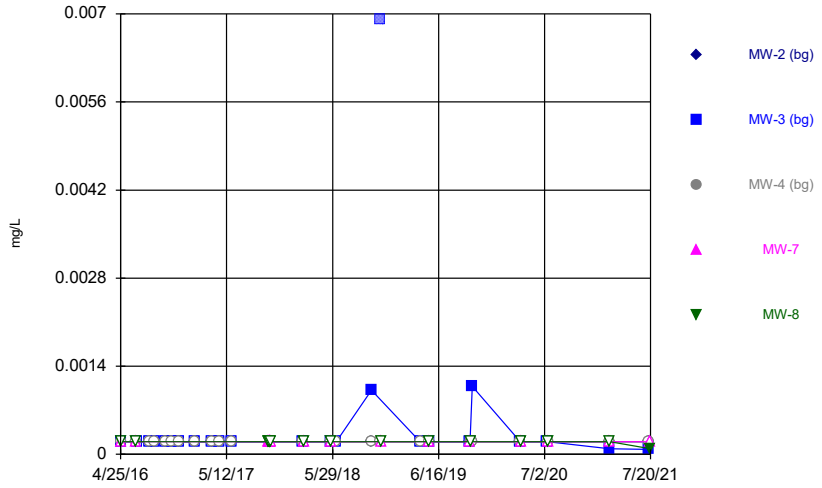
Time Series



Constituent: Lead Analysis Run 12/2/2021 9:40 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

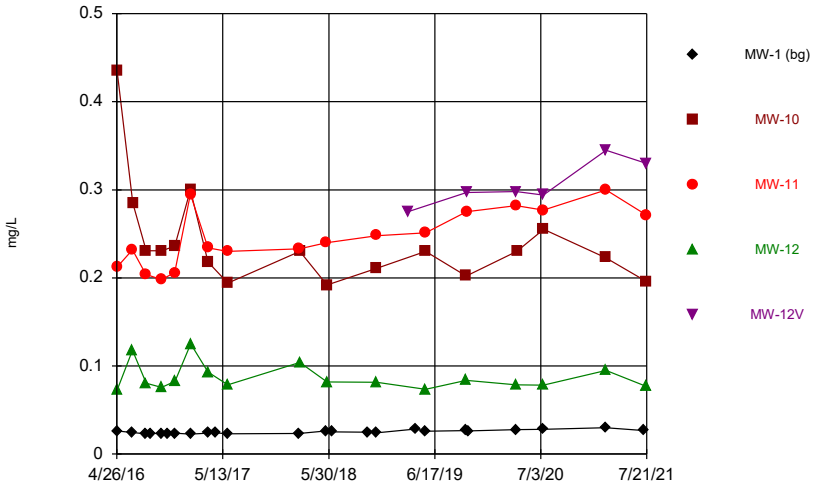
Time Series



Constituent: Lead Analysis Run 12/2/2021 9:40 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

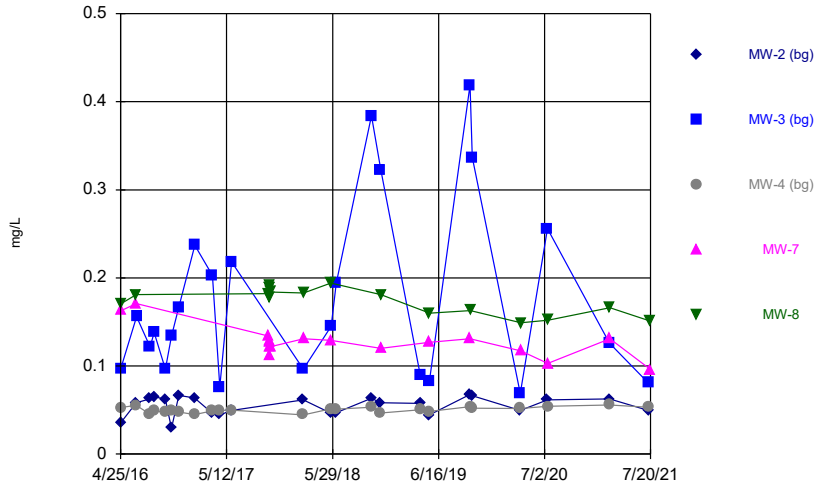
Time Series



Constituent: Lithium Analysis Run 12/2/2021 9:40 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

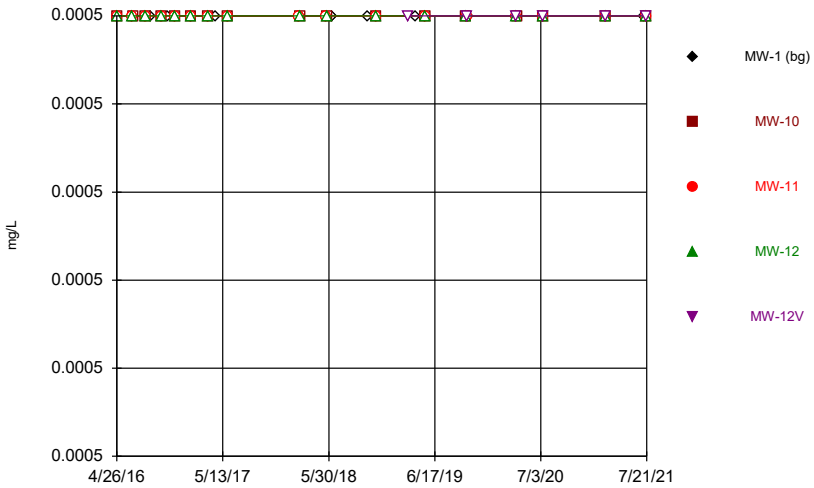
Time Series



Constituent: Lithium Analysis Run 12/2/2021 9:40 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

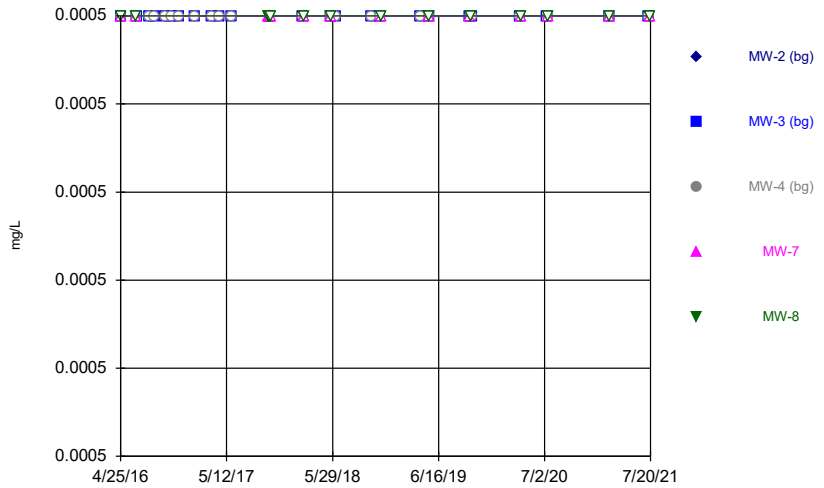
Time Series



Constituent: Mercury Analysis Run 12/2/2021 9:40 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

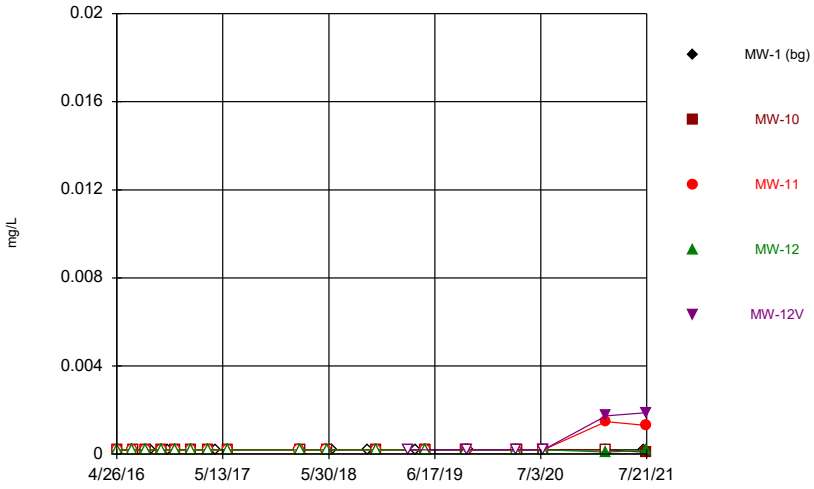
Time Series



Constituent: Mercury Analysis Run 12/2/2021 9:40 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

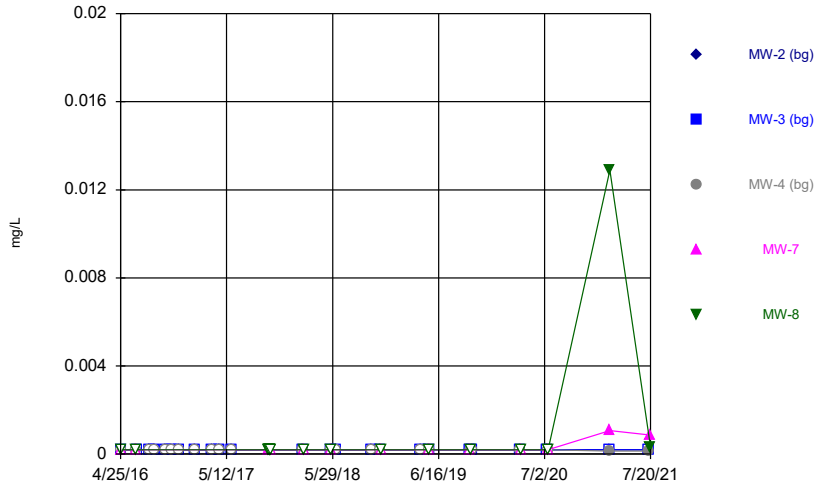
Time Series



Constituent: Molybdenum Analysis Run 12/2/2021 9:40 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

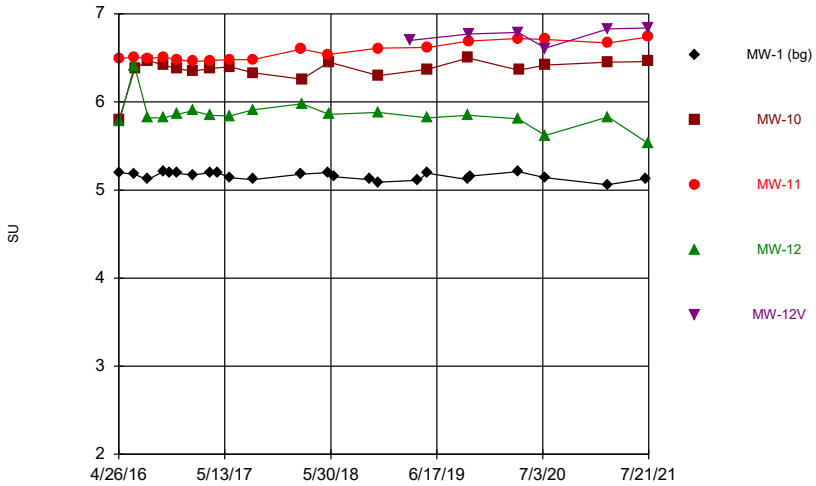
Time Series



Constituent: Molybdenum Analysis Run 12/2/2021 9:40 AM
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series

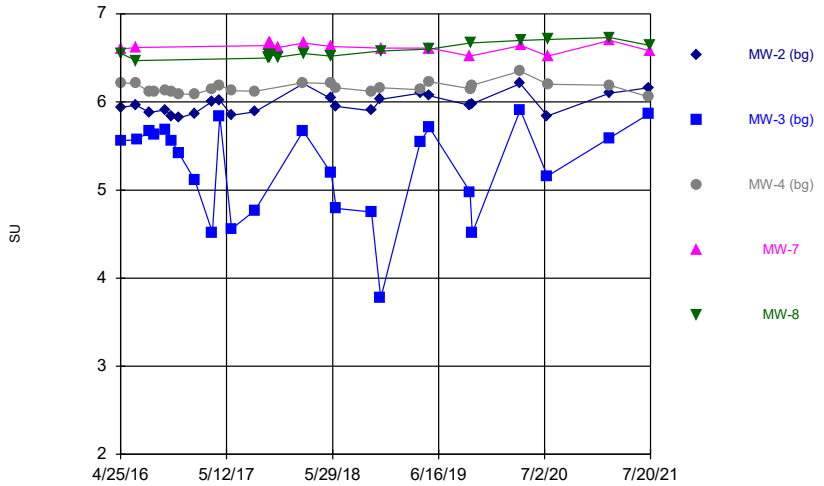


Constituent: pH Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series



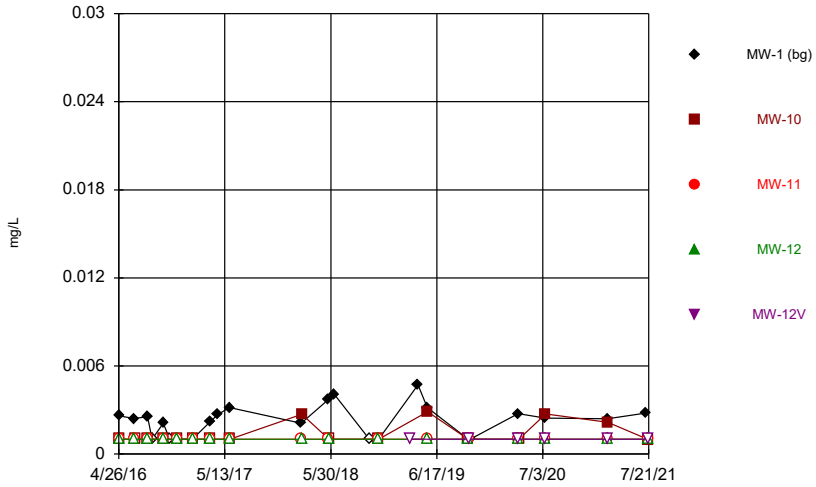
Constituent: pH Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series



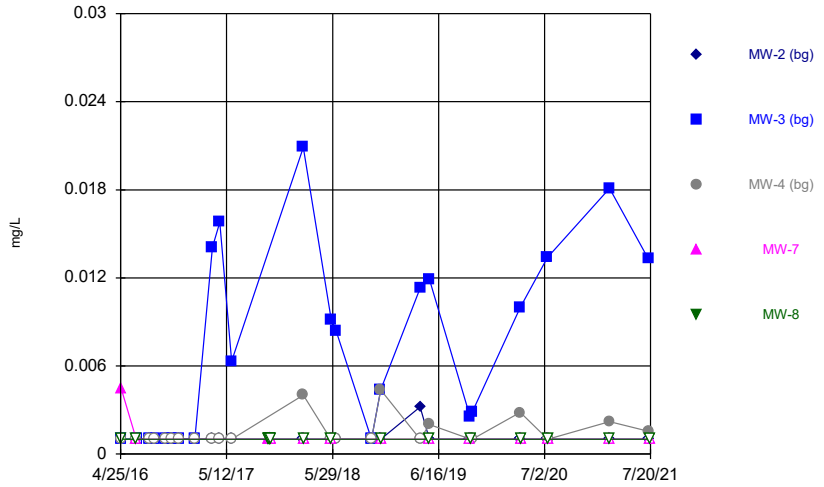
Constituent: Selenium Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series

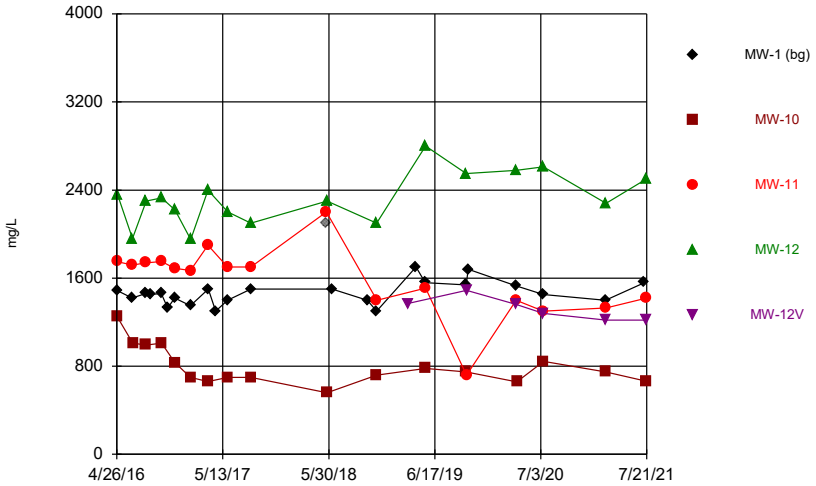


Constituent: Selenium Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series

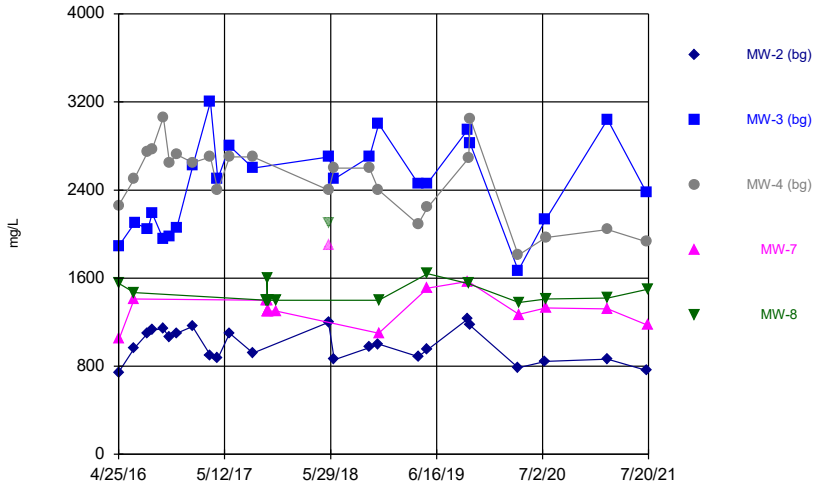


Constituent: Sulfate Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series

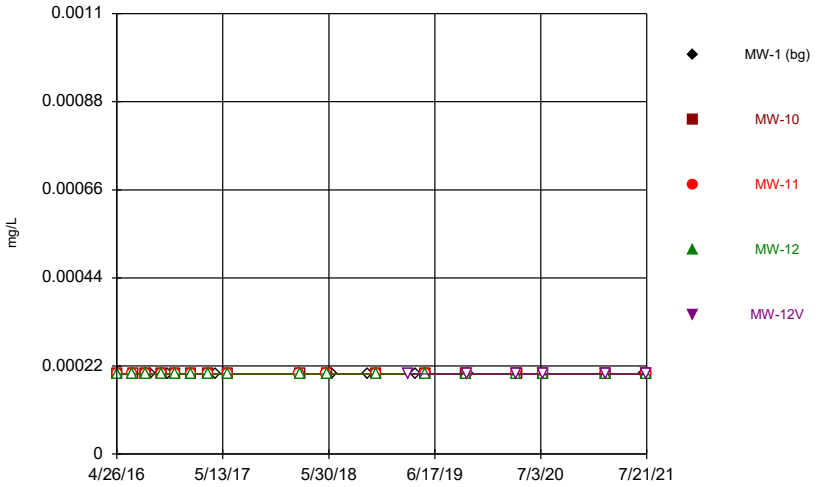


Constituent: Sulfate Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series

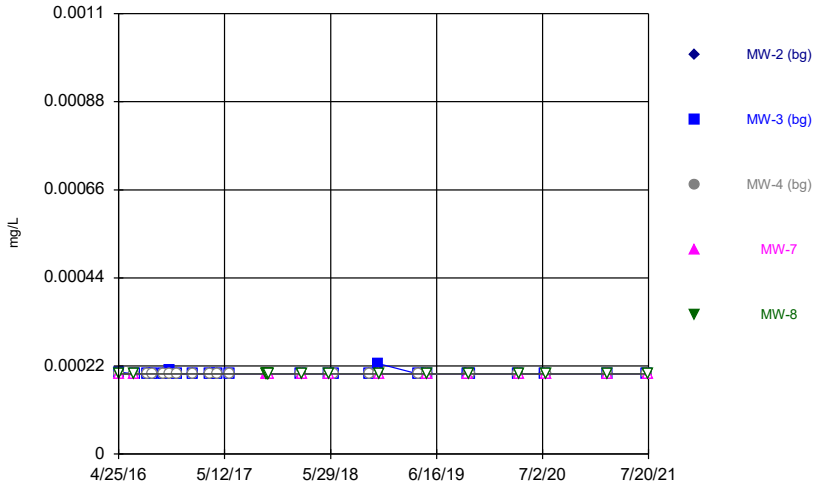


Constituent: Thallium Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

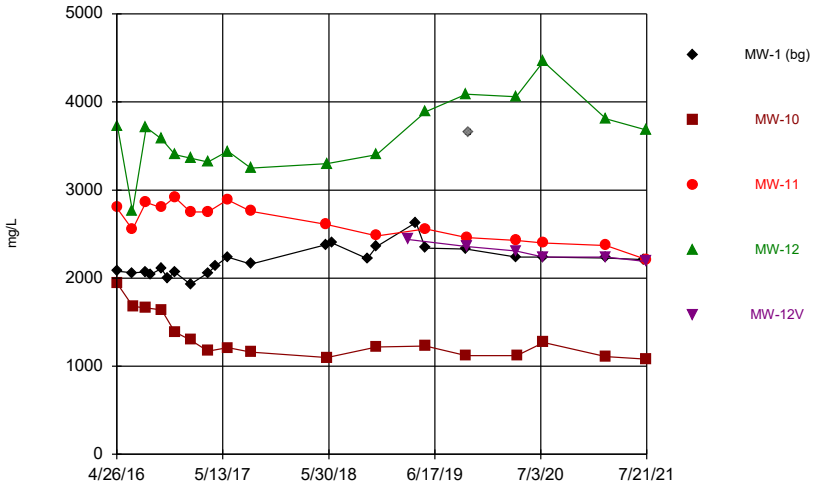
Time Series



Constituent: Thallium Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series

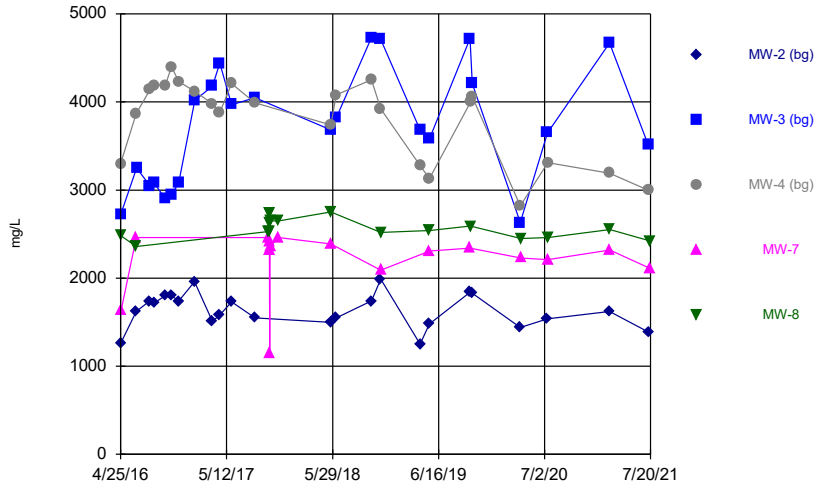


Constituent: Total Dissolved Solids Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Time Series



Constituent: Total Dissolved Solids Analysis Run 12/2/2021 9:40 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series

Constituent: Antimony (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.00102		<0.00102		
4/27/2016		<0.00102			
4/28/2016				<0.00102	
6/20/2016	<0.00102				
6/22/2016			<0.00102	<0.00102	
6/23/2016		<0.00102			
8/8/2016	<0.00102				
8/9/2016			<0.00102		
8/10/2016		<0.00102		<0.00102	
8/24/2016	<0.00102				
10/3/2016	<0.00102				
10/4/2016			<0.00102		
10/5/2016		<0.00102		<0.00102	
10/26/2016	<0.00102				
11/21/2016	<0.00102	<0.00102	<0.00102		
11/22/2016				<0.00102	
1/17/2017	<0.00102	<0.00102	<0.00102		
1/18/2017				<0.00102	
3/21/2017		<0.00102	<0.00102	<0.00102	
3/22/2017	<0.00102				
4/18/2017	<0.00102				
5/30/2017	<0.00102		<0.00102		
5/31/2017		<0.00102		<0.00102	
2/13/2018	<0.00102				
2/14/2018			<0.00102		
2/15/2018		<0.00102		<0.00102	
5/22/2018	<0.00102		<0.00102		
5/24/2018		<0.00102		<0.00102	
6/12/2018	<0.00102				
10/17/2018	<0.00102				
11/19/2018	<0.00102	<0.00102		<0.00102	
11/20/2018			<0.00102		
3/12/2019					0.00159 (J)
4/10/2019	0.00143 (J)				
5/14/2019	0.00137 (J)				
5/15/2019		0.000996 (J)	<0.00102	0.000977 (J)	
10/8/2019	<0.00102				
10/9/2019		<0.00102		<0.00102	
10/10/2019			<0.00102		<0.00102
10/16/2019	<0.00102				
4/6/2020	<0.00102		<0.00102	<0.00102	<0.00102
4/8/2020		<0.00102			
7/13/2020	<0.00102		<0.00102	<0.00102	<0.00102
7/14/2020		<0.00102			
2/22/2021	<0.00102				
2/23/2021		<0.00102			
2/24/2021			<0.00102	<0.00102	<0.00102
7/12/2021	<0.00102				
7/20/2021		<0.00102		<0.00102	<0.00102
7/21/2021			<0.00102		

Time Series

Constituent: Antimony (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.00102	<0.00102	<0.00102		
4/27/2016				<0.00102	<0.00102
6/20/2016	<0.00102		<0.00102		
6/21/2016				<0.00102	<0.00102
6/22/2016		<0.00102			
8/8/2016	<0.00102				
8/9/2016		<0.00102	<0.00102		
8/24/2016	<0.00102	<0.00102	<0.00102		
10/3/2016	<0.00102		<0.00102		
10/4/2016		<0.00102			
10/26/2016	<0.00102	<0.00102	<0.00102		
11/21/2016	<0.00102	<0.00102	<0.00102		
1/17/2017	<0.00102				
1/18/2017		<0.00102	<0.00102		
3/22/2017	<0.00102	<0.00102	<0.00102		
4/18/2017	<0.00102	<0.00102	<0.00102		
5/31/2017	<0.00102	<0.00102	<0.00102		
10/12/2017				<0.00102	<0.00102
10/13/2017				<0.00102	<0.00102
10/14/2017				<0.00102	<0.00102
10/15/2017				<0.00102	<0.00102
10/16/2017				<0.00102	<0.00102
10/17/2017				<0.00102	<0.00102
2/13/2018	<0.00102	<0.00102	<0.00102		
2/14/2018				<0.00102	<0.00102
5/22/2018	<0.00102				
5/23/2018			<0.00102	<0.00102	<0.00102
5/24/2018		<0.00102			
6/12/2018	<0.00102	<0.00102	<0.00102		
10/17/2018	<0.00102	<0.00102	<0.00102		
11/19/2018	<0.00102	<0.00102	<0.00102		
11/20/2018				<0.00102	<0.00102
4/10/2019	0.000993 (J)	0.000978 (J)	0.00097 (J)		
5/14/2019	0.000989 (J)	<0.00102	<0.00102		
5/15/2019				<0.00102	<0.00102
10/8/2019	<0.00102	<0.00102		<0.00102	
10/9/2019					<0.00102
10/10/2019			<0.00102		
10/16/2019	<0.00102	<0.00102	<0.00102		
4/6/2020	<0.00102	<0.00102	<0.00102		
4/8/2020				<0.00102	<0.00102
7/13/2020	<0.00102	<0.00102			
7/14/2020			<0.00102	<0.00102	
7/15/2020					<0.00102
2/22/2021	<0.00102	<0.00102	<0.00102		
2/23/2021				<0.00102	<0.00102
7/12/2021	<0.00102	<0.00102	<0.00102		
7/20/2021				<0.00102	<0.00102

Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.005		0.00189 (J)		
4/27/2016		0.00196 (J)			
4/28/2016				0.0444	
6/20/2016	<0.005				
6/22/2016			0.00213 (J)	0.00953	
6/23/2016		<0.005			
8/8/2016	<0.005				
8/9/2016			0.0021 (J)		
8/10/2016		<0.005		0.0416	
8/24/2016	<0.005				
10/3/2016	<0.005				
10/4/2016			0.00206 (J)		
10/5/2016		<0.005		0.0431	
10/26/2016	<0.005				
11/21/2016	<0.005	<0.005	0.00182 (J)		
11/22/2016				0.0487	
1/17/2017	<0.005	<0.005	0.00201 (J)		
1/18/2017				0.0428	
3/21/2017		<0.005	0.00183 (J)	0.0418	
3/22/2017	<0.005				
4/18/2017	<0.005				
5/30/2017	<0.005		0.00214 (J)		
5/31/2017		<0.005		0.0466	
2/13/2018	<0.005				
2/14/2018			0.00171 (J)		
2/15/2018		<0.005		0.0346	
5/22/2018	<0.005		0.00168 (J)		
5/24/2018		<0.005		0.0478	
6/12/2018	<0.005				
10/17/2018	<0.005				
11/19/2018	<0.005	<0.005		0.0405	
11/20/2018			<0.005		
3/12/2019					0.00486 (J)
4/10/2019	<0.005				
5/14/2019	<0.005				
5/15/2019		0.00162 (J)	<0.005	0.0511	
10/8/2019	<0.005				
10/9/2019		<0.005		0.0507	
10/10/2019			<0.005		0.00827
10/16/2019	<0.005				
4/6/2020	<0.005		<0.005	0.0597	0.00731
4/8/2020		0.0013 (J)			
7/13/2020	<0.005		<0.005	0.0613	0.0071
7/14/2020		0.00164 (J)			
2/22/2021	0.000403				
2/23/2021		0.0016			
2/24/2021			0.000834	0.0516	0.00584
7/12/2021	0.00036				
7/20/2021		0.00102		0.0668	0.00573
7/21/2021			0.0009		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.005	<0.005	<0.005		
4/27/2016				<0.005	<0.005
6/20/2016	<0.005		<0.005		
6/21/2016				0.00165 (J)	0.00101 (J)
6/22/2016		<0.005			
8/8/2016	<0.005				
8/9/2016		<0.005	<0.005		
8/24/2016	<0.005	<0.005	<0.005		
10/3/2016	<0.005		<0.005		
10/4/2016		<0.005			
10/26/2016	<0.005	<0.005	<0.005		
11/21/2016	0.00111 (J)	<0.005	<0.005		
1/17/2017	<0.005				
1/18/2017		<0.005	<0.005		
3/22/2017	<0.005	0.00122 (J)	<0.005		
4/18/2017	<0.005	<0.005	<0.005		
5/31/2017	<0.005	<0.005	<0.005		
10/12/2017				0.00188 (J)	0.00197 (J)
10/13/2017				0.00181 (J)	0.00159 (J)
10/14/2017				0.00127 (J)	0.00126 (J)
10/15/2017				0.00144 (J)	0.00106 (J)
10/16/2017				0.00139 (J)	0.00106 (J)
10/17/2017				0.00138 (J)	0.00103 (J)
2/13/2018	<0.005	<0.005	<0.005		
2/14/2018				0.00131 (J)	0.00185 (J)
5/22/2018	<0.005				
5/23/2018			<0.005	0.00155 (J)	0.00157 (J)
5/24/2018		<0.005			
6/12/2018	<0.005	0.00103 (J)	<0.005		
10/17/2018	<0.005	0.00133 (J)	<0.005		
11/19/2018	<0.005	0.0012 (J)	<0.005		
11/20/2018				0.00133 (J)	0.00173 (J)
4/10/2019	<0.005	<0.005	<0.005		
5/14/2019	<0.005	<0.005	<0.005		
5/15/2019				0.00138 (J)	0.00136 (J)
10/8/2019	<0.005	0.0048 (J)		0.00145 (J)	
10/9/2019					0.00142 (J)
10/10/2019			<0.005		
10/16/2019	<0.005	0.00389 (J)	<0.005		
4/6/2020	<0.005	<0.005	<0.005		
4/8/2020				0.00136 (J)	0.00102 (J)
7/13/2020	<0.005	0.00316 (J)			
7/14/2020			<0.005	0.00147 (J)	
7/15/2020					0.00212 (J)
2/22/2021	0.000295	0.000789	0.000125 (J)		
2/23/2021				0.00141	0.00117
7/12/2021	0.00036	0.00038	0.00012 (J)		
7/20/2021				0.00164	0.00111

Time Series

Constituent: Barium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.00941 (J)		0.011		
4/27/2016		0.0187			
4/28/2016				0.0109	
6/20/2016	0.00951 (J)				
6/22/2016			0.0122	0.0155	
6/23/2016		0.0181			
8/8/2016	0.00991 (J)				
8/9/2016			0.012		
8/10/2016		0.0186		0.0125	
8/24/2016	0.00949 (J)				
10/3/2016	0.0105				
10/4/2016			0.0142		
10/5/2016		0.023		0.0143	
10/26/2016	0.00931 (J)				
11/21/2016	0.00879 (J)	0.0219	0.0114		
11/22/2016				0.0118	
1/17/2017	0.00929 (J)	0.0203	0.0119		
1/18/2017				0.0112	
3/21/2017		0.0203	0.012	0.0108	
3/22/2017	0.00938 (J)				
4/18/2017	0.00964 (J)				
5/30/2017	0.00982 (J)		0.012		
5/31/2017		0.0188		0.0107	
2/13/2018	0.00937 (J)				
2/14/2018			0.0139		
2/15/2018		0.0199		0.0113	
5/22/2018	0.0102		0.0148		
5/24/2018		0.0198		0.0122	
6/12/2018	0.0104				
10/17/2018	0.00952 (J)				
11/19/2018	0.00915 (J)	0.0187		0.0108	
11/20/2018			0.0127		
3/12/2019					0.0301
4/10/2019	0.0105				
5/14/2019	0.00913 (J)				
5/15/2019		0.0189	0.0132	0.0113	
10/8/2019	0.0109				
10/9/2019		0.0204		0.0126	
10/10/2019			0.0154		0.0236
10/16/2019	0.0106				
4/6/2020	0.00971 (J)		0.0147	0.0128	0.019
4/8/2020		0.0201			
7/13/2020	0.0101		0.0149	0.0124	0.019
7/14/2020		0.0245			
2/22/2021	0.0107				
2/23/2021		0.0201			
2/24/2021			0.015	0.0123	0.0185
7/12/2021	0.00991				
7/20/2021		0.0208		0.012	0.0186
7/21/2021			0.0159		

Time Series

Constituent: Barium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	0.0134	0.00803 (J)	0.0114		
4/27/2016				0.0107	0.0108
6/20/2016	0.0165		0.0103		
6/21/2016				0.0129	0.0116
6/22/2016		0.0101			
8/8/2016	0.0162				
8/9/2016		0.00889 (J)	0.0119		
8/24/2016	0.0139	0.00962 (J)	0.0118		
10/3/2016	0.0164		0.0119		
10/4/2016		0.00984 (J)			
10/26/2016	0.0138	0.00878 (J)	0.0104		
11/21/2016	0.0144	0.00833 (J)	0.0106		
1/17/2017	0.0135				
1/18/2017		0.00966 (J)	0.0101		
3/22/2017	0.0132	0.00991 (J)	0.0103		
4/18/2017	0.012	0.00976 (J)	0.0107		
5/31/2017	0.0126	0.00866 (J)	0.0104		
10/12/2017				0.014	0.0141
10/13/2017				0.0147	0.0148
10/14/2017				0.0123	0.0134
10/15/2017				0.0132	0.0139
10/16/2017				0.0122	0.0129
10/17/2017				0.0121	0.0126
2/13/2018	0.0127	0.00821 (J)	0.0111		
2/14/2018				0.0119	0.0126
5/22/2018	0.0131				
5/23/2018			0.0107	0.0135	0.0137
5/24/2018		0.00977 (J)			
6/12/2018	0.0138	0.00997 (J)	0.0108		
10/17/2018	0.0137	0.0126	0.0119		
11/19/2018	0.0115	0.0109	0.0107		
11/20/2018				0.0116	0.0123
4/10/2019	0.0111	0.0101	0.0107		
5/14/2019	0.0109	0.00922 (J)	0.00949 (J)		
5/15/2019				0.0114	0.0122
10/8/2019	0.0151	0.0154		0.0145	
10/9/2019					0.0137
10/10/2019			0.0116		
10/16/2019	0.0146	0.0128	0.0125		
4/6/2020	0.0125	0.00931 (J)	0.0115		
4/8/2020				0.0127	0.0137
7/13/2020	0.0145	0.0142			
7/14/2020			0.0122	0.0148	
7/15/2020					0.0143
2/22/2021	0.0132	0.00981	0.0111		
2/23/2021				0.014	0.014
7/12/2021	0.013	0.00857	0.0108		
7/20/2021				0.0142	0.0141

Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.00102		<0.00102		
4/27/2016		0.00486			
4/28/2016				<0.00102	
6/20/2016	<0.00102				
6/22/2016			<0.00102	<0.00102	
6/23/2016		<0.00102			
8/8/2016	<0.00102				
8/9/2016			<0.00102		
8/10/2016		<0.00102		<0.00102	
8/24/2016	<0.00102				
10/3/2016	<0.00102				
10/4/2016			<0.00102		
10/5/2016		<0.00102		<0.00102	
10/26/2016	<0.00102				
11/21/2016	<0.00102	<0.00102	<0.00102		
11/22/2016				<0.00102	
1/17/2017	<0.00102	<0.00102	<0.00102		
1/18/2017				<0.00102	
3/21/2017		0.000883 (J)	<0.00102	<0.00102	
3/22/2017	<0.00102				
4/18/2017	<0.00102				
5/30/2017	<0.00102		<0.00102		
5/31/2017		0.00123 (J)		<0.00102	
2/13/2018	<0.00102				
2/14/2018			<0.00102		
2/15/2018		0.00235 (J)		<0.00102	
5/22/2018	<0.00102		<0.00102		
5/24/2018		0.001 (J)		<0.00102	
6/12/2018	<0.00102				
10/17/2018	<0.00102				
11/19/2018	<0.00102	0.00203 (J)		<0.00102	
11/20/2018			<0.00102		
3/12/2019					<0.00102
4/10/2019	<0.00102				
5/14/2019	<0.00102				
5/15/2019		0.00177 (J)	<0.00102	<0.00102	
10/8/2019	<0.00102				
10/9/2019		0.00072 (J)		<0.00102	
10/10/2019			<0.00102		<0.00102
10/16/2019	<0.00102				
4/6/2020	<0.00102		<0.00102	<0.00102	<0.00102
4/8/2020		0.00114 (J)			
7/13/2020	<0.00102		<0.00102	<0.00102	<0.00102
7/14/2020		0.00135 (J)			
2/22/2021	<0.00102				
2/23/2021		0.00128			
2/24/2021			<0.00102	<0.00102	<0.00102
7/12/2021	<0.00102				
7/20/2021		0.00095 (J)		<0.00102	<0.00102
7/21/2021			<0.00102		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.00102	0.00122 (J)	<0.00102		
4/27/2016				<0.00102	<0.00102
6/20/2016	<0.00102		<0.00102		
6/21/2016				<0.00102	<0.00102
6/22/2016		0.00144 (J)			
8/8/2016	<0.00102				
8/9/2016		0.00331	<0.00102		
8/24/2016	<0.00102	0.00308	<0.00102		
10/3/2016	<0.00102		<0.00102		
10/4/2016		0.00129 (J)			
10/26/2016	<0.00102	0.0071	<0.00102		
11/21/2016	<0.00102	0.00689	<0.00102		
1/17/2017	<0.00102				
1/18/2017		0.0169 (O)	<0.00102		
3/22/2017	<0.00102	0.00686	<0.00102		
4/18/2017	<0.00102	<0.00102	<0.00102		
5/31/2017	<0.00102	0.00547	<0.00102		
10/12/2017				<0.00102	<0.00102
10/13/2017				<0.00102	<0.00102
10/14/2017				<0.00102	<0.00102
10/15/2017				<0.00102	<0.00102
10/16/2017				<0.00102	<0.00102
10/17/2017				<0.00102	<0.00102
2/13/2018	<0.00102	<0.00102	<0.00102		
2/14/2018				<0.00102	<0.00102
5/22/2018	<0.00102				
5/23/2018			<0.00102	<0.00102	<0.00102
5/24/2018		0.00164 (J)			
6/12/2018	<0.00102	0.00306	<0.00102		
10/17/2018	<0.00102	0.0121	<0.00102		
11/19/2018	<0.00102	0.0185 (O)	<0.00102		
11/20/2018				<0.00102	<0.00102
4/10/2019	<0.00102	<0.00102	<0.00102		
5/14/2019	<0.00102	<0.00102	<0.00102		
5/15/2019				<0.00102	<0.00102
10/8/2019	<0.00102	0.0084		<0.00102	
10/9/2019					<0.00102
10/10/2019			<0.00102		
10/16/2019	<0.00102	0.0103	<0.00102		
4/6/2020	<0.00102	<0.00102	<0.00102		
4/8/2020				<0.00102	<0.00102
7/13/2020	<0.00102	0.0021 (J)			
7/14/2020			<0.00102	<0.00102	
7/15/2020					<0.00102
2/22/2021	<0.00102	<0.00102	<0.00102		
2/23/2021				<0.00102	<0.00102
7/12/2021	<0.00102	<0.00102	<0.00102		
7/20/2021				<0.00102	<0.00102

Time Series

Constituent: Boron (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.0231 (J)		0.094 (J)		
4/27/2016		0.371			
4/28/2016				0.19	
6/20/2016	0.0227 (J)				
6/22/2016			0.0959 (J)	0.118	
6/23/2016		0.251			
8/8/2016	0.0278 (J)				
8/9/2016			0.0964 (J)		
8/10/2016		0.216		0.197	
8/24/2016	0.0247 (J)				
10/3/2016	0.0307 (J)				
10/4/2016			0.0916 (J)		
10/5/2016		0.187		0.179	
10/26/2016	0.0241 (J)				
11/21/2016	0.0202 (J)	0.182	0.0929 (J)		
11/22/2016				0.197	
1/17/2017	0.0201 (J)	0.2	0.0963 (J)		
1/18/2017				0.186	
3/21/2017		0.178	0.0947 (J)	0.183	
3/22/2017	0.0224 (J)				
4/18/2017	<0.1015				
5/30/2017	<0.1015		0.0926 (J)		
5/31/2017		0.149		0.193	
8/23/2017	0.0253 (J)	0.181	0.0968 (J)	0.185	
5/22/2018	0.0224 (J)		0.102		
5/24/2018		0.159		0.197	
6/12/2018	0.0214 (J)				
10/17/2018	0.0216 (J)				
11/19/2018	0.0237 (J)	0.211		0.252	
11/20/2018			0.106		
3/12/2019					0.147
4/10/2019	0.0304 (J)				
5/14/2019	<0.1015				
5/15/2019		0.234	0.101 (J)	0.239	
10/8/2019	<0.1015				
10/9/2019		0.181		0.315	
10/10/2019			0.109		0.15
10/16/2019	0.0385 (J)				
4/6/2020	<0.1015		0.109	0.229	0.149
4/8/2020		0.209			
7/13/2020	<0.1015		0.111	0.266	0.15
7/14/2020		0.25			
2/22/2021	0.0307 (J)				
2/23/2021		0.205			
2/24/2021			0.108	0.193	0.16
7/12/2021	<0.1015				
7/20/2021		0.201		0.227	0.149
7/21/2021			0.104		

Time Series

Constituent: Boron (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	0.0241 (J)	0.028 (J)	0.0414 (J)		
4/27/2016				0.253 (o)	0.0662 (J)
6/20/2016	0.0284 (J)		0.0434 (J)		
6/21/2016				0.0768 (J)	0.0681 (J)
6/22/2016		0.0433 (J)			
8/8/2016	0.034 (J)				
8/9/2016		0.0429 (J)	0.0453 (J)		
8/24/2016	0.0316 (J)	0.0431 (J)	0.0451 (J)		
10/3/2016	0.0367 (J)		0.0511 (J)		
10/4/2016		0.04 (J)			
10/26/2016	0.0331 (J)	0.0375 (J)	0.0507 (J)		
11/21/2016	0.035 (J)	0.0406 (J)	0.0458 (J)		
1/17/2017	0.0259 (J)				
1/18/2017		0.0548 (J)	0.0445 (J)		
3/22/2017	0.0243 (J)	0.0344 (J)	0.0432 (J)		
4/18/2017	0.0206 (J)	<0.1015	0.0409 (J)		
5/31/2017	0.0234 (J)	0.0454 (J)	0.0392 (J)		
8/23/2017	0.0267 (J)	0.0425 (J)	0.042 (J)		
10/12/2017				0.0685 (J)	0.0687 (J)
10/13/2017				0.0674 (J)	0.0831 (J)
10/14/2017				0.0756 (J)	0.0702 (J)
10/15/2017				0.0719 (J)	0.0702 (J)
10/16/2017				0.0726 (J)	0.0707 (J)
10/17/2017				0.0716 (J)	0.0695 (J)
11/16/2017				0.0644 (J)	0.0675 (J)
5/22/2018	0.0251 (J)				
5/23/2018			0.0433 (J)	0.0715 (J)	0.0693 (J)
5/24/2018		0.0339 (J)			
6/12/2018	0.0275 (J)	0.0371 (J)	0.0478 (J)		
10/17/2018	0.0321 (J)	0.0596 (J)	0.0468 (J)		
11/19/2018	0.0324 (J)	0.0514 (J)	0.0526 (J)		
11/20/2018				0.0772 (J)	0.0771 (J)
4/10/2019	<0.1015	<0.1015	0.0438 (J)		
5/14/2019	<0.1015	<0.1015	<0.203 (o)		
5/15/2019				0.0678 (J)	0.0689 (J)
10/8/2019	0.0371 (J)	0.0537 (J)		0.073 (J)	
10/9/2019					0.0723 (J)
10/10/2019			0.0487 (J)		
10/16/2019	0.0419 (J)	0.05 (J)	0.0505 (J)		
4/6/2020	<0.1015	<0.1015	0.0428 (J)		
4/8/2020				0.077 (J)	0.0683 (J)
7/13/2020	<0.1015	0.0366 (J)			
7/14/2020			0.0441 (J)	0.0865 (J)	
7/15/2020					0.0723 (J)
2/22/2021	<0.1015	<0.1015	0.0397 (J)		
2/23/2021				0.0803 (J)	0.0731 (J)
7/12/2021	<0.1015	<0.1015	0.0411 (J)		
7/20/2021				0.0721 (J)	0.0656 (J)

Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.00196		<0.0002		
4/27/2016		0.000452 (J)			
4/28/2016				<0.0002	
6/20/2016	0.0021				
6/22/2016			<0.0002	<0.0002	
6/23/2016		<0.0002			
8/8/2016	0.00206				
8/9/2016			<0.0002		
8/10/2016		<0.0002		<0.0002	
8/24/2016	0.00182				
10/3/2016	0.00188				
10/4/2016			<0.0002		
10/5/2016		<0.0002		<0.0002	
10/26/2016	0.00175				
11/21/2016	0.00197	<0.0002	<0.0002		
11/22/2016				<0.0002	
1/17/2017	0.002	<0.0002	<0.0002		
1/18/2017				<0.0002	
3/21/2017		<0.0002	<0.0002	<0.0002	
3/22/2017	0.0019				
4/18/2017	0.00159				
5/30/2017	0.00214		<0.0002		
5/31/2017		<0.0002		<0.0002	
2/13/2018	0.0018				
2/14/2018			<0.0002		
2/15/2018		<0.0002		<0.0002	
5/22/2018	0.00201		<0.0002		
5/24/2018		<0.0002		<0.0002	
6/12/2018	0.00217				
10/17/2018	0.00228				
11/19/2018	0.00156	<0.0002		<0.0002	
11/20/2018			<0.0002		
3/12/2019					<0.0002
4/10/2019	0.00224				
5/14/2019	0.00238				
5/15/2019		<0.0002	<0.0002	<0.0002	
10/8/2019	0.00218				
10/9/2019		<0.0002		<0.0002	
10/10/2019			<0.0002		<0.0002
10/16/2019	0.00225				
4/6/2020	0.00184		<0.0002	<0.0002	<0.0002
4/8/2020		<0.0002			
7/13/2020	0.00194		<0.0002	<0.0002	<0.0002
7/14/2020		<0.0002			
2/22/2021	0.00184				
2/23/2021		0.000148 (J)			
2/24/2021			<0.0002	<0.0002	<0.0002
7/12/2021	0.00193				
7/20/2021		8E-05 (J)		<0.0002	<0.0002
7/21/2021			<0.0002		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.0002	0.0121 (O)	<0.0002		
4/27/2016				<0.0002	<0.0002
6/20/2016	<0.0002		<0.0002		
6/21/2016				<0.0002	<0.0002
6/22/2016		0.00163			
8/8/2016	<0.0002				
8/9/2016		0.00122	<0.0002		
8/24/2016	<0.0002	<0.0002	<0.0002		
10/3/2016	<0.0002		<0.0002		
10/4/2016		0.000689 (J)			
10/26/2016	<0.0002	0.00136	<0.0002		
11/21/2016	<0.0002	0.00171	<0.0002		
1/17/2017	0.000311 (J)				
1/18/2017		0.003	<0.0002		
3/22/2017	<0.0002	0.00473	<0.0002		
4/18/2017	<0.0002	0.00117	<0.0002		
5/31/2017	0.000212 (J)	0.00296	<0.0002		
10/12/2017				<0.0002	<0.0002
10/13/2017				<0.0002	<0.0002
10/14/2017				<0.0002	<0.0002
10/15/2017				<0.0002	<0.0002
10/16/2017				<0.0002	<0.0002
10/17/2017				<0.0002	<0.0002
2/13/2018	<0.0002	0.00232	<0.0002		
2/14/2018				<0.0002	<0.0002
5/22/2018	<0.0002				
5/23/2018			<0.0002	<0.0002	<0.0002
5/24/2018		0.00459			
6/12/2018	<0.0002	0.00351	<0.0002		
10/17/2018	<0.0002	0.00393	<0.0002		
11/19/2018	<0.0002	0.00309	<0.0002		
11/20/2018				<0.0002	<0.0002
4/10/2019	<0.0002	0.00337	<0.0002		
5/14/2019	<0.0002	0.0013	<0.0002		
5/15/2019				<0.0002	<0.0002
10/8/2019	<0.0002	0.00598		<0.0002	
10/9/2019					<0.0002
10/10/2019			<0.0002		
10/16/2019	<0.0002	0.00448	<0.0002		
4/6/2020	<0.0002	0.000645 (J)	<0.0002		
4/8/2020				<0.0002	<0.0002
7/13/2020	<0.0002	0.00885 (O)			
7/14/2020			<0.0002	<0.0002	
7/15/2020					<0.0002
2/22/2021	8.96E-05 (J)	0.00536	8.96E-05 (J)		
2/23/2021				<0.0002	<0.0002
7/12/2021	8E-05 (J)	0.00094	8E-05 (J)		
7/20/2021				<0.0002	<0.0002

Time Series

Constituent: Calcium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	147		400		
4/27/2016		279			
4/28/2016				349	
6/20/2016	152				
6/22/2016			398	374	
6/23/2016		256			
8/8/2016	150				
8/9/2016			399		
8/10/2016		245		348	
8/24/2016	142				
10/3/2016	139				
10/4/2016			389		
10/5/2016		225		344	
10/26/2016	133				
11/21/2016	144	179	386		
11/22/2016				342	
1/17/2017	131	168	344		
1/18/2017				359	
3/21/2017		152	396	352	
3/22/2017	141				
4/18/2017	149				
5/30/2017	140		370		
5/31/2017		130		313	
8/23/2017	152	147	374	349	
5/22/2018	166		375		
5/24/2018		159		349	
6/12/2018	203				
10/17/2018	171				
11/19/2018	154	160		348	
11/20/2018			370		
3/12/2019					355
4/10/2019	243				
5/14/2019	167				
5/15/2019		186	380	411	
10/8/2019	157				
10/9/2019		146		359	
10/10/2019			373		319
10/16/2019	157				
4/6/2020	149		333	354	301
4/8/2020		164			
7/13/2020	147		350	392	305
7/14/2020		208			
2/22/2021	151				
2/23/2021		151			
2/24/2021			325	346	293
7/12/2021	149				
7/20/2021		149		330	283
7/21/2021			322		

Time Series

Constituent: Calcium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	123	224	261		
4/27/2016				198	282
6/20/2016	168		295		
6/21/2016				327	291
6/22/2016		266			
8/8/2016	180				
8/9/2016		260	318		
8/24/2016	180	274	319		
10/3/2016	184		293		
10/4/2016		243			
10/26/2016	171	254	311		
11/21/2016	179	263	320		
1/17/2017	188				
1/18/2017		431	417		
3/22/2017	155	318	292		
4/18/2017	156	296	302		
5/31/2017	151	306	284		
8/23/2017	155	298	297		
10/12/2017				317	300
10/13/2017				302	298
10/14/2017				283	299
10/15/2017				294	307
10/16/2017				284	299
10/17/2017				294	294
11/16/2017				299	308
5/22/2018	172				
5/23/2018			296	321	344
5/24/2018		297			
6/12/2018	179	318	355		
10/17/2018	200	392	342		
11/19/2018	221	387	289		
11/20/2018				306	327
4/10/2019	200	348	356		
5/14/2019	168	254	254		
5/15/2019				302	305
10/8/2019	190	371		294	
10/9/2019					329
10/10/2019			302		
10/16/2019	194	346	356		
4/6/2020	152	177	222		
4/8/2020				280	281
7/13/2020	163	264			
7/14/2020			259	261	
7/15/2020					280
2/22/2021	178	312	271		
2/23/2021				292	306
7/12/2021	159	252	242		
7/20/2021				254	281

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	1.94		2.16		
4/27/2016		1.46			
4/28/2016				4.12	
6/20/2016	2.09				
6/22/2016			2.16	3.44	
6/23/2016		1.49			
8/8/2016	2.18				
8/9/2016			2.19		
8/10/2016		1.55		4.15	
8/24/2016	2.22				
10/3/2016	2.34				
10/4/2016			2.21		
10/5/2016		1.58		4.12	
10/26/2016	2.34				
11/21/2016	2.5	1.62	2.24		
11/22/2016				3.98	
1/17/2017	2.68	1.61	2.23		
1/18/2017				3.6	
3/21/2017		1.6 (J)	2.5	3.6	
3/22/2017	3.7				
4/18/2017	2.4				
5/30/2017	2.6		3.2		
5/31/2017		3.2		3.9	
8/23/2017	2.7	6.1	2.8	4.2	
5/22/2018	2.3		24		
5/24/2018		5		7.1	
6/12/2018	2.3				
10/17/2018	1.7 (J)				
11/19/2018	1.7 (J)	7.8		6.1	
11/20/2018			59		
3/12/2019					84.8
4/10/2019	2.36				
5/14/2019	2.28				
5/15/2019		6.93	75.4	8.51	
10/8/2019	2.31				
10/9/2019		4.51		8.73	
10/10/2019			84.6		79.3
10/16/2019	2.42				
4/6/2020	2.01		100	8.58	79.4
4/8/2020		2.64			
7/13/2020	2.1		79.6	8.35	70.1
7/14/2020		3.09			
2/22/2021	2.16				
2/23/2021		3.63			
2/24/2021			113	11.2	101
7/12/2021	2.19				
7/20/2021		3.64		9.85	59.2
7/21/2021			73.8		

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	1.9	1.32	1.53		
4/27/2016				1.71	2.34
6/20/2016	3.43		1.85		
6/21/2016				2.04	2.29
6/22/2016		1.46			
8/8/2016	3.31				
8/9/2016		1.35	1.95		
8/24/2016	3.23	1.47	2.07		
10/3/2016	3.21		2.02		
10/4/2016		1.59			
10/26/2016	3.35	1.27	2.07		
11/21/2016	3.34	1.38	2.39		
1/17/2017	3.58				
1/18/2017		1.34	1.9		
3/22/2017	3.4	2	1.5 (J)		
4/18/2017	2.6	2.2	1.6 (J)		
5/31/2017	4.4	1.5 (J)	2.1		
8/23/2017	4.4	1.8 (J)	2.3		
10/12/2017				31	150
10/13/2017				32	130
10/14/2017				33	140
10/15/2017				34	130
10/16/2017				34	140
10/17/2017				34	140
11/16/2017				35	130
5/22/2018	3.2				
5/23/2018			2	28	75
5/24/2018		1.6 (J)			
6/12/2018	3.7	1.4 (J)	1.7 (J)		
10/17/2018	4.6	<2	1.5 (J)		
11/19/2018	3	<2	<2		
11/20/2018				20	45
4/10/2019	1.76	2.25	1.88		
5/14/2019	2.98	2.28	1.82		
5/15/2019				15.9	52
10/8/2019	4.26	1.36		16.8	
10/9/2019					39.2
10/10/2019			1.93		
10/16/2019	4.04	1.4	1.92		
4/6/2020	2.43	1.72	1.5		
4/8/2020				10.6	24.9
7/13/2020	4.05	1.34			
7/14/2020			1.61	9.68	
7/15/2020					23.8
2/22/2021	1.72	2.22	1.52		
2/23/2021				7.85	17.9
7/12/2021	2.36	2.13	1.56		
7/20/2021				6.35	14.3

Time Series

Constituent: Chromium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.00102		<0.00102		
4/27/2016		<0.00102			
4/28/2016				<0.00102	
6/20/2016	<0.00102				
6/22/2016			<0.00102	<0.00102	
6/23/2016		<0.00102			
8/8/2016	<0.00102				
8/9/2016			<0.00102		
8/10/2016		<0.00102		<0.00102	
8/24/2016	<0.00102				
10/3/2016	<0.00102				
10/4/2016			<0.00102		
10/5/2016		<0.00102		<0.00102	
10/26/2016	<0.00102				
11/21/2016	<0.00102	<0.00102	<0.00102		
11/22/2016				<0.00102	
1/17/2017	<0.00102	<0.00102	<0.00102		
1/18/2017				<0.00102	
3/21/2017		<0.00102	<0.00102	<0.00102	
3/22/2017	<0.00102				
4/18/2017	<0.00102				
5/30/2017	<0.00102		<0.00102		
5/31/2017		<0.00102		<0.00102	
2/13/2018	<0.00102				
2/14/2018			<0.00102		
2/15/2018		<0.00102		<0.00102	
5/22/2018	<0.00102		<0.00102		
5/24/2018		<0.00102		<0.00102	
6/12/2018	<0.00102				
10/17/2018	<0.00102				
11/19/2018	<0.00102	<0.00102		<0.00102	
11/20/2018			<0.00102		
3/12/2019					<0.00102
4/10/2019	<0.00102				
5/14/2019	<0.00102				
5/15/2019		<0.00102	<0.00102	<0.00102	
10/8/2019	<0.00102				
10/9/2019		<0.00102		<0.00102	
10/10/2019			<0.00102		<0.00102
10/16/2019	<0.00102				
4/6/2020	<0.00102		<0.00102	<0.00102	<0.00102
4/8/2020		<0.00102			
7/13/2020	<0.00102		<0.00102	<0.00102	<0.00102
7/14/2020		<0.00102			
2/22/2021	0.000382 (J)				
2/23/2021		<0.00102			
2/24/2021			<0.00102	<0.00102	<0.00102
7/12/2021	0.00049 (J)				
7/20/2021		0.00021 (J)		0.00028 (J)	<0.00102
7/21/2021			<0.00102		

Time Series

Constituent: Chromium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.00102	0.00373 (J)	<0.00102		
4/27/2016				<0.00102	<0.00102
6/20/2016	<0.00102		<0.00102		
6/21/2016				<0.00102	<0.00102
6/22/2016		0.00606 (J)			
8/8/2016	<0.00102				
8/9/2016		<0.00102	<0.00102		
8/24/2016	<0.00102	<0.00102	<0.00102		
10/3/2016	<0.00102		<0.00102		
10/4/2016		<0.00102			
10/26/2016	<0.00102	<0.00102	<0.00102		
11/21/2016	<0.00102	<0.00102	<0.00102		
1/17/2017	<0.00102				
1/18/2017		<0.00102	<0.00102		
3/22/2017	<0.00102	0.00945 (J)	<0.00102		
4/18/2017	<0.00102	0.0105	<0.00102		
5/31/2017	<0.00102	<0.00102	<0.00102		
10/12/2017				<0.00102	<0.00102
10/13/2017				<0.00102	<0.00102
10/14/2017				<0.00102	<0.00102
10/15/2017				<0.00102	<0.00102
10/16/2017				<0.00102	<0.00102
10/17/2017				<0.00102	<0.00102
2/13/2018	<0.00102	<0.00102	<0.00102		
2/14/2018				<0.00102	<0.00102
5/22/2018	<0.00102				
5/23/2018			<0.00102	<0.00102	<0.00102
5/24/2018		<0.00102			
6/12/2018	<0.00102	<0.00102	<0.00102		
10/17/2018	<0.00102	<0.00102	<0.00102		
11/19/2018	<0.00102	<0.00102	<0.00102		
11/20/2018				<0.00102	<0.00102
4/10/2019	<0.00102	<0.00102	<0.00102		
5/14/2019	<0.00102	<0.00102	<0.00102		
5/15/2019				<0.00102	<0.00102
10/8/2019	<0.00102	<0.00102		<0.00102	
10/9/2019					<0.00102
10/10/2019			<0.00102		
10/16/2019	<0.00102	<0.00102	<0.00102		
4/6/2020	<0.00102	<0.00102	<0.00102		
4/8/2020				<0.00102	<0.00102
7/13/2020	<0.00102	<0.00102			
7/14/2020			<0.00102	<0.00102	
7/15/2020					<0.00102
2/22/2021	<0.00102	0.00035 (J)	<0.00102		
2/23/2021				<0.00102	<0.00102
7/12/2021	0.00025 (J)	0.00031 (J)	0.0003 (J)		
7/20/2021				<0.00102	<0.00102

Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.0343		<0.0002		
4/27/2016		0.0543			
4/28/2016				0.0531	
6/20/2016	0.0413				
6/22/2016			<0.0002	0.0388	
6/23/2016		0.0106			
8/8/2016	0.0513				
8/9/2016			<0.0002		
8/10/2016		0.00438 (J)		0.0565	
8/24/2016	0.0471				
10/3/2016	0.0525				
10/4/2016			<0.0002		
10/5/2016		0.00663 (J)		0.0479	
10/26/2016	0.0527				
11/21/2016	0.0569	0.0109	<0.0002		
11/22/2016				0.0453	
1/17/2017	0.0768	0.0146	<0.0002		
1/18/2017				0.0431	
3/21/2017		0.013	<0.0002	0.0414	
3/22/2017	0.0535				
4/18/2017	0.0442				
5/30/2017	0.0465		<0.0002		
5/31/2017		0.0086 (J)		0.0379	
2/13/2018	0.062				
2/14/2018			<0.0002		
2/15/2018		0.0199		0.0333	
5/22/2018	0.0443		<0.0002		
5/24/2018		0.00905 (J)		0.0399	
6/12/2018	0.0512				
10/17/2018	0.0751				
11/19/2018	0.0825	0.0147		0.0485	
11/20/2018			<0.0002		
3/12/2019					<0.0002
4/10/2019	0.0445				
5/14/2019	0.0485				
5/15/2019		0.0226	<0.0002	0.0603	
10/8/2019	0.0778				
10/9/2019		0.00969		0.0512	
10/10/2019			<0.0002		<0.0002
10/16/2019	0.08				
4/6/2020	0.0417		<0.0002	0.0537	<0.0002
4/8/2020		0.0176			
7/13/2020	0.0532		<0.0002	0.0515	<0.0002
7/14/2020		0.0232			
2/22/2021	0.0657				
2/23/2021		0.0167			
2/24/2021			0.00026	0.0442	0.000378
7/12/2021	0.0556				
7/20/2021		0.0131		0.046	0.00018 (J)
7/21/2021			0.00025		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	0.0487	0.232	<0.0002		
4/27/2016				<0.0002	0.00436 (J)
6/20/2016	0.0767		<0.0002		
6/21/2016				<0.0002	0.00484 (J)
6/22/2016		0.332			
8/8/2016	0.103				
8/9/2016		0.311	<0.0002		
8/24/2016	0.093	0.271	<0.0002		
10/3/2016	0.0964		<0.0002		
10/4/2016		0.148			
10/26/2016	0.0904	0.236	<0.0002		
11/21/2016	0.0857	0.241	<0.0002		
1/17/2017	0.0745				
1/18/2017		0.347	<0.0002		
3/22/2017	0.0328	0.271	<0.0002		
4/18/2017	0.0242	0.00324 (J)	<0.0002		
5/31/2017	0.0441	0.225	<0.0002		
10/12/2017				0.00269 (J)	0.005 (J)
10/13/2017				0.00341 (J)	0.0052 (J)
10/14/2017				0.00451 (J)	0.00513 (J)
10/15/2017				0.00371 (J)	0.00518 (J)
10/16/2017				0.00371 (J)	0.00453 (J)
10/17/2017				0.0035 (J)	0.00463 (J)
2/13/2018	0.0179	0.00661 (J)	<0.0002		
2/14/2018				<0.0002	0.00441 (J)
5/22/2018	0.028				
5/23/2018			<0.0002	<0.0002	0.00466 (J)
5/24/2018		0.158			
6/12/2018	0.0366	0.291	<0.0002		
10/17/2018	0.0745	0.49	<0.0002		
11/19/2018	0.0225	0.386	<0.0002		
11/20/2018				0.00306 (J)	0.00551
4/10/2019	0.0152	0.0144	<0.0002		
5/14/2019	0.0222	0.00536	<0.0002		
5/15/2019				0.00234 (J)	0.00643
10/8/2019	0.0674	1.07 (o)		0.00408 (J)	
10/9/2019					0.00864
10/10/2019			<0.0002		
10/16/2019	0.073	0.848 (o)	<0.0002		
4/6/2020	0.0116	<0.0002	<0.0002		
4/8/2020				0.00394 (J)	0.00762
7/13/2020	0.0405	0.47			
7/14/2020			<0.0002	0.00653	
7/15/2020					0.00821
2/22/2021	0.0161	0.0515	<0.0002		
2/23/2021				0.00294	0.00796
7/12/2021	0.0155	0.00567	<0.0002		
7/20/2021				0.00561	0.00714

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.622		0.57		
4/27/2016		0.316 (U)		0.259 (U)	
4/28/2016				0.608	
6/20/2016	0.159 (U)				
6/22/2016			0.724	0.45 (U)	
6/23/2016		0.451 (U)			
8/8/2016	0.511 (U)				
8/9/2016			0.579		
8/10/2016		0.368 (U)		1.03	
8/24/2016	0.566 (U)				
10/3/2016	0.537 (U)				
10/4/2016			0.372 (U)		
10/5/2016		0.515		0.494 (U)	
10/26/2016	0.636				
11/21/2016	0.807	0.489 (U)	1.19		
11/22/2016				0.578	
1/17/2017	0.308 (U)	0.236 (U)	-0.187 (U)		
1/18/2017				0.216 (U)	
3/21/2017		0.101 (U)	0.403 (U)	0.101 (U)	
3/22/2017	0.344 (U)				
4/18/2017	0.934				
5/30/2017	0.149 (U)		0.998		
5/31/2017		1.19		1.4	
2/13/2018	0.774				
2/14/2018			1.74		
2/15/2018		0.55		0.925	
5/22/2018	-0.091 (U)		0.276 (U)		
5/24/2018		0.472		0.756	
6/12/2018	1.18				
10/17/2018	0.553 (U)				
11/19/2018	0.862 (D)	0.167 (U)		0.648	
11/20/2018			1.04		
3/12/2019					0.369
5/14/2019	0.509				
5/15/2019		0.421 (U)	1.18	1	
10/8/2019	1.47				
10/9/2019		0.742 (U)		1.18	
10/10/2019			0.902		0.446 (U)
10/16/2019	0.204 (U)				
4/6/2020	0.309 (U)		0.678	1.22	0.116 (U)
4/8/2020		0.205 (U)			
7/13/2020	0.219 (U)		0.665	0.787	0.794
7/14/2020		0.314 (U)			
2/22/2021	0.677 (U)				
2/23/2021		0.329 (U)			
2/24/2021			0.869 (U)	1.24	0.865 (U)
7/12/2021	0.476 (U)				
7/20/2021		0.344 (U)		1.15 (U)	0.763 (U)
7/21/2021			0.951 (U)		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016		0.484 (U)	0.434 (U)		
4/27/2016				0.374 (U)	-0.207 (U)
5/5/2016	-0.0718 (U)				
6/20/2016	0.295 (U)		0.287 (U)		
6/21/2016				0.151 (U)	0.529
6/22/2016		0.2 (U)			
8/8/2016	0.231 (U)				
8/9/2016		0.378 (U)	0.516 (U)		
8/24/2016	0.65	0.131 (U)	0.266 (U)		
10/3/2016	0.845		0.59 (U)		
10/4/2016		0.514 (U)			
10/26/2016	0.994	0.755	0.164 (U)		
11/21/2016	0.537 (U)	0.7	0.296 (U)		
1/17/2017	-0.0159 (U)				
1/18/2017		0.606	0.0267 (U)		
3/22/2017	0.279 (U)	0.927	0.132 (U)		
4/18/2017	0.32 (U)	0.334 (U)	-0.0439 (U)		
5/31/2017	0.178 (U)	0.8	0.3 (U)		
10/12/2017				0.182 (U)	0.267 (U)
10/13/2017				0.517 (U)	0.873 (U)
10/14/2017				0.43 (U)	1.6 (U)
10/15/2017				0.45 (U)	0.327 (U)
10/16/2017				0.55 (U)	0.524 (U)
10/17/2017				0.474 (U)	0.0455 (U)
2/13/2018	0.804	0.649	0.69		
2/14/2018				0.736	0.633
5/22/2018	0.0077 (U)				
5/23/2018			0.186 (U)	0.0192 (U)	0.377 (U)
5/24/2018		0.448 (U)			
6/12/2018	-0.315 (U)	0.234 (U)	0.153 (U)		
10/17/2018	0.574 (U)	0.852	0.313 (U)		
11/19/2018	0.654 (D)	0.521 (D)	0.794 (D)		
11/20/2018				0.494	0.28 (U)
5/14/2019	0.579	0.176 (U)	0.352 (U)		
5/15/2019				0.61	0.697
10/8/2019	0.493 (U)	0.833 (U)		0.345 (U)	
10/9/2019					0.416 (U)
10/10/2019			1.02 (U)		
10/16/2019	0.046 (U)	0.0279 (U)	0.356 (U)		
4/6/2020	0.212 (U)	0.569 (U)	0.459 (U)		
4/8/2020				0.237 (U)	1.38 (U)
7/13/2020	0.0814 (U)	0.53			
7/14/2020			0.169 (U)	0.434	
7/15/2020					0.398 (U)
2/22/2021	0.434 (U)	0.472 (U)	0 (U)		
2/23/2021				0.696 (U)	0.685 (U)
7/12/2021	0.155 (U)	0.114 (U)	0.301 (U)		
7/20/2021				0.356 (U)	0.42 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.146 (J)		0.084 (J)		
4/27/2016		0.337			
4/28/2016				0.153 (J)	
6/20/2016	0.148 (J)				
6/22/2016			0.106 (J)	0.146 (J)	
6/23/2016		0.155 (J)			
8/8/2016	0.137 (J)				
8/9/2016			0.092 (J)		
8/10/2016		0.123 (J)		0.127 (J)	
8/24/2016	0.133 (J)				
10/3/2016	0.103 (J)				
10/4/2016			0.049 (J)		
10/5/2016		0.086 (J)		0.09 (J)	
10/26/2016	0.05 (J)				
11/21/2016	0.047 (J)	0.056 (J)	<0.3		
11/22/2016				0.012 (J)	
1/17/2017	0.09 (J)	0.103 (J)	0.044 (J)		
1/18/2017				0.071 (J)	
3/21/2017		0.15	0.08 (J)	0.09 (J)	
3/22/2017	0.12				
4/18/2017	0.12				
5/30/2017	0.13		0.096 (J)		
5/31/2017		0.18		0.11	
8/23/2017	0.16	0.23	0.11	0.13	
2/13/2018	0.14				
2/14/2018			0.1		
2/15/2018		0.23		0.12	
5/22/2018	0.16		0.1		
5/24/2018		0.13		0.15	
6/12/2018	0.16				
10/17/2018	0.18				
11/19/2018	0.15	0.26		0.16	
11/20/2018			0.1		
3/12/2019					0.177
4/10/2019	0.102				
5/14/2019	0.119				
5/15/2019		0.276	0.1	0.185	
10/8/2019	0.0924 (J)				
10/9/2019		0.142		0.215	
10/10/2019			0.0915 (J)		0.163
10/16/2019	0.0756 (J)				
4/6/2020	0.101		0.118	0.254	0.188
4/8/2020		0.243			
7/13/2020	0.0678 (J)		0.108	0.161	0.166
7/14/2020		0.224			
2/22/2021	0.082 (J)				
2/23/2021		0.202			
2/24/2021			0.107	0.172	0.17
7/12/2021	0.125				
7/20/2021		0.268		0.219	0.224
7/21/2021			0.16		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	0.149 (J)	0.243 (J)	0.372		
4/27/2016				0.2 (J)	0.212 (J)
6/20/2016	0.148 (J)		0.361		
6/21/2016				0.163 (J)	0.211 (J)
6/22/2016		0.269 (J)			
8/8/2016	0.134 (J)				
8/9/2016		0.363	0.326		
8/24/2016	0.129 (J)	0.346	0.329		
10/3/2016	0.086 (J)		0.287 (J)		
10/4/2016		0.266 (J)			
10/26/2016	0.027 (J)	0.266 (J)	0.194 (J)		
11/21/2016	0.027 (J)	0.244 (J)	0.192 (J)		
1/17/2017	0.066 (J)				
1/18/2017		0.385	0.223 (J)		
3/22/2017	0.13	0.41	0.32		
4/18/2017	0.16	0.29	0.32		
5/31/2017	0.13	0.37	0.31		
8/23/2017	0.16	0.55	0.38		
10/12/2017				0.17	0.22
10/13/2017				0.19	0.23
10/14/2017				0.2	0.22
10/15/2017				0.2	0.22
10/16/2017				0.2	0.22
10/17/2017				0.19	0.21
11/16/2017				0.18	0.22
2/13/2018	0.22	0.27	0.38		
2/14/2018				0.18	0.21
5/22/2018	0.17				
5/23/2018			0.38	0.18	0.21
5/24/2018		0.6			
6/12/2018	0.16	0.53	0.39		
10/17/2018	0.16	0.63	0.39		
11/19/2018	0.18	0.31	0.36		
11/20/2018				0.19	0.21
4/10/2019	0.262	0.273	0.384		
5/14/2019	0.17	0.281	0.335		
5/15/2019				0.169	0.192
10/8/2019	0.164	0.225		0.183	
10/9/2019					0.189
10/10/2019			0.304		
10/16/2019	0.114	0.106	0.302		
4/6/2020	0.207	0.314	0.368		
4/8/2020				0.153	0.192
7/13/2020	0.132	0.13			
7/14/2020			0.33	0.193	
7/15/2020					0.196
2/22/2021	0.209	0.246	0.357		
2/23/2021				0.2	0.208
7/12/2021	0.196	0.287	0.35		
7/20/2021				0.286	0.262

Time Series

Constituent: Lead (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.0002		<0.0002		
4/27/2016		<0.0002			
4/28/2016				<0.0002	
6/20/2016	<0.0002				
6/22/2016			<0.0002	<0.0002	
6/23/2016		<0.0002			
8/8/2016	<0.0002				
8/9/2016			<0.0002		
8/10/2016		<0.0002		<0.0002	
8/24/2016	<0.0002				
10/3/2016	<0.0002				
10/4/2016			<0.0002		
10/5/2016		<0.0002		<0.0002	
10/26/2016	<0.0002				
11/21/2016	<0.0002	<0.0002	<0.0002		
11/22/2016				<0.0002	
1/17/2017	<0.0002	<0.0002	<0.0002		
1/18/2017				<0.0002	
3/21/2017		<0.0002	<0.0002	<0.0002	
3/22/2017	<0.0002				
4/18/2017	<0.0002				
5/30/2017	<0.0002		<0.0002		
5/31/2017		<0.0002		<0.0002	
2/13/2018	<0.0002				
2/14/2018			<0.0002		
2/15/2018		<0.0002		<0.0002	
5/22/2018	<0.0002		<0.0002		
5/24/2018		<0.0002		<0.0002	
6/12/2018	<0.0002				
10/17/2018	<0.0002				
11/19/2018	<0.0002	<0.0002		<0.0002	
11/20/2018			<0.0002		
3/12/2019					<0.0002
4/10/2019	<0.0002				
5/14/2019	<0.0002				
5/15/2019		<0.0002	<0.0002	<0.0002	
10/8/2019	<0.0002				
10/9/2019		<0.0002		<0.0002	
10/10/2019			0.00145 (J)		<0.0002
10/16/2019	<0.0002				
4/6/2020	<0.0002		<0.0002	<0.0002	<0.0002
4/8/2020		<0.0002			
7/13/2020	<0.0002		<0.0002	<0.0002	<0.0002
7/14/2020		<0.0002			
2/22/2021	<0.0002				
2/23/2021		<0.0002			
2/24/2021			<0.0002	0.000178 (J)	<0.0002
7/12/2021	<0.0002				
7/20/2021		8E-05 (J)		0.00023	<0.0002
7/21/2021			<0.0002		

Time Series

Constituent: Lead (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.0002	<0.0002	<0.0002		
4/27/2016				<0.0002	<0.0002
6/20/2016	<0.0002		<0.0002		
6/21/2016				<0.0002	<0.0002
6/22/2016		<0.0002			
8/8/2016	<0.0002				
8/9/2016		<0.0002	<0.0002		
8/24/2016	<0.0002	<0.0002	<0.0002		
10/3/2016	<0.0002		<0.0002		
10/4/2016		<0.0002			
10/26/2016	<0.0002	<0.0002	<0.0002		
11/21/2016	<0.0002	<0.0002	<0.0002		
1/17/2017	<0.0002				
1/18/2017		<0.0002	<0.0002		
3/22/2017	<0.0002	<0.0002	<0.0002		
4/18/2017	<0.0002	<0.0002	<0.0002		
5/31/2017	<0.0002	<0.0002	<0.0002		
10/12/2017				<0.0002	<0.0002
10/13/2017				<0.0002	<0.0002
10/14/2017				<0.0002	<0.0002
10/15/2017				<0.0002	<0.0002
10/16/2017				<0.0002	<0.0002
10/17/2017				<0.0002	<0.0002
2/13/2018	<0.0002	<0.0002	<0.0002		
2/14/2018				<0.0002	<0.0002
5/22/2018	<0.0002				
5/23/2018			<0.0002	<0.0002	<0.0002
5/24/2018		<0.0002			
6/12/2018	<0.0002	<0.0002	<0.0002		
10/17/2018	<0.0002	0.00102 (J)	<0.0002		
11/19/2018	<0.0002	0.00692 (o)	<0.0002		
11/20/2018				<0.0002	<0.0002
4/10/2019	<0.0002	<0.0002	<0.0002		
5/14/2019	<0.0002	<0.0002	<0.0002		
5/15/2019				<0.0002	<0.0002
10/8/2019	<0.0002	<0.0002		<0.0002	
10/9/2019					<0.0002
10/10/2019			<0.0002		
10/16/2019	<0.0002	0.00108 (J)	<0.0002		
4/6/2020	<0.0002	<0.0002	<0.0002		
4/8/2020				<0.0002	<0.0002
7/13/2020	<0.0002	<0.0002			
7/14/2020			<0.0002	<0.0002	
7/15/2020					<0.0002
2/22/2021	<0.0002	8.8E-05 (J)	<0.0002		
2/23/2021				<0.0002	<0.0002
7/12/2021	<0.0002	8E-05 (J)	<0.0002		
7/20/2021				<0.0002	9E-05 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.0264 (J)		0.212		
4/27/2016		0.435			
4/28/2016				0.0735	
6/20/2016	0.0246 (J)				
6/22/2016			0.232	0.118	
6/23/2016		0.285			
8/8/2016	0.0229 (J)				
8/9/2016			0.204		
8/10/2016		0.231		0.0805	
8/24/2016	0.0236 (J)				
10/3/2016	0.0229 (J)				
10/4/2016			0.198		
10/5/2016		0.231		0.0757	
10/26/2016	0.0227 (J)				
11/21/2016	0.0236 (J)	0.236	0.206		
11/22/2016				0.0828	
1/17/2017	0.0228 (J)	0.3	0.295		
1/18/2017				0.125	
3/21/2017		0.218	0.234	0.093	
3/22/2017	0.0238 (J)				
4/18/2017	0.0242 (J)				
5/30/2017	0.0229 (J)		0.23		
5/31/2017		0.194		0.0787	
2/13/2018	0.0233 (J)				
2/14/2018			0.233		
2/15/2018		0.23		0.104	
5/22/2018	0.0263 (J)		0.24		
5/24/2018		0.192		0.0819	
6/12/2018	0.0251 (J)				
10/17/2018	0.025 (J)				
11/19/2018	0.0241	0.211		0.0816	
11/20/2018			0.248		
3/12/2019					0.275
4/10/2019	0.0285				
5/14/2019	0.026 (J)				
5/15/2019		0.23	0.251	0.0736	
10/8/2019	0.0268				
10/9/2019		0.202		0.0838	
10/10/2019			0.275		0.297
10/16/2019	0.0263				
4/6/2020	0.0278		0.282	0.0786	0.298
4/8/2020		0.23			
7/13/2020	0.028		0.277	0.0784	0.294
7/14/2020		0.255			
2/22/2021	0.0301				
2/23/2021		0.223			
2/24/2021			0.3	0.0949	0.345
7/12/2021	0.0266				
7/20/2021		0.196		0.0769	0.33
7/21/2021			0.271		

Time Series

Constituent: Lithium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	0.0353 (J)	0.0964	0.0528		
4/27/2016				0.163	0.171
6/20/2016	0.0583		0.0554		
6/21/2016				0.171	0.181
6/22/2016		0.156			
8/8/2016	0.0627				
8/9/2016		0.122	0.0452 (J)		
8/24/2016	0.0651	0.138	0.0488 (J)		
10/3/2016	0.0622		0.0476 (J)		
10/4/2016		0.0966			
10/26/2016	0.0293 (J)	0.134	0.049 (J)		
11/21/2016	0.0667	0.167	0.0477 (J)		
1/17/2017	0.0636				
1/18/2017		0.237	0.045 (J)		
3/22/2017	0.0464 (J)	0.203	0.0493 (J)		
4/18/2017	0.0446 (J)	0.0764	0.0494 (J)		
5/31/2017	0.0496 (J)	0.218	0.0501		
10/12/2017				0.134	0.182
10/13/2017				0.127	0.189
10/14/2017				0.112	0.177
10/15/2017				0.129	0.191
10/16/2017				0.122	0.189
10/17/2017				0.122	0.184
2/13/2018	0.0615	0.0964	0.0446 (J)		
2/14/2018				0.131	0.183
5/22/2018	0.0465 (J)				
5/23/2018			0.0513	0.129	0.194
5/24/2018		0.145			
6/12/2018	0.0472 (J)	0.194	0.0511		
10/17/2018	0.0633	0.384	0.0532		
11/19/2018	0.0584	0.323	0.0467		
11/20/2018				0.12	0.181
4/10/2019	0.0574	0.0905	0.0504		
5/14/2019	0.0445	0.0828	0.0485		
5/15/2019				0.127	0.16
10/8/2019	0.0677	0.419		0.131	
10/9/2019					0.163
10/10/2019			0.054		
10/16/2019	0.0661	0.337	0.052		
4/6/2020	0.0496	0.0689	0.0519		
4/8/2020				0.117	0.149
7/13/2020	0.0615	0.256			
7/14/2020			0.0543	0.103	
7/15/2020					0.152
2/22/2021	0.0625	0.126	0.0558		
2/23/2021				0.131	0.166
7/12/2021	0.0495	0.0808	0.0533		
7/20/2021				0.096	0.151

Time Series

Constituent: Mercury (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.0005		<0.0005		
4/27/2016		<0.0005			
4/28/2016				<0.0005	
6/20/2016	<0.0005				
6/22/2016			<0.0005	<0.0005	
6/23/2016		<0.0005			
8/8/2016	<0.0005				
8/9/2016			<0.0005		
8/10/2016		<0.0005		<0.0005	
8/24/2016	<0.0005				
10/3/2016	<0.0005				
10/4/2016			<0.0005		
10/5/2016		<0.0005		<0.0005	
10/26/2016	<0.0005				
11/21/2016	<0.0005	<0.0005	<0.0005		
11/22/2016				<0.0005	
1/17/2017	<0.0005	<0.0005	<0.0005		
1/18/2017				<0.0005	
3/21/2017		<0.0005	<0.0005	<0.0005	
3/22/2017	<0.0005				
4/18/2017	<0.0005				
5/30/2017	<0.0005		<0.0005		
5/31/2017		<0.0005		<0.0005	
2/13/2018	<0.0005				
2/14/2018			<0.0005		
2/15/2018		<0.0005		<0.0005	
5/22/2018	<0.0005		<0.0005		
5/24/2018		<0.0005		<0.0005	
6/12/2018	<0.0005				
10/17/2018	<0.0005				
11/19/2018	<0.0005	<0.0005		<0.0005	
11/20/2018			<0.0005		
3/12/2019					<0.0005
4/10/2019	<0.0005				
5/14/2019	<0.0005				
5/15/2019		<0.0005	<0.0005	<0.0005	
10/8/2019	<0.0005				
10/9/2019		<0.0005		<0.0005	
10/10/2019			<0.0005		<0.0005
10/16/2019	<0.0005				
4/6/2020	<0.0005		<0.0005	<0.0005	<0.0005
4/8/2020		<0.0005			
7/13/2020	<0.0005		<0.0005	<0.0005	<0.0005
7/14/2020		<0.0005			
2/22/2021	<0.0005				
2/23/2021		<0.0005			
2/24/2021			<0.0005	<0.0005	<0.0005
7/12/2021	<0.0005				
7/20/2021		<0.0005		<0.0005	<0.0005
7/21/2021			<0.0005		

Time Series

Constituent: Mercury (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.0005	<0.0005	<0.0005		
4/27/2016				<0.0005	<0.0005
6/20/2016	<0.0005		<0.0005		
6/21/2016				<0.0005	<0.0005
6/22/2016		<0.0005			
8/8/2016	<0.0005				
8/9/2016		<0.0005	<0.0005		
8/24/2016	<0.0005	<0.0005	<0.0005		
10/3/2016	<0.0005		<0.0005		
10/4/2016		<0.0005			
10/26/2016	<0.0005	<0.0005	<0.0005		
11/21/2016	<0.0005	<0.0005	<0.0005		
1/17/2017	<0.0005				
1/18/2017		<0.0005	<0.0005		
3/22/2017	<0.0005	<0.0005	<0.0005		
4/18/2017	<0.0005	<0.0005	<0.0005		
5/31/2017	<0.0005	<0.0005	<0.0005		
10/12/2017				<0.0005	<0.0005
10/13/2017				<0.0005	<0.0005
10/14/2017				<0.0005	<0.0005
10/15/2017				<0.0005	<0.0005
10/16/2017				<0.0005	<0.0005
10/17/2017				<0.0005	<0.0005
2/13/2018	<0.0005	<0.0005	<0.0005		
2/14/2018				<0.0005	<0.0005
5/22/2018	<0.0005				
5/23/2018			<0.0005	<0.0005	<0.0005
5/24/2018		<0.0005			
6/12/2018	<0.0005	<0.0005	<0.0005		
10/17/2018	<0.0005	<0.0005	<0.0005		
11/19/2018	<0.0005	<0.0005	<0.0005		
11/20/2018				<0.0005	<0.0005
4/10/2019	<0.0005	<0.0005	<0.0005		
5/14/2019	<0.0005	<0.0005	<0.0005		
5/15/2019				<0.0005	<0.0005
10/8/2019	<0.0005	<0.0005		<0.0005	
10/9/2019					<0.0005
10/10/2019			<0.0005		
10/16/2019	<0.0005	<0.0005	<0.0005		
4/6/2020	<0.0005	<0.0005	<0.0005		
4/8/2020				<0.0005	<0.0005
7/13/2020	<0.0005	<0.0005			
7/14/2020			<0.0005	<0.0005	
7/15/2020					<0.0005
2/22/2021	<0.0005	<0.0005	<0.0005		
2/23/2021				<0.0005	<0.0005
7/12/2021	<0.0005	<0.0005	<0.0005		
7/20/2021				<0.0005	<0.0005

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.0002		<0.0002		
4/27/2016		<0.0002			
4/28/2016				<0.0002	
6/20/2016	<0.0002				
6/22/2016			<0.0002	<0.0002	
6/23/2016		<0.0002			
8/8/2016	<0.0002				
8/9/2016			<0.0002		
8/10/2016		<0.0002		<0.0002	
8/24/2016	<0.0002				
10/3/2016	<0.0002				
10/4/2016			<0.0002		
10/5/2016		<0.0002		<0.0002	
10/26/2016	<0.0002				
11/21/2016	<0.0002	<0.0002	<0.0002		
11/22/2016				<0.0002	
1/17/2017	<0.0002	<0.0002	<0.0002		
1/18/2017				<0.0002	
3/21/2017		<0.0002	<0.0002	<0.0002	
3/22/2017	<0.0002				
4/18/2017	<0.0002				
5/30/2017	<0.0002		<0.0002		
5/31/2017		<0.0002		<0.0002	
2/13/2018	<0.0002				
2/14/2018			<0.0002		
2/15/2018		<0.0002		<0.0002	
5/22/2018	<0.0002		<0.0002		
5/24/2018		<0.0002		<0.0002	
6/12/2018	<0.0002				
10/17/2018	<0.0002				
11/19/2018	<0.0002	<0.0002		<0.0002	
11/20/2018			<0.0002		
3/12/2019					<0.0002
4/10/2019	<0.0002				
5/14/2019	<0.0002				
5/15/2019		<0.0002	<0.0002	<0.0002	
10/8/2019	<0.0002				
10/9/2019		<0.0002		<0.0002	
10/10/2019			<0.0002		<0.0002
10/16/2019	<0.0002				
4/6/2020	<0.0002		<0.0002	<0.0002	<0.0002
4/8/2020		<0.0002			
7/13/2020	<0.0002		<0.0002	<0.0002	<0.0002
7/14/2020		<0.0002			
2/22/2021	<0.0002				
2/23/2021		<0.0002			
2/24/2021			0.00148	8.8E-05 (J)	0.00174
7/12/2021	<0.0002				
7/20/2021		8E-05 (J)		0.00017 (J)	0.00188
7/21/2021			0.0013		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.0002	<0.0002	<0.0002		
4/27/2016				<0.0002	<0.0002
6/20/2016	<0.0002		<0.0002		
6/21/2016				<0.0002	<0.0002
6/22/2016		<0.0002			
8/8/2016	<0.0002				
8/9/2016		<0.0002	<0.0002		
8/24/2016	<0.0002	<0.0002	<0.0002		
10/3/2016	<0.0002		<0.0002		
10/4/2016		<0.0002			
10/26/2016	<0.0002	<0.0002	<0.0002		
11/21/2016	<0.0002	<0.0002	<0.0002		
1/17/2017	<0.0002				
1/18/2017		<0.0002	<0.0002		
3/22/2017	<0.0002	<0.0002	<0.0002		
4/18/2017	<0.0002	<0.0002	<0.0002		
5/31/2017	<0.0002	<0.0002	<0.0002		
10/12/2017				<0.0002	<0.0002
10/13/2017				<0.0002	<0.0002
10/14/2017				<0.0002	<0.0002
10/15/2017				<0.0002	<0.0002
10/16/2017				<0.0002	<0.0002
10/17/2017				<0.0002	<0.0002
2/13/2018	<0.0002	<0.0002	<0.0002		
2/14/2018				<0.0002	<0.0002
5/22/2018	<0.0002				
5/23/2018			<0.0002	<0.0002	<0.0002
5/24/2018		<0.0002			
6/12/2018	<0.0002	<0.0002	<0.0002		
10/17/2018	<0.0002	<0.0002	<0.0002		
11/19/2018	<0.0002	<0.0002	<0.0002		
11/20/2018				<0.0002	<0.0002
4/10/2019	<0.0002	<0.0002	<0.0002		
5/14/2019	<0.0002	<0.0002	<0.0002		
5/15/2019				<0.0002	<0.0002
10/8/2019	<0.0002	<0.0002		<0.0002	
10/9/2019					<0.0002
10/10/2019			<0.0002		
10/16/2019	<0.0002	<0.0002	<0.0002		
4/6/2020	<0.0002	<0.0002	<0.0002		
4/8/2020				<0.0002	<0.0002
7/13/2020	<0.0002	<0.0002			
7/14/2020			<0.0002	<0.0002	
7/15/2020					<0.0002
2/22/2021	<0.0002	<0.0002	0.000131 (J)		
2/23/2021				0.00107	0.0129
7/12/2021	<0.0002	<0.0002	0.00014 (J)		
7/20/2021				0.00086	0.00033

Time Series

Constituent: pH (SU) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	5.2		6.49		
4/27/2016		5.8			
4/28/2016				5.78	
6/20/2016	5.18				
6/22/2016			6.51	6.41	
6/23/2016		6.38			
8/8/2016	5.12				
8/9/2016			6.49		
8/10/2016		6.47		5.82	
10/3/2016	5.21 (D)				
10/4/2016			6.51 (D)		
10/5/2016		6.42 (D)		5.82 (D)	
10/26/2016	5.2				
11/21/2016	5.19 (D)	6.38	6.48		
11/22/2016				5.86	
1/17/2017	5.17 (D)	6.35	6.46		
1/18/2017				5.9	
3/21/2017		6.38	6.47	5.85	
3/22/2017	5.2 (D)				
4/18/2017	5.2				
5/30/2017	5.14 (D)		6.48		
5/31/2017		6.4		5.84	
8/23/2017	5.12 (D)	6.33	6.48	5.91	
2/13/2018	5.18				
2/14/2018			6.6		
2/15/2018		6.26		5.98	
5/22/2018	5.2		6.54		
5/24/2018		6.45		5.86	
6/12/2018	5.15				
10/17/2018	5.12				
11/19/2018	5.09	6.3		5.88	
11/20/2018			6.61		
3/12/2019					6.7
4/10/2019	5.11				
5/14/2019	5.19				
5/15/2019		6.37	6.62	5.82	
10/8/2019	5.12				
10/9/2019		6.5		5.85	
10/10/2019			6.69		6.77
10/16/2019	5.16				
4/6/2020	5.21		6.72	5.81	6.79
4/8/2020		6.36			
7/13/2020	5.14		6.71	5.62	6.61
7/14/2020		6.42			
2/22/2021	5.06				
2/23/2021		6.45			
2/24/2021			6.67	5.83	6.83
7/12/2021	5.13				
7/20/2021		6.46		5.53	6.84
7/21/2021			6.74		

Time Series

Constituent: pH (SU) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	5.94	5.56	6.22		
4/27/2016				6.6	6.55
6/20/2016	5.96		6.21		
6/21/2016				6.62	6.47
6/22/2016		5.57			
8/8/2016	5.88				
8/9/2016		5.67	6.11		
8/24/2016		5.63	6.11		
10/3/2016	5.91 (D)		6.13 (D)		
10/4/2016		5.69 (D)			
10/26/2016	5.84	5.56	6.12		
11/21/2016	5.82 (D)	5.42 (D)	6.09 (D)		
1/17/2017	5.87 (D)				
1/18/2017		5.11 (D)	6.09 (D)		
3/22/2017	6.01 (D)	4.52 (D)	6.15 (D)		
4/18/2017	6.02	5.84	6.19		
5/31/2017	5.85 (D)	4.56 (D)	6.13 (D)		
8/23/2017	5.89 (D)	4.77 (D)	6.12 (D)		
10/12/2017				6.64	6.5
10/13/2017				6.64	6.51
10/14/2017				6.66	6.53
10/15/2017				6.67	6.53
10/16/2017				6.67	6.54
10/17/2017				6.66	6.54
11/16/2017				6.62	6.51
2/13/2018	6.21	5.67	6.22		
2/14/2018				6.67	6.55
5/22/2018	6.04				
5/23/2018			6.21	6.63	6.52
5/24/2018		5.19			
6/12/2018	5.95	4.79	6.16		
10/17/2018	5.9	4.75	6.12		
11/19/2018	6.03	3.77 (E)	6.16		
11/20/2018				6.61	6.58
4/10/2019	6.1	5.54	6.14		
5/14/2019	6.07	5.71	6.23		
5/15/2019				6.61	6.6
10/8/2019	5.96	4.98		6.52	
10/9/2019					6.67
10/10/2019			6.15		
10/16/2019	5.98	4.51	6.19		
4/6/2020	6.21	5.91	6.35		
4/8/2020				6.64	6.7
7/13/2020	5.84	5.16			
7/14/2020			6.2	6.52	
7/15/2020					6.71
2/22/2021	6.1	5.59	6.19		
2/23/2021				6.7	6.73
7/12/2021	6.16	5.86	6.06		
7/20/2021				6.58	6.64

Time Series

Constituent: Selenium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	0.00261 (J)		<0.00102		
4/27/2016		<0.00102			
4/28/2016				<0.00102	
6/20/2016	0.00242 (J)				
6/22/2016			<0.00102	<0.00102	
6/23/2016		<0.00102			
8/8/2016	0.00253 (J)				
8/9/2016			<0.00102		
8/10/2016		<0.00102		<0.00102	
8/24/2016	<0.00102				
10/3/2016	0.00211 (J)				
10/4/2016			<0.00102		
10/5/2016		<0.00102		<0.00102	
10/26/2016	<0.00102				
11/21/2016	<0.00102	<0.00102	<0.00102		
11/22/2016				<0.00102	
1/17/2017	<0.00102	<0.00102	<0.00102		
1/18/2017				<0.00102	
3/21/2017		<0.00102	<0.00102	<0.00102	
3/22/2017	0.0022 (J)				
4/18/2017	0.0027 (J)				
5/30/2017	0.00316 (J)		<0.00102		
5/31/2017		<0.00102		<0.00102	
2/13/2018	0.00211 (J)				
2/14/2018			<0.00102		
2/15/2018		0.00272 (J)		<0.00102	
5/22/2018	0.00372 (J)		<0.00102		
5/24/2018		<0.00102		<0.00102	
6/12/2018	0.00409 (J)				
10/17/2018	<0.00102				
11/19/2018	<0.00102	<0.00102		<0.00102	
11/20/2018			<0.00102		
3/12/2019					<0.00102
4/10/2019	0.00471 (J)				
5/14/2019	0.00316 (J)				
5/15/2019		0.00289 (J)	<0.00102	<0.00102	
10/8/2019	<0.00102				
10/9/2019		<0.00102		<0.00102	
10/10/2019			<0.00102		<0.00102
10/16/2019	<0.00102				
4/6/2020	0.00275 (J)		<0.00102	<0.00102	<0.00102
4/8/2020		<0.00102			
7/13/2020	0.00245 (J)		<0.00102	<0.00102	<0.00102
7/14/2020		0.00273 (J)			
2/22/2021	0.00241				
2/23/2021		0.00217			
2/24/2021			<0.00102	<0.00102	<0.00102
7/12/2021	0.0028				
7/20/2021		0.00098 (J)		<0.00102	<0.00102
7/21/2021			<0.00102		

Time Series

Constituent: Selenium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.00102	<0.00102	<0.00102		
4/27/2016				0.00445 (J)	<0.00102
6/20/2016	<0.00102		<0.00102		
6/21/2016				<0.00102	<0.00102
6/22/2016		<0.00102			
8/8/2016	<0.00102				
8/9/2016		<0.00102	<0.00102		
8/24/2016	<0.00102	<0.00102	<0.00102		
10/3/2016	<0.00102		<0.00102		
10/4/2016		<0.00102			
10/26/2016	<0.00102	<0.00102	<0.00102		
11/21/2016	<0.00102	<0.00102	<0.00102		
1/17/2017	<0.00102				
1/18/2017		<0.00102	<0.00102		
3/22/2017	<0.00102	0.0141	<0.00102		
4/18/2017	<0.00102	0.0158	<0.00102		
5/31/2017	<0.00102	0.00632 (J)	<0.00102		
10/12/2017				<0.00102	<0.00102
10/13/2017				<0.00102	<0.00102
10/14/2017				<0.00102	<0.00102
10/15/2017				<0.00102	<0.00102
10/16/2017				<0.00102	<0.00102
10/17/2017				<0.00102	<0.00102
2/13/2018	<0.00102	0.0209	0.00403 (J)		
2/14/2018				<0.00102	<0.00102
5/22/2018	<0.00102				
5/23/2018			<0.00102	<0.00102	<0.00102
5/24/2018		0.00918 (J)			
6/12/2018	<0.00102	0.00836 (J)	<0.00102		
10/17/2018	<0.00102	<0.00102	<0.00102		
11/19/2018	<0.00102	0.00439 (J)	0.00436 (J)		
11/20/2018				<0.00102	<0.00102
4/10/2019	0.00322 (J)	0.0113	<0.00102		
5/14/2019	<0.00102	0.0119	0.00201 (J)		
5/15/2019				<0.00102	<0.00102
10/8/2019	<0.00102	0.00256 (J)		<0.00102	
10/9/2019					<0.00102
10/10/2019			<0.00102		
10/16/2019	<0.00102	0.00286 (J)	<0.00102		
4/6/2020	<0.00102	0.01	0.00284 (J)		
4/8/2020				<0.00102	<0.00102
7/13/2020	<0.00102	0.0134			
7/14/2020			<0.00102	<0.00102	
7/15/2020					<0.00102
2/22/2021	<0.00102	0.0181	0.00222		
2/23/2021				<0.00102	<0.00102
7/12/2021	<0.00102	0.0133	0.00155		
7/20/2021				<0.00102	<0.00102

Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	1490		1750		
4/27/2016		1250			
4/28/2016				2360	
6/20/2016	1420				
6/22/2016			1720	1960	
6/23/2016		1010			
8/8/2016	1460				
8/9/2016			1740		
8/10/2016		992		2300	
8/24/2016	1450				
10/3/2016	1460				
10/4/2016			1750		
10/5/2016		1010		2330	
10/26/2016	1330				
11/21/2016	1420	834	1690		
11/22/2016				2220	
1/17/2017	1350	700	1670		
1/18/2017				1950	
3/21/2017		660	1900	2400	
3/22/2017	1500				
4/18/2017	1300				
5/30/2017	1400		1700		
5/31/2017		700		2200	
8/23/2017	1500	700	1700	2100	
5/22/2018	2100 (o)		2200		
5/24/2018		560		2300	
6/12/2018	1500				
10/17/2018	1400				
11/19/2018	1300	720		2100	
11/20/2018			1400		
3/12/2019					1370
4/10/2019	1700				
5/14/2019	1560				
5/15/2019		780	1510	2800	
10/8/2019	1540				
10/9/2019		748		2550	
10/10/2019			719		1490
10/16/2019	1680				
4/6/2020	1530		1400	2580	1360
4/8/2020		658			
7/13/2020	1450		1300	2610	1280
7/14/2020		845			
2/22/2021	1400				
2/23/2021		747			
2/24/2021			1330	2280	1220
7/12/2021	1560				
7/20/2021		665		2500	1220
7/21/2021			1420		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	745	1890	2260		
4/27/2016				1050	1550
6/20/2016	964		2500		
6/21/2016				1410	1470
6/22/2016		2100			
8/8/2016	1100				
8/9/2016		2050	2750		
8/24/2016	1130	2190	2770		
10/3/2016	1140		3060		
10/4/2016		1950			
10/26/2016	1060	1980	2650		
11/21/2016	1100	2060	2720		
1/17/2017	1160				
1/18/2017		2620	2650		
3/22/2017	900	3200	2700		
4/18/2017	870	2500	2400		
5/31/2017	1100	2800	2700		
8/23/2017	920	2600	2700		
10/12/2017				1400	1400
10/13/2017				1400	1600
10/14/2017				1300	1400
10/15/2017				1300	1400
10/16/2017				1300	1400
10/17/2017				1300	1400
11/16/2017				1300	1400
5/22/2018	1200				
5/23/2018			2400	1900 (o)	2100 (o)
5/24/2018		2700			
6/12/2018	860	2500	2600		
10/17/2018	970	2700	2600		
11/19/2018	1000	3000	2400		
11/20/2018				1100	1400
4/10/2019	889	2460	2090		
5/14/2019	948	2460	2240		
5/15/2019				1510	1640
10/8/2019	1230	2950		1570	
10/9/2019					1550
10/10/2019			2690		
10/16/2019	1170	2820	3050		
4/6/2020	786	1670	1810		
4/8/2020				1270	1380
7/13/2020	843	2130			
7/14/2020			1970	1330	
7/15/2020					1410
2/22/2021	864	3040	2040		
2/23/2021				1320	1420
7/12/2021	763	2380	1930		
7/20/2021				1170	1500

Time Series

Constituent: Thallium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	<0.0002		<0.0002		
4/27/2016		<0.0002			
4/28/2016				<0.0002	
6/20/2016	<0.0002				
6/22/2016			<0.0002	<0.0002	
6/23/2016		<0.0002			
8/8/2016	<0.0002				
8/9/2016			<0.0002		
8/10/2016		<0.0002		<0.0002	
8/24/2016	<0.0002				
10/3/2016	<0.0002				
10/4/2016			<0.0002		
10/5/2016		<0.0002		<0.0002	
10/26/2016	<0.0002				
11/21/2016	<0.0002	<0.0002	<0.0002		
11/22/2016				<0.0002	
1/17/2017	<0.0002	<0.0002	<0.0002		
1/18/2017				<0.0002	
3/21/2017		<0.0002	<0.0002	<0.0002	
3/22/2017	<0.0002				
4/18/2017	<0.0002				
5/30/2017	<0.0002		<0.0002		
5/31/2017		<0.0002		<0.0002	
2/13/2018	<0.0002				
2/14/2018			<0.0002		
2/15/2018		<0.0002		<0.0002	
5/22/2018	<0.0002		<0.0002		
5/24/2018		<0.0002		<0.0002	
6/12/2018	<0.0002				
10/17/2018	<0.0002				
11/19/2018	<0.0002	<0.0002		<0.0002	
11/20/2018			<0.0002		
3/12/2019					<0.0002
4/10/2019	<0.0002				
5/14/2019	<0.0002				
5/15/2019		<0.0002	<0.0002	<0.0002	
10/8/2019	<0.0002				
10/9/2019		<0.0002		<0.0002	
10/10/2019			<0.0002		<0.0002
10/16/2019	<0.0002				
4/6/2020	<0.0002		<0.0002	<0.0002	<0.0002
4/8/2020		<0.0002			
7/13/2020	<0.0002		<0.0002	<0.0002	<0.0002
7/14/2020		<0.0002			
2/22/2021	<0.0002				
2/23/2021		<0.0002			
2/24/2021			<0.0002	<0.0002	<0.0002
7/12/2021	<0.0002				
7/20/2021		<0.0002		<0.0002	<0.0002
7/21/2021			<0.0002		

Time Series

Constituent: Thallium (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	<0.0002	0.000205 (J)	<0.0002		
4/27/2016				<0.0002	<0.0002
6/20/2016	<0.0002		<0.0002		
6/21/2016				<0.0002	<0.0002
6/22/2016		<0.0002			
8/8/2016	<0.0002				
8/9/2016		<0.0002	<0.0002		
8/24/2016	<0.0002	<0.0002	<0.0002		
10/3/2016	<0.0002		<0.0002		
10/4/2016		<0.0002			
10/26/2016	<0.0002	0.000209 (J)	<0.0002		
11/21/2016	<0.0002	<0.0002	<0.0002		
1/17/2017	<0.0002				
1/18/2017		<0.0002	<0.0002		
3/22/2017	<0.0002	<0.0002	<0.0002		
4/18/2017	<0.0002	<0.0002	<0.0002		
5/31/2017	<0.0002	<0.0002	<0.0002		
10/12/2017				<0.0002	<0.0002
10/13/2017				<0.0002	<0.0002
10/14/2017				<0.0002	<0.0002
10/15/2017				<0.0002	<0.0002
10/16/2017				<0.0002	<0.0002
10/17/2017				<0.0002	<0.0002
2/13/2018	<0.0002	<0.0002	<0.0002		
2/14/2018				<0.0002	<0.0002
5/22/2018	<0.0002				
5/23/2018			<0.0002	<0.0002	<0.0002
5/24/2018		<0.0002			
6/12/2018	<0.0002	<0.0002	<0.0002		
10/17/2018	<0.0002	<0.0002	<0.0002		
11/19/2018	<0.0002	0.000226 (J)	<0.0002		
11/20/2018				<0.0002	<0.0002
4/10/2019	<0.0002	<0.0002	<0.0002		
5/14/2019	<0.0002	<0.0002	<0.0002		
5/15/2019				<0.0002	<0.0002
10/8/2019	<0.0002	<0.0002		<0.0002	
10/9/2019					<0.0002
10/10/2019			<0.0002		
10/16/2019	<0.0002	<0.0002	<0.0002		
4/6/2020	<0.0002	<0.0002	<0.0002		
4/8/2020				<0.0002	<0.0002
7/13/2020	<0.0002	<0.0002			
7/14/2020			<0.0002	<0.0002	
7/15/2020					<0.0002
2/22/2021	<0.0002	<0.0002	<0.0002		
2/23/2021				<0.0002	<0.0002
7/12/2021	<0.0002	<0.0002	<0.0002		
7/20/2021				<0.0002	<0.0002

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1 (bg)	MW-10	MW-11	MW-12	MW-12V
4/26/2016	2080		2800		
4/27/2016		1940			
4/28/2016				3730	
6/20/2016	2060				
6/22/2016			2550	2760	
6/23/2016		1680			
8/8/2016	2070				
8/9/2016			2860		
8/10/2016		1660		3710	
8/24/2016	2040				
10/3/2016	2110				
10/4/2016			2800		
10/5/2016		1640		3580	
10/26/2016	2000				
11/21/2016	2070	1390	2920		
11/22/2016				3400	
1/17/2017	1930	1300	2750		
1/18/2017				3360	
3/21/2017		1170	2750	3320	
3/22/2017	2060				
4/18/2017	2140				
5/30/2017	2240		2890		
5/31/2017		1210		3440	
8/23/2017	2160	1160	2760	3250	
5/22/2018	2380		2610		
5/24/2018		1100		3300	
6/12/2018	2400				
10/17/2018	2220				
11/19/2018	2360	1220		3400	
11/20/2018			2480		
3/12/2019					2440
4/10/2019	2630				
5/14/2019	2340				
5/15/2019		1230	2560	3890	
10/8/2019	2330				
10/9/2019		1120		4090	
10/10/2019			2460		2360
10/16/2019	3650 (o)				
4/6/2020	2240		2430	4060	2310
4/8/2020		1120			
7/13/2020	2240		2400	4460	2240
7/14/2020		1270			
2/22/2021	2230				
2/23/2021		1110			
2/24/2021			2370	3810	2240
7/12/2021	2210				
7/20/2021		1080		3680	2190
7/21/2021			2210		

Time Series

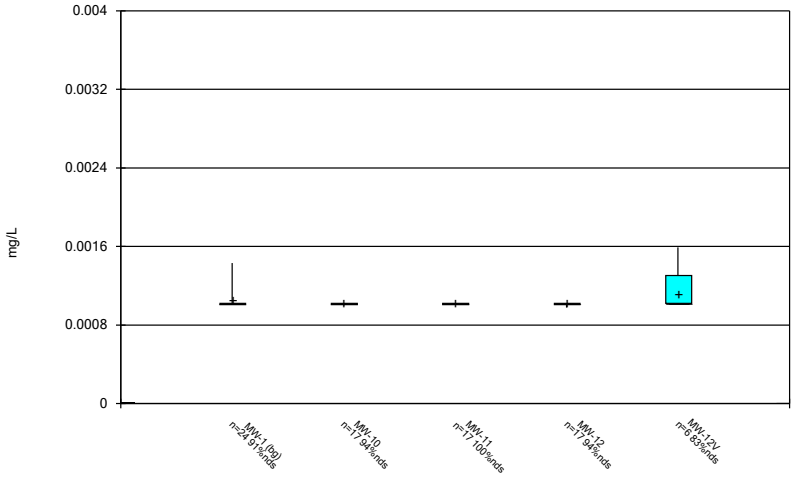
Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/2/2021 9:42 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-7	MW-8
4/25/2016	1260	2720	3300		
4/27/2016				1640	2480
6/20/2016	1620		3870		
6/21/2016				2460	2360
6/22/2016		3250			
8/8/2016	1740				
8/9/2016		3050	4140		
8/24/2016	1720	3080	4190		
10/3/2016	1800		4190		
10/4/2016		2900			
10/26/2016	1800	2940	4400		
11/21/2016	1740	3090	4230		
1/17/2017	1960				
1/18/2017		4020	4120		
3/22/2017	1510	4180	3980		
4/18/2017	1580	4440	3880		
5/31/2017	1730	3970	4210		
8/23/2017	1550	4050	3990		
10/12/2017				2460	2530
10/13/2017				2420	2740
10/14/2017				2320	2630
10/15/2017				1150	2530
10/16/2017				2320	2740
10/17/2017				2360	2650
11/16/2017				2460	2650
5/22/2018	1500				
5/23/2018			3740	2390	2750
5/24/2018		3680			
6/12/2018	1550	3820	4080		
10/17/2018	1740	4730	4250		
11/19/2018	1990	4710	3920		
11/20/2018				2090	2520
4/10/2019	1250	3680	3280		
5/14/2019	1480	3580	3130		
5/15/2019				2310	2540
10/8/2019	1840	4720		2340	
10/9/2019					2590
10/10/2019			4000		
10/16/2019	1830	4210	4060		
4/6/2020	1440	2630	2820		
4/8/2020				2230	2450
7/13/2020	1540	3650			
7/14/2020			3310	2210	
7/15/2020					2460
2/22/2021	1620	4670	3190		
2/23/2021				2320	2550
7/12/2021	1390	3510	3000		
7/20/2021				2110	2420

FIGURE B.

Box & Whiskers Plot

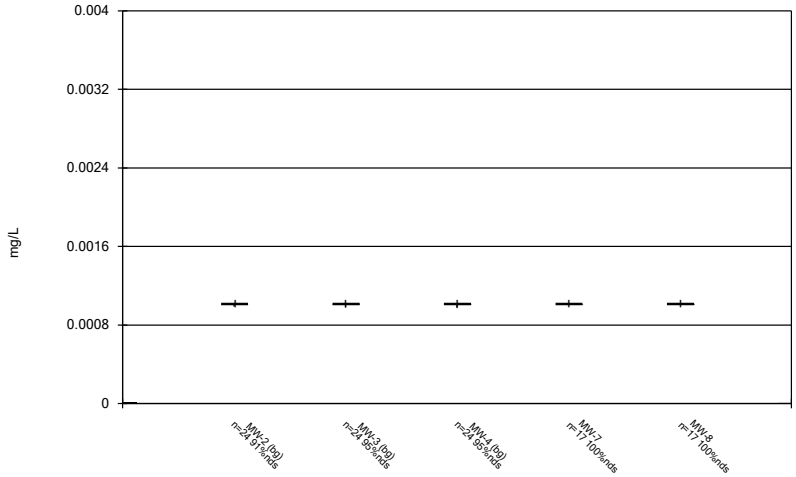


Constituent: Antimony Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

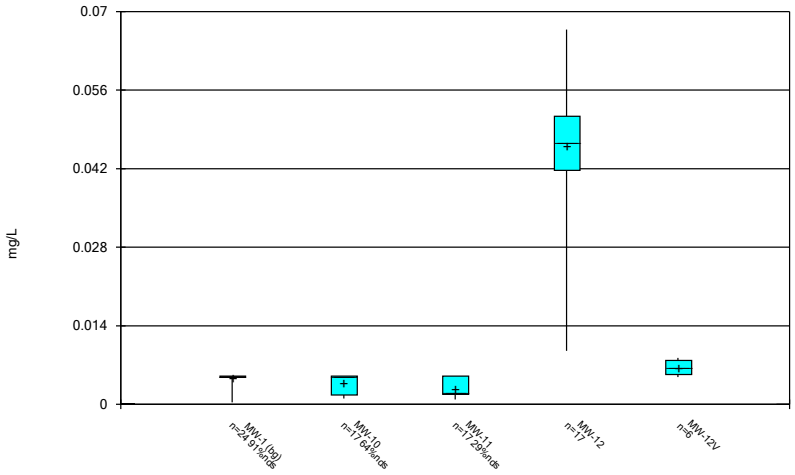


Constituent: Antimony Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

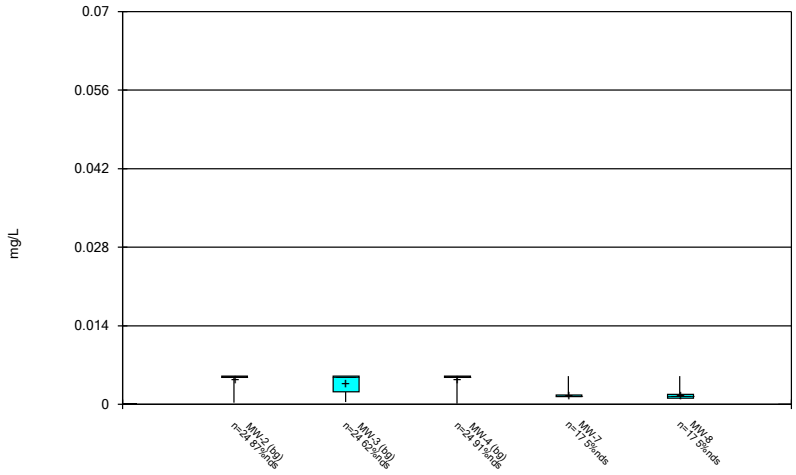


Constituent: Arsenic Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

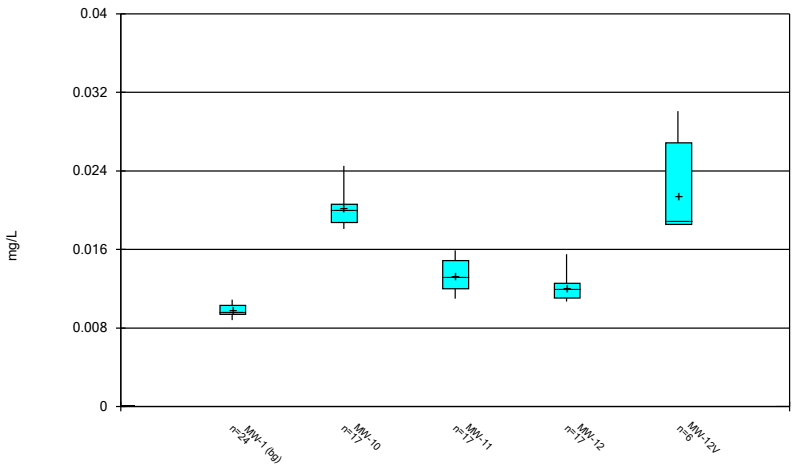
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Box & Whiskers Plot

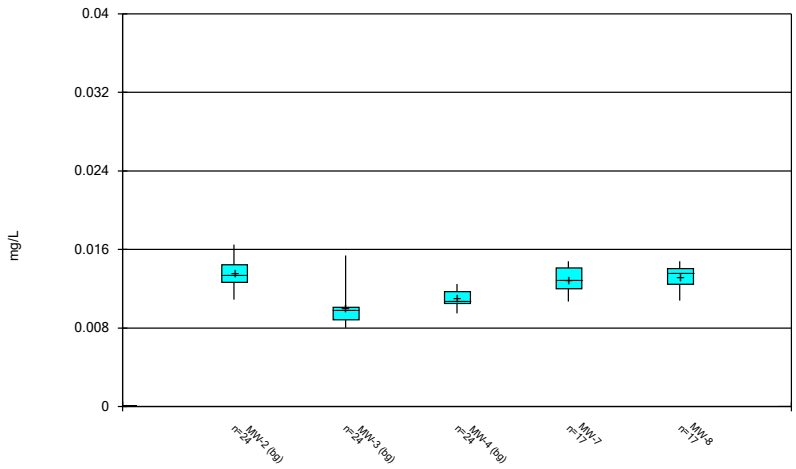


Constituent: Barium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

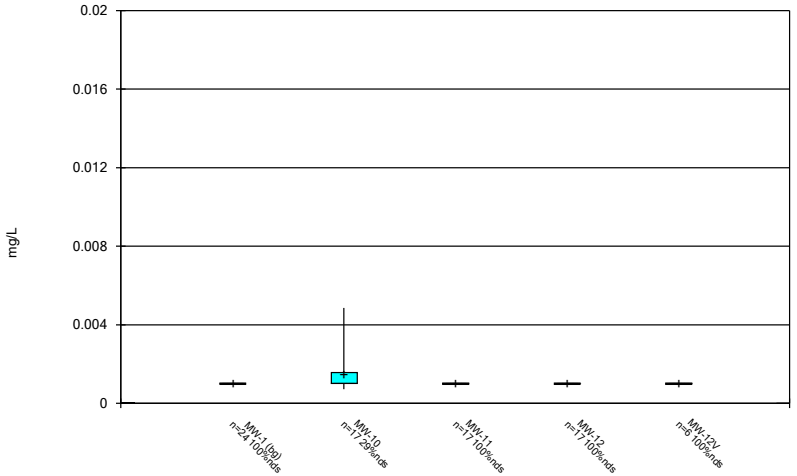


Constituent: Barium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

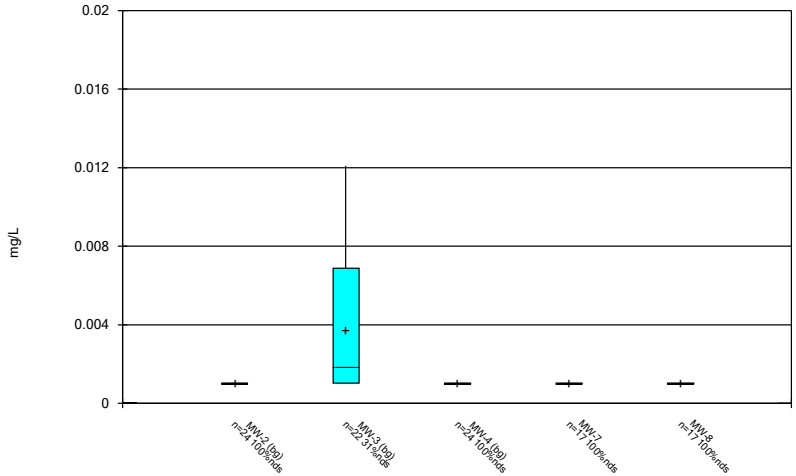


Constituent: Beryllium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

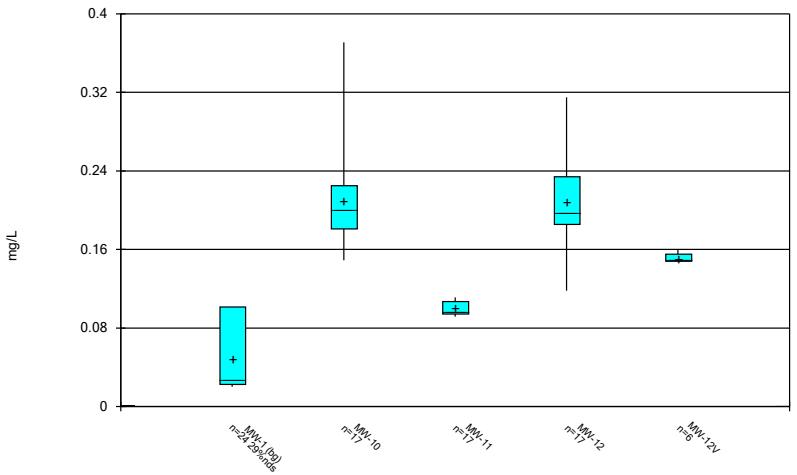
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Box & Whiskers Plot

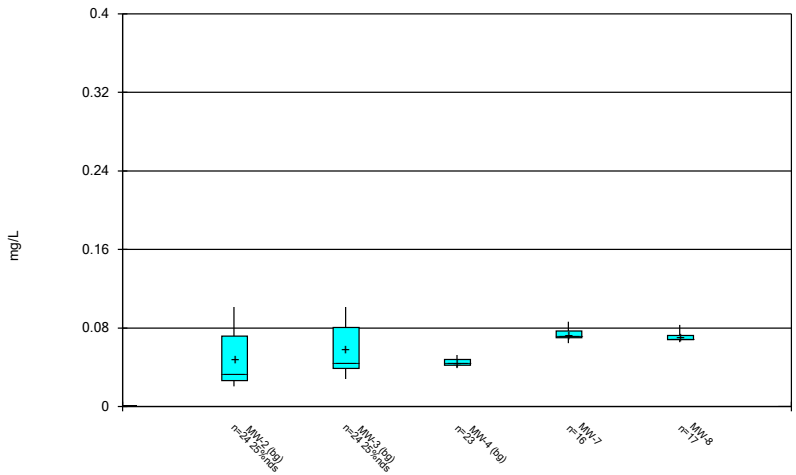


Constituent: Boron Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

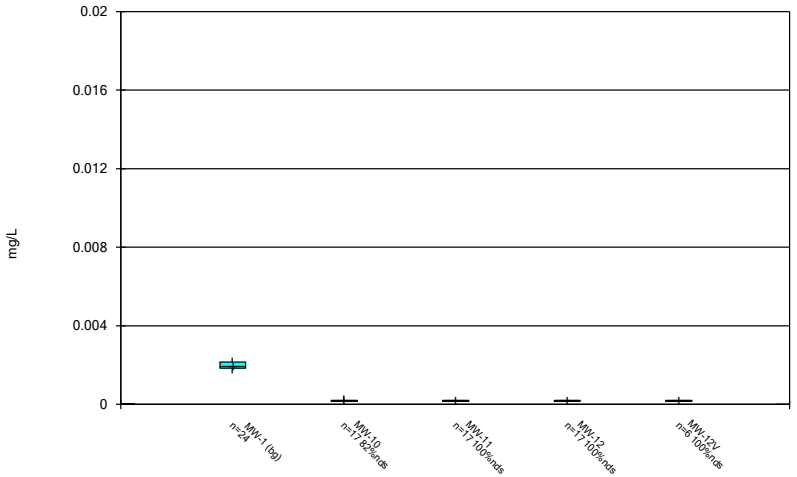


Constituent: Boron Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

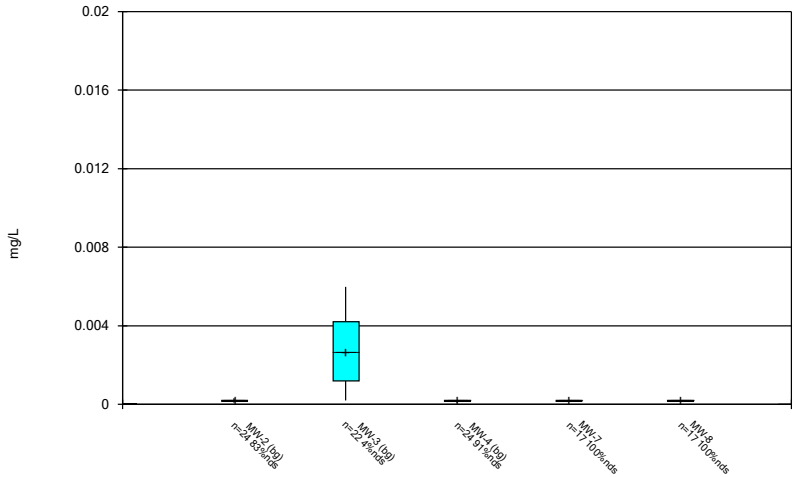


Constituent: Cadmium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

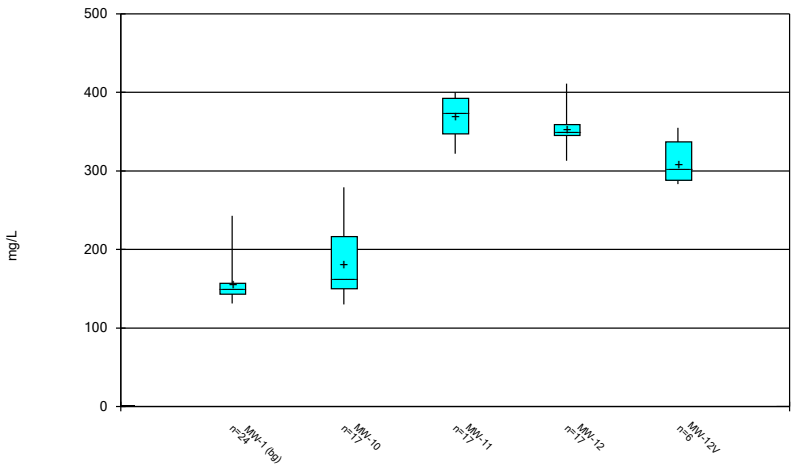
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Box & Whiskers Plot

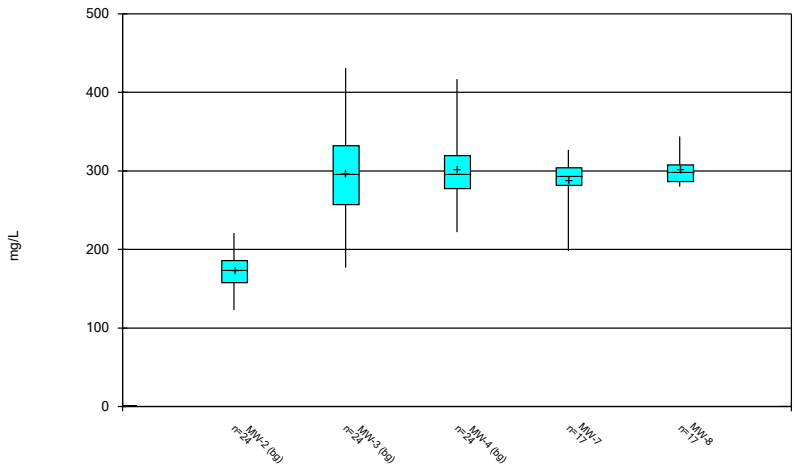


Constituent: Calcium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

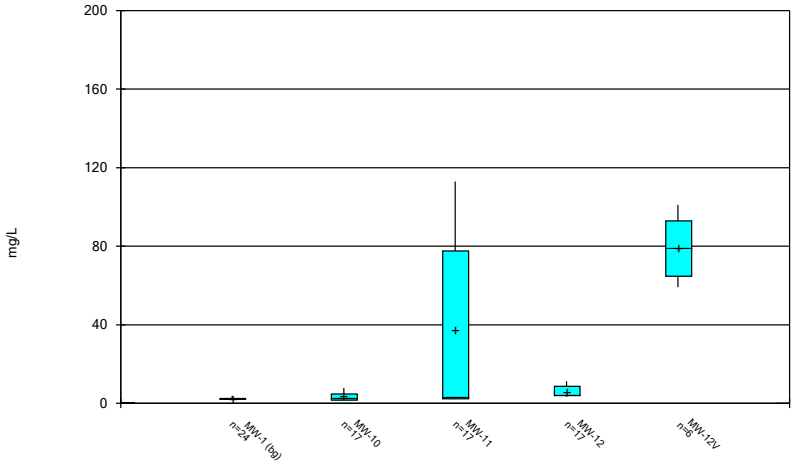


Constituent: Calcium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

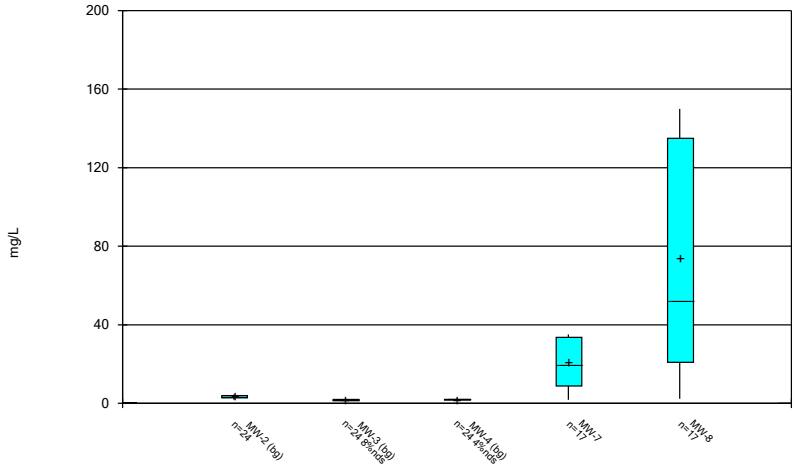


Constituent: Chloride Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

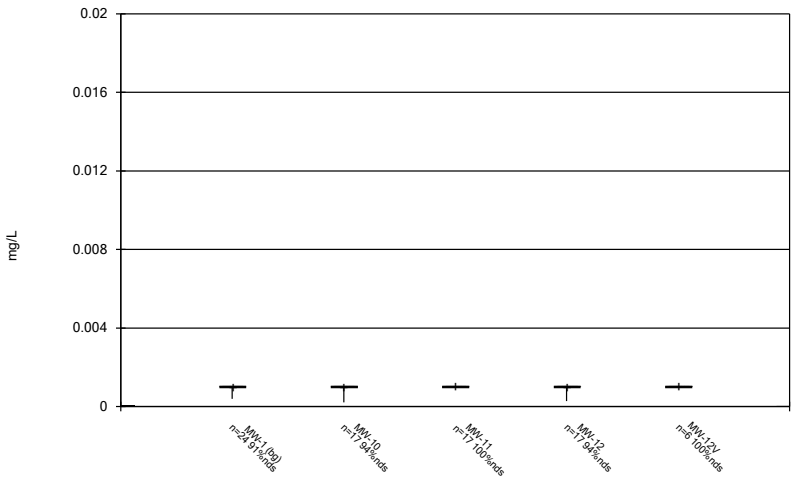
Box & Whiskers Plot



Constituent: Chloride Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Box & Whiskers Plot

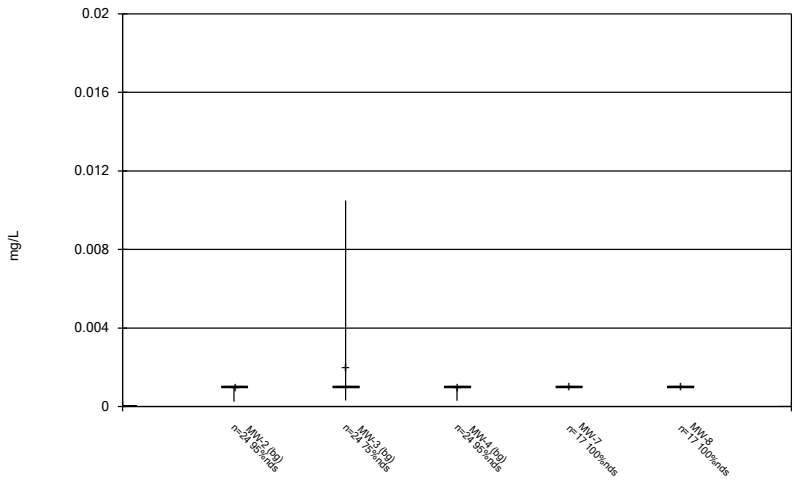


Constituent: Chromium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

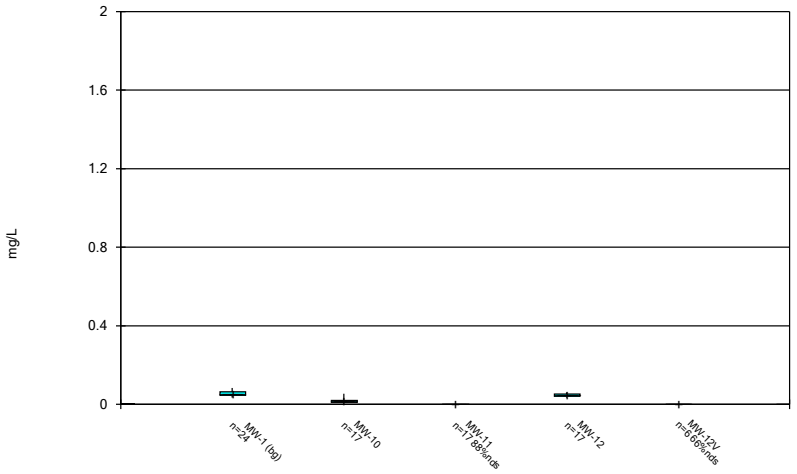


Constituent: Chromium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

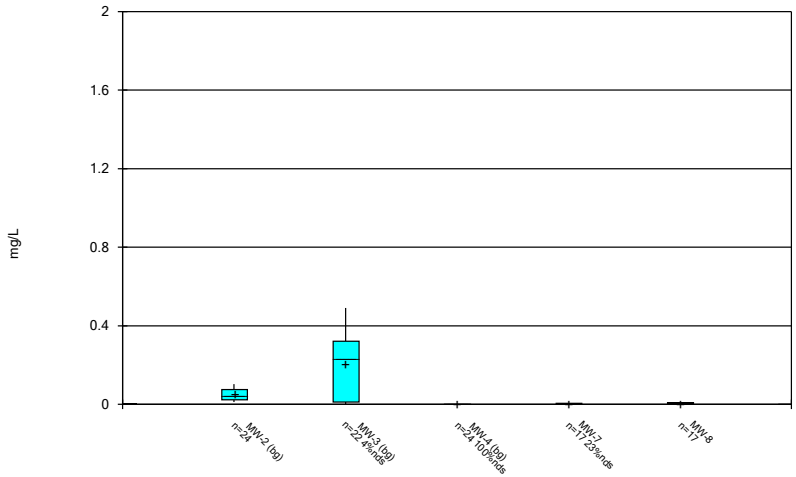


Constituent: Cobalt Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

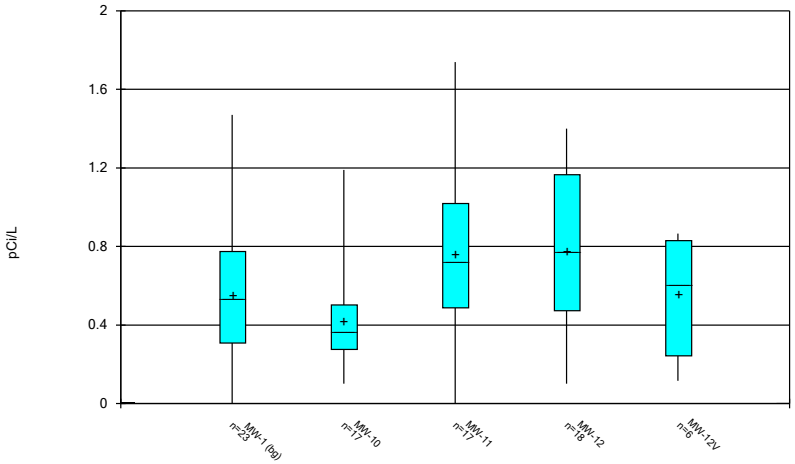
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Box & Whiskers Plot

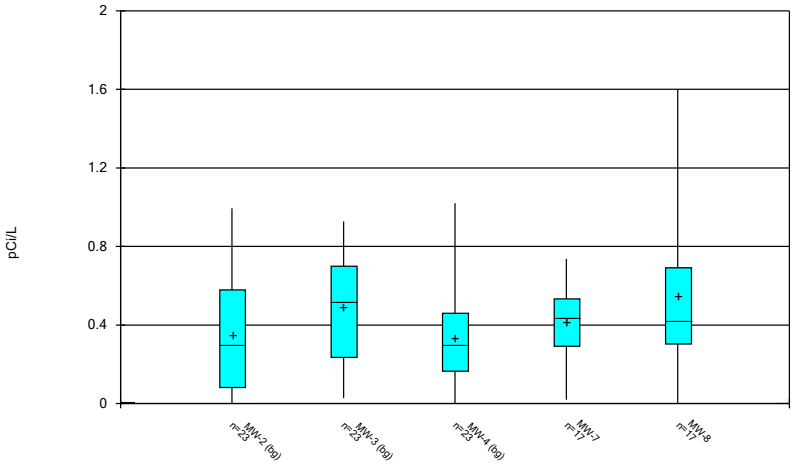


Constituent: Combined Radium 226 + 228 Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

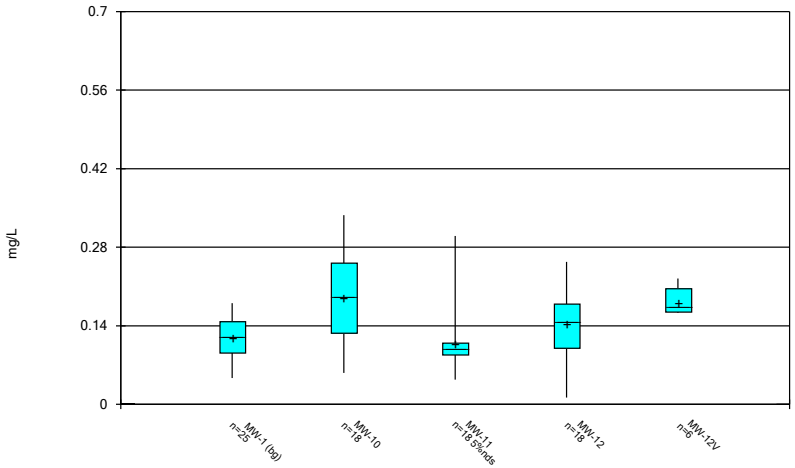


Constituent: Combined Radium 226 + 228 Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

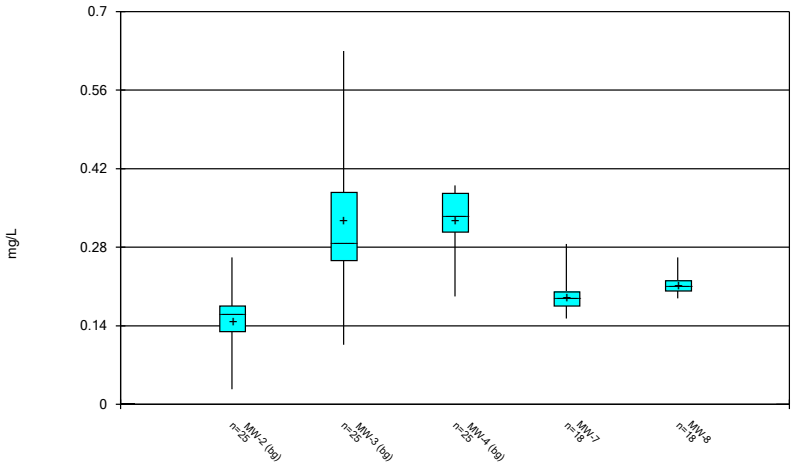


Constituent: Fluoride Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

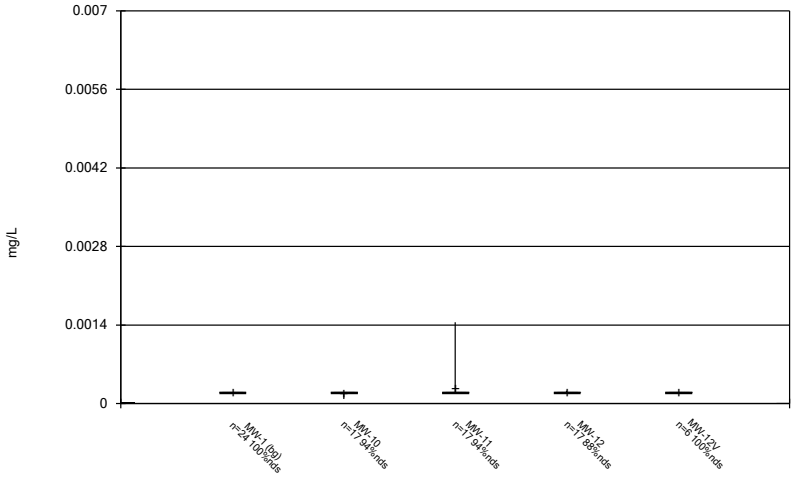
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Box & Whiskers Plot

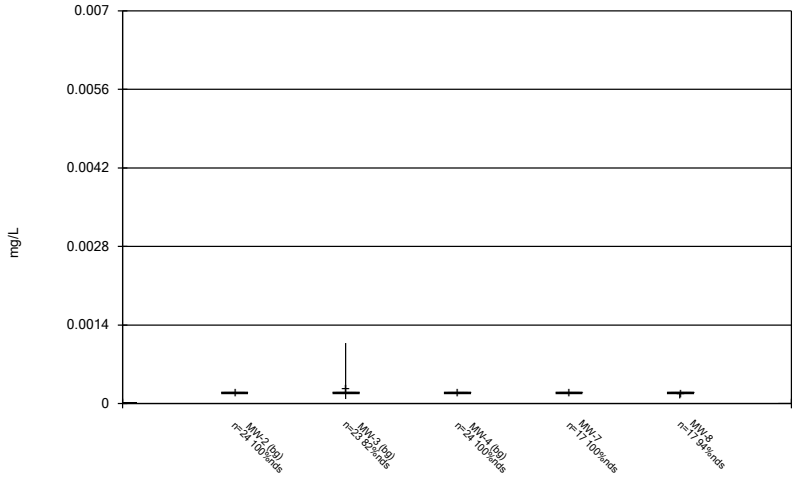


Constituent: Lead Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

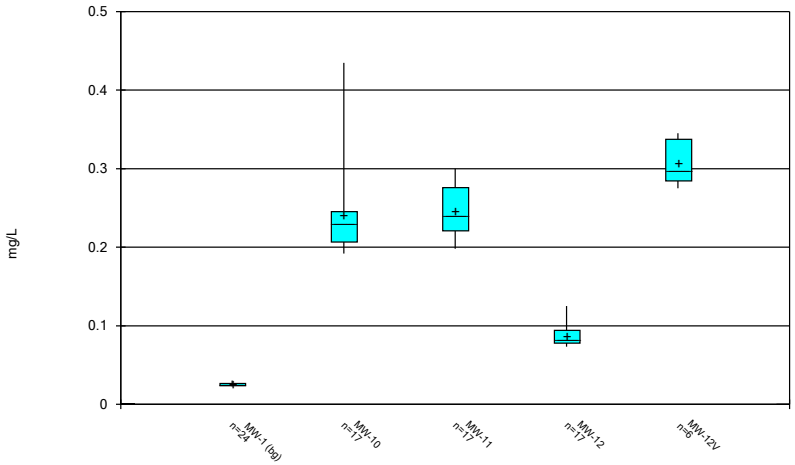


Constituent: Lead Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

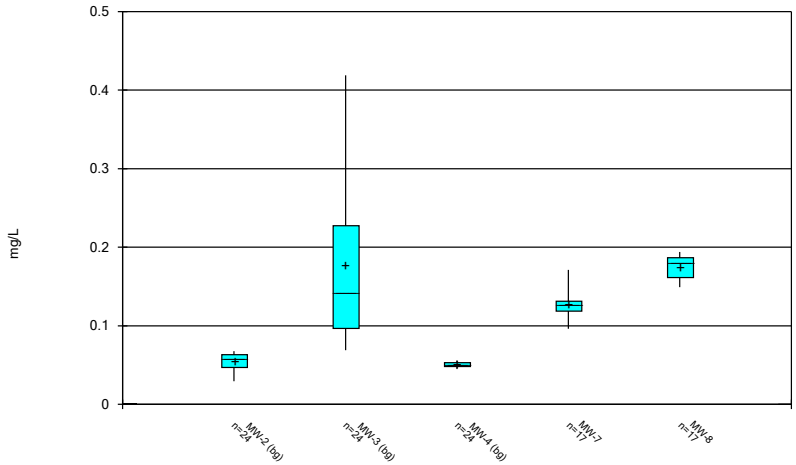


Constituent: Lithium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

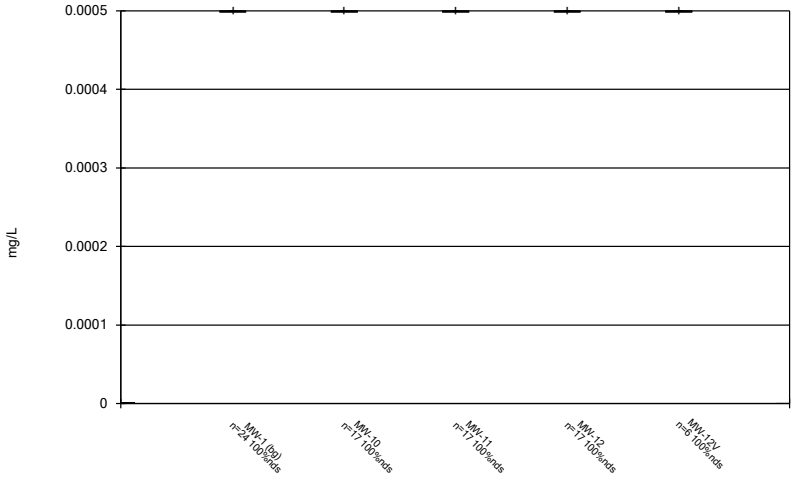
Box & Whiskers Plot



Constituent: Lithium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Box & Whiskers Plot

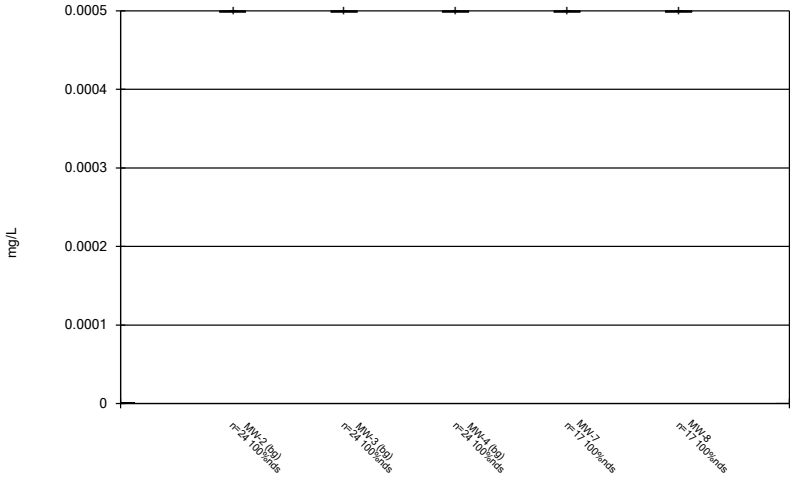


Constituent: Mercury Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

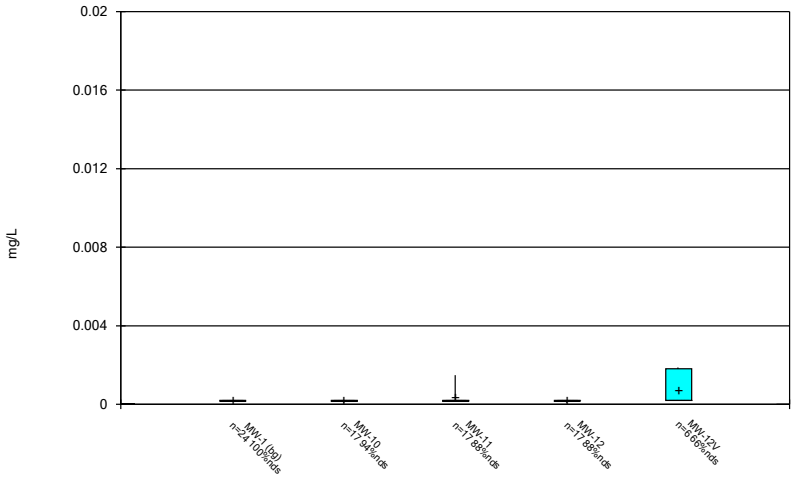


Constituent: Mercury Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

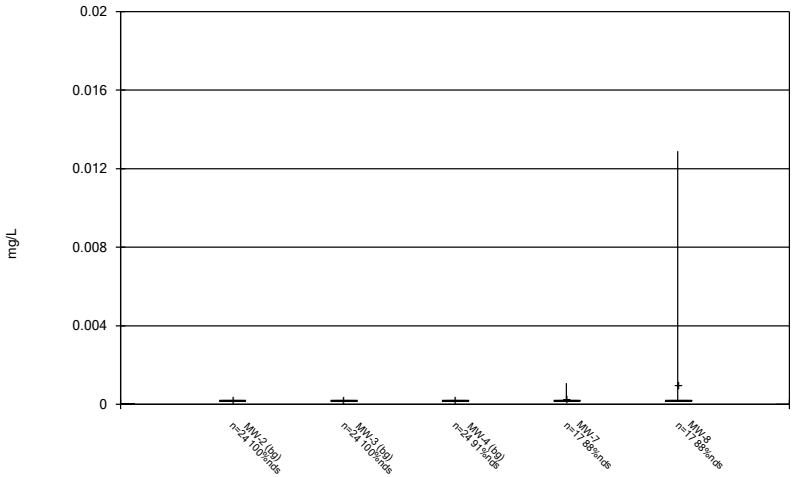


Constituent: Molybdenum Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

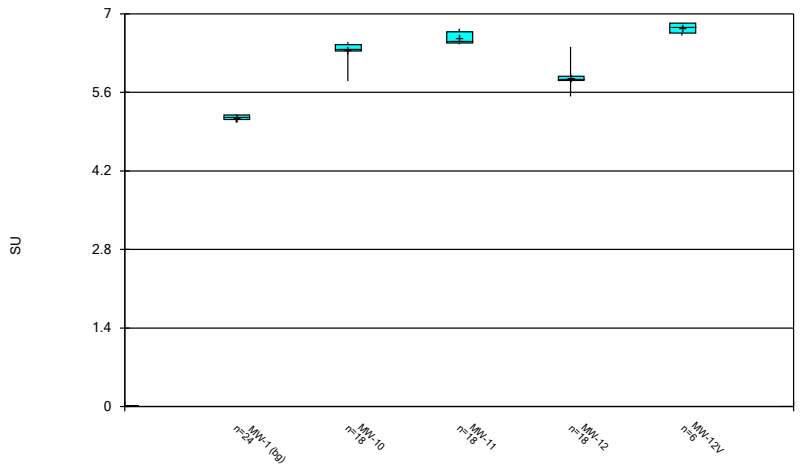
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Box & Whiskers Plot

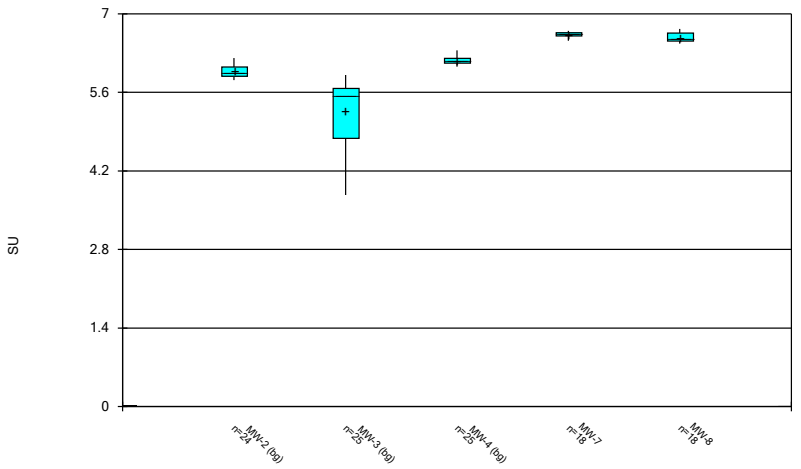


Constituent: pH Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

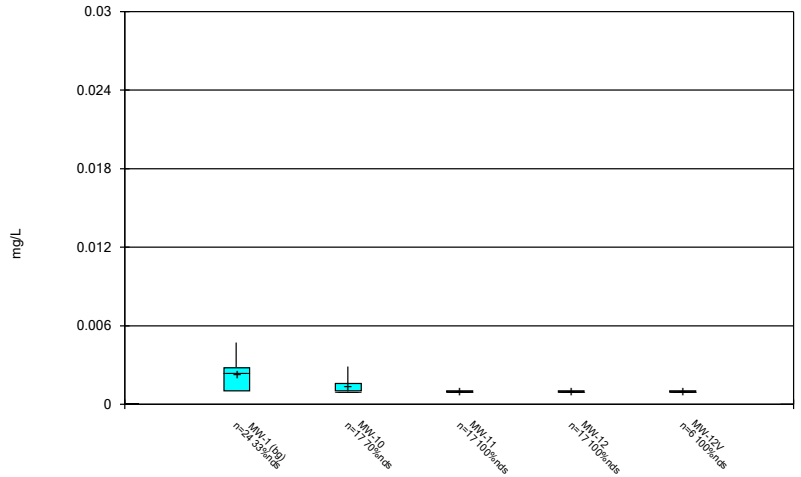


Constituent: pH Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

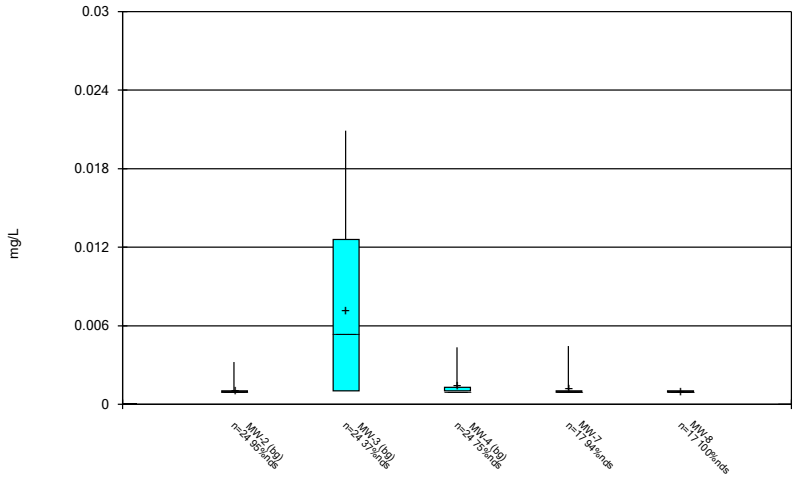


Constituent: Selenium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

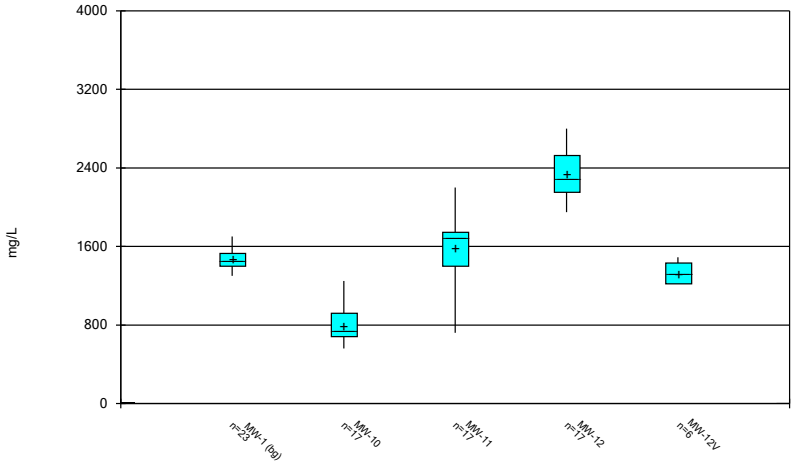
Box & Whiskers Plot



Constituent: Selenium Analysis Run 12/2/2021 9:43 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Box & Whiskers Plot

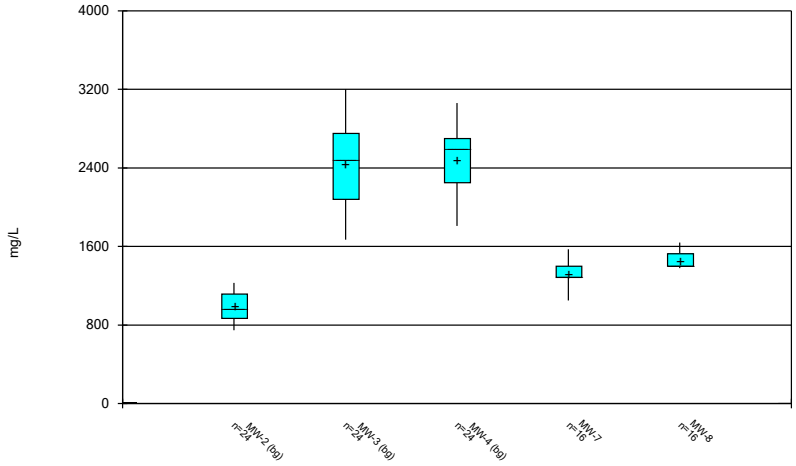


Constituent: Sulfate Analysis Run 12/2/2021 9:44 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

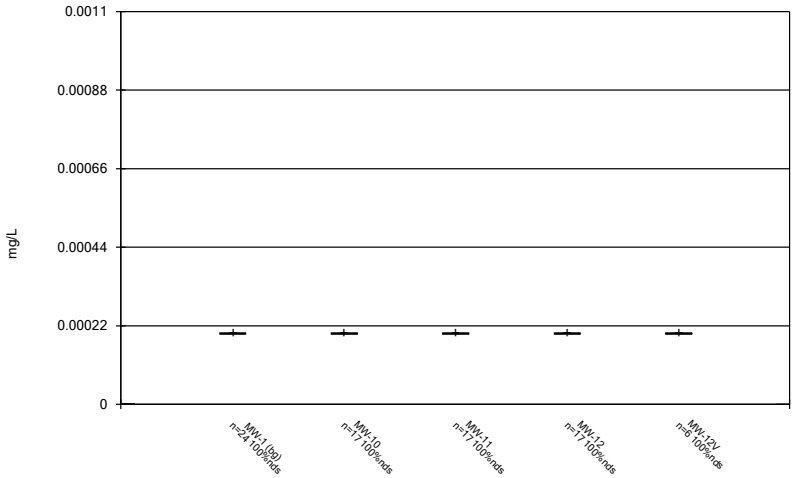


Constituent: Sulfate Analysis Run 12/2/2021 9:44 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot

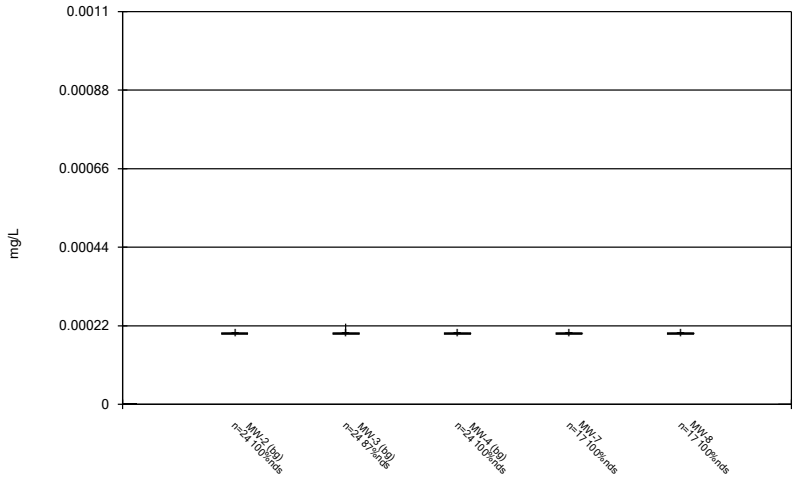


Constituent: Thallium Analysis Run 12/2/2021 9:44 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

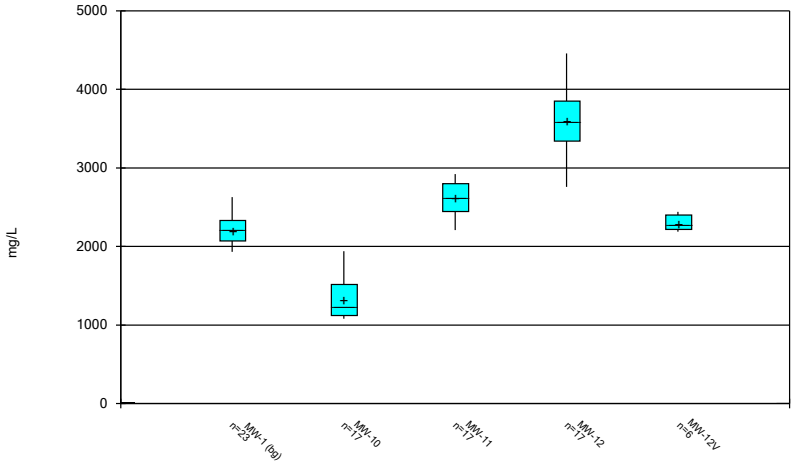
Box & Whiskers Plot



Constituent: Thallium Analysis Run 12/2/2021 9:44 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Box & Whiskers Plot

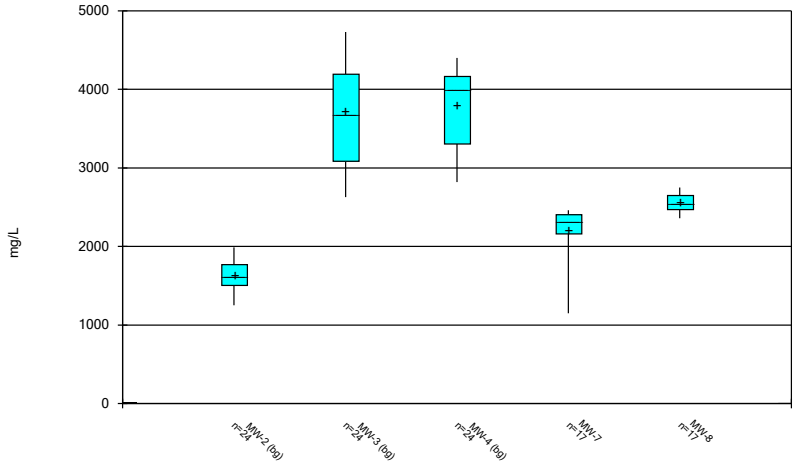


Constituent: Total Dissolved Solids Analysis Run 12/2/2021 9:44 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 12/2/2021 9:44 AM

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

FIGURE C.

Outlier Summary

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:16 AM

	MW-3 Beryllium (mg/L)	MW-4 Boron (mg/L)	MW-7 Boron (mg/L)	MW-3 Cadmium (mg/L)	MW-3 Cobalt (mg/L)	MW-3 Lead (mg/L)	MW-1 Sulfate (mg/L)	MW-7 Sulfate (mg/L)	MW-8 Sulfate (mg/L)	MW-1 Total Dissolved Solids (mg/L)
4/25/2016				0.0121 (O)						
4/27/2016			0.253 (o)							
1/18/2017	0.0169 (O)									
5/22/2018							2100 (o)			
5/23/2018								1900 (o)	2100 (o)	
11/19/2018	0.0185 (O)					0.00692 (o)				
5/14/2019		<0.203 (o)								
10/8/2019					1.07 (o)					
10/16/2019					0.848 (o)					3650 (o)
7/13/2020				0.00885 (O)						

FIGURE D.

Welch's t-test/Mann-Whitney - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 11/10/2021, 11:00 PM

Constituent	Well	Calc.	0.01	Method
Fluoride (mg/L)	**MW-12**	**2.662**	**Yes**	**Mann-W**
Fluoride (mg/L)	**MW-8**	**-2.771**	**Yes**	**Mann-W**
Sulfate (mg/L)	**MW-11**	**-2.917**	**Yes**	**Mann-W**
Total Dissolved Solids (mg/L)	**MW-11**	**-2.975**	**Yes**	**Mann-W**
Total Dissolved Solids (mg/L)	**MW-12**	**2.731**	**Yes**	**Mann-W**

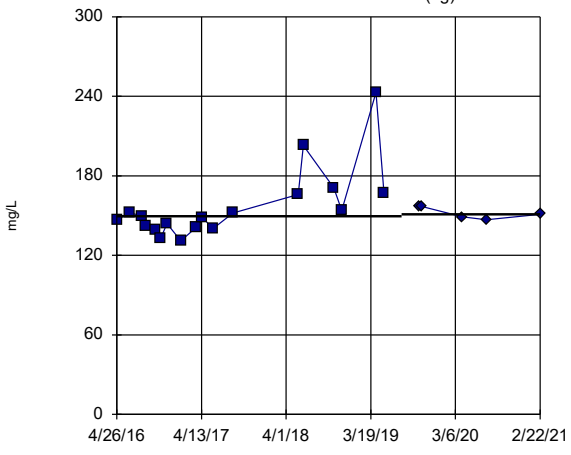
Welch's t-test/Mann-Whitney - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 11/10/2021, 11:00 PM

Constituent	Well	Calc.	0.01	Method
Calcium (mg/L)	MW-1 (bg)	0.485	No	Mann-W
Calcium (mg/L)	MW-10	-1.031	No	Mann-W
Calcium (mg/L)	MW-11	-2.488	No	Mann-W
Calcium (mg/L)	MW-12	0.9745	No	Mann-W
Calcium (mg/L)	MW-2 (bg)	0.03731	No	Mann-W
Calcium (mg/L)	MW-3 (bg)	0.1119	No	Mann-W
Calcium (mg/L)	MW-4 (bg)	-1.23	No	Mann-W
Calcium (mg/L)	MW-7	-1.887	No	Mann-W
Calcium (mg/L)	MW-8	-0.6675	No	Mann-W
Fluoride (mg/L)	MW-1 (bg)	-2.562	No	Mann-W
Fluoride (mg/L)	MW-10	0.5098	No	Mann-W
Fluoride (mg/L)	MW-11	1.31	No	Mann-W
Fluoride (mg/L)	**MW-12**	**2.662**	**Yes**	**Mann-W**
Fluoride (mg/L)	MW-2 (bg)	0.7841	No	Mann-W
Fluoride (mg/L)	MW-3 (bg)	-2.56	No	Mann-W
Fluoride (mg/L)	MW-4 (bg)	-0.6406	No	Mann-W
Fluoride (mg/L)	MW-7	-0.05761	No	Mann-W
Fluoride (mg/L)	**MW-8**	**-2.771**	**Yes**	**Mann-W**
Sulfate (mg/L)	MW-1 (bg)	1.297	No	Mann-W
Sulfate (mg/L)	MW-10	-0.426	No	Mann-W
Sulfate (mg/L)	**MW-11**	**-2.917**	**Yes**	**Mann-W**
Sulfate (mg/L)	MW-12	1.761	No	Mann-W
Sulfate (mg/L)	MW-2 (bg)	-0.485	No	Mann-W
Sulfate (mg/L)	MW-3 (bg)	0.7086	No	Mann-W
Sulfate (mg/L)	MW-4 (bg)	-1.308	No	Mann-W
Sulfate (mg/L)	MW-7	0.5988	No	Mann-W
Sulfate (mg/L)	MW-8	0	No	Mann-W
Total Dissolved Solids (mg/L)	MW-1 (bg)	1.151	No	Mann-W
Total Dissolved Solids (mg/L)	MW-10	-1.881	No	Mann-W
Total Dissolved Solids (mg/L)	**MW-11**	**-2.975**	**Yes**	**Mann-W**
Total Dissolved Solids (mg/L)	**MW-12**	**2.731**	**Yes**	**Mann-W**
Total Dissolved Solids (mg/L)	MW-2 (bg)	0.1493	No	Mann-W
Total Dissolved Solids (mg/L)	MW-3 (bg)	0.7828	No	Mann-W
Total Dissolved Solids (mg/L)	MW-4 (bg)	-1.752	No	Mann-W
Total Dissolved Solids (mg/L)	MW-7	-0.9149	No	Mann-W
Total Dissolved Solids (mg/L)	MW-8	-1.276	No	Mann-W

Mann-Whitney (Wilcoxon Rank Sum)

MW-1 (bg)



MW-1 background

MW-1 compliance

background median = 149.5

compliance median = 151

Z = 0.485 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

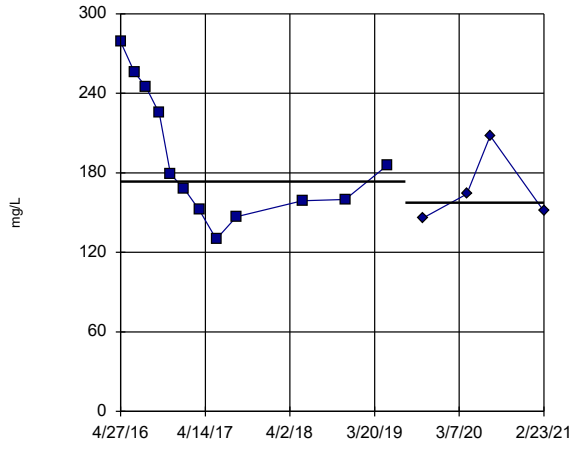
Constituent: Calcium Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-10



MW-10 background

MW-10 compliance

background median = 173.5

compliance median = 157.5

Z = -1.031 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

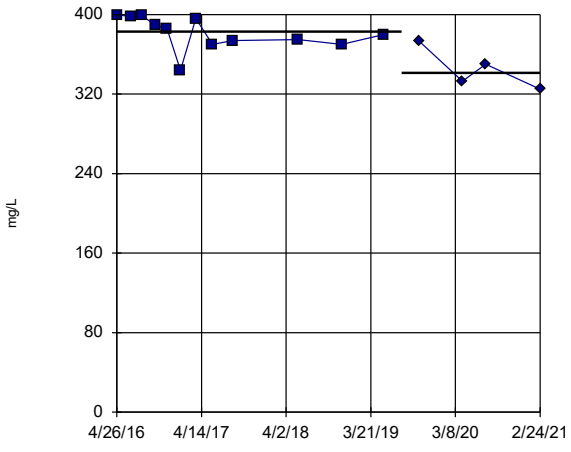
Constituent: Calcium Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-11



MW-11 background

MW-11 compliance

background median = 383

compliance median = 341.5

Z = -2.488 (two-tail)

Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	Yes
0.02	2.326	Yes
0.01	2.576	No

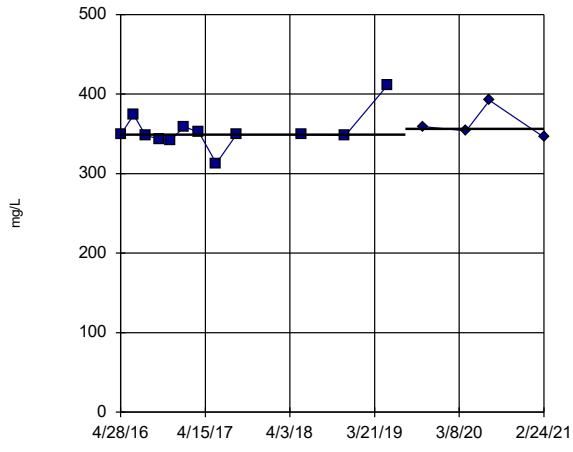
Constituent: Calcium Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-12



MW-12 background

MW-12 compliance

background median = 349

compliance median = 356.5

Z = 0.9745 (two-tail)

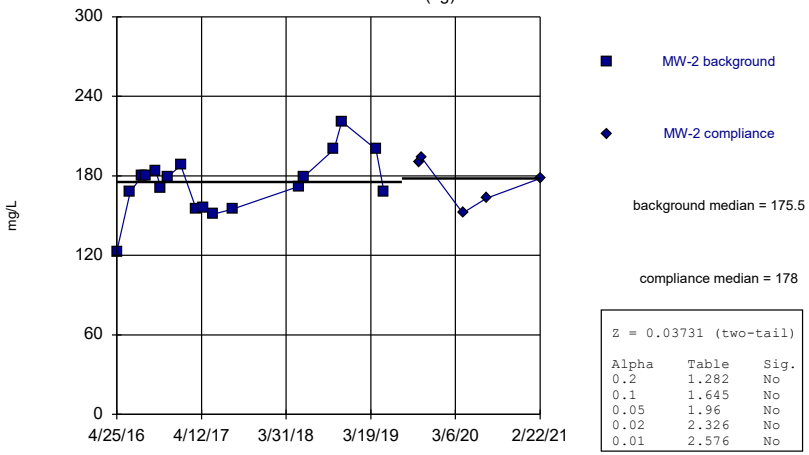
Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Calcium Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-2 (bg)



background median = 175.5

compliance median = 178

Z = 0.03731 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

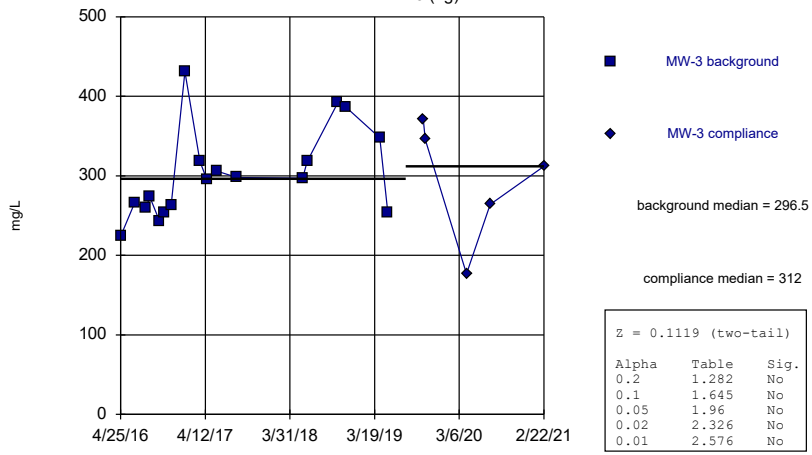
Constituent: Calcium Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-3 (bg)



background median = 296.5

compliance median = 312

Z = 0.1119 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

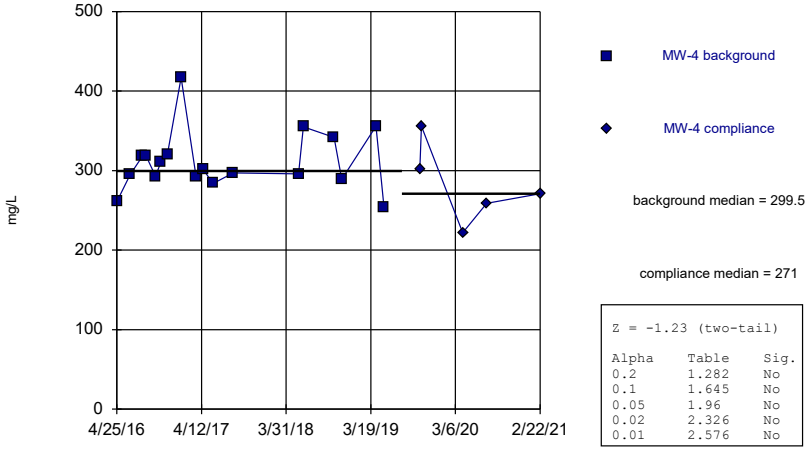
Constituent: Calcium Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-4 (bg)



background median = 299.5

compliance median = 271

Z = -1.23 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

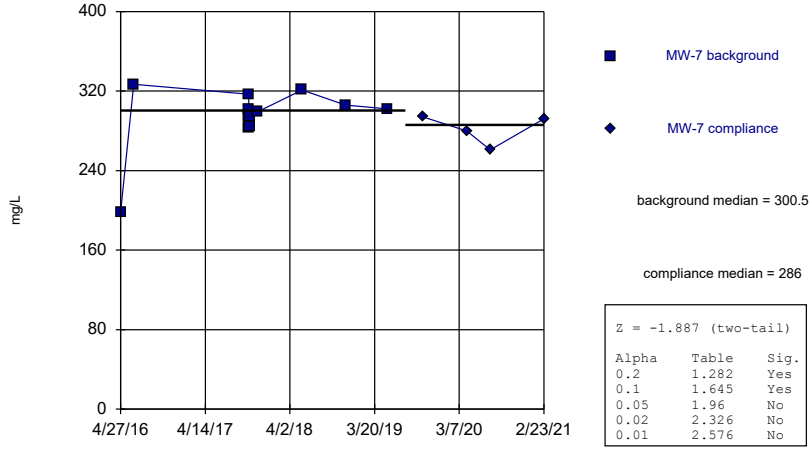
Constituent: Calcium Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-7



background median = 300.5

compliance median = 286

Z = -1.887 (two-tail)

Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

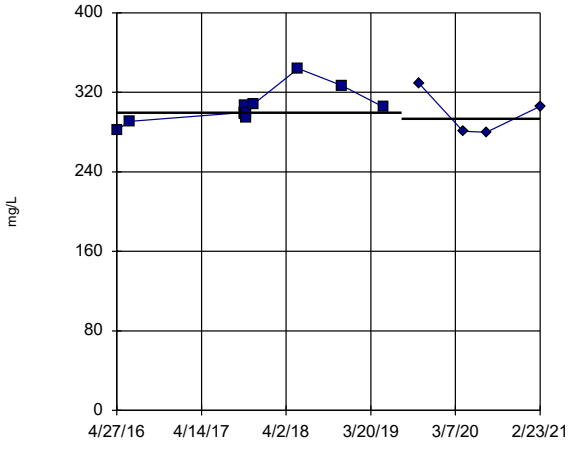
Constituent: Calcium Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-8



MW-8 background

MW-8 compliance

background median = 299.5

compliance median = 293.5

Z = -0.6675 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

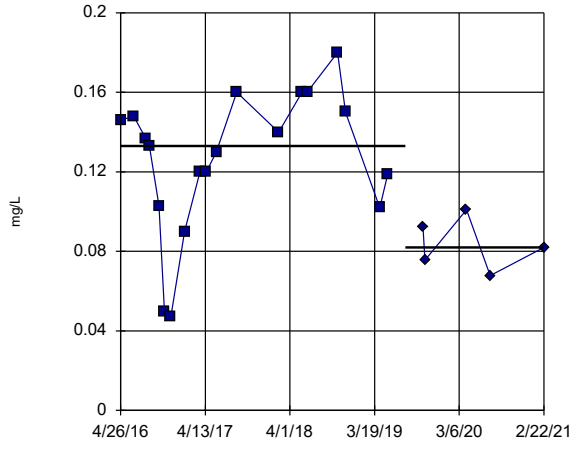
Constituent: Calcium Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-1 (bg)



MW-1 background

MW-1 compliance

background median = 0.133

compliance median = 0.082

Z = -2.562 (two-tail)

Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	Yes
0.02	2.326	Yes
0.01	2.576	No

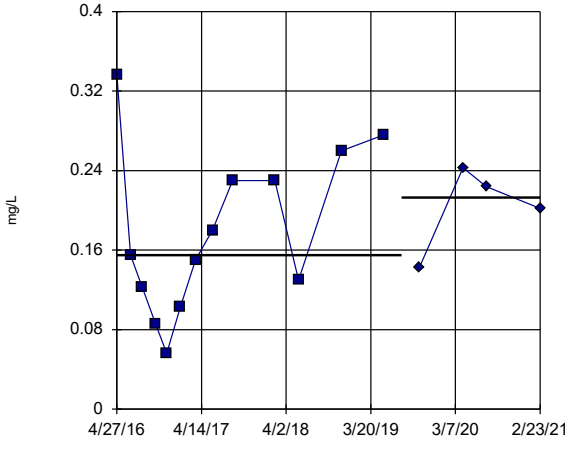
Constituent: Fluoride Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-10



MW-10 background

MW-10 compliance

background median = 0.155

compliance median = 0.213

Z = 0.5098 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Fluoride Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

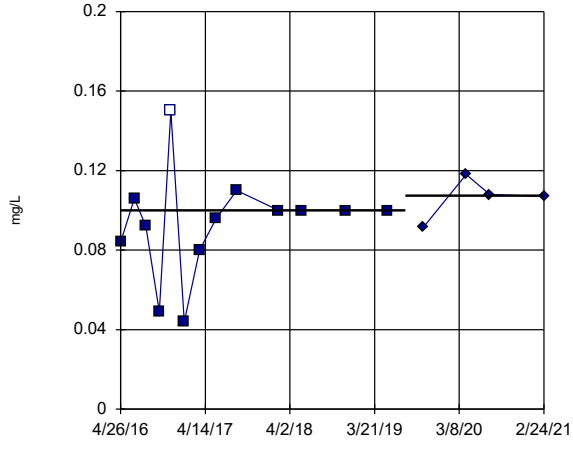
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-11



MW-11 background

MW-11 compliance

background median = 0.1

compliance median = 0.1075

Z = 1.31 (two-tail)

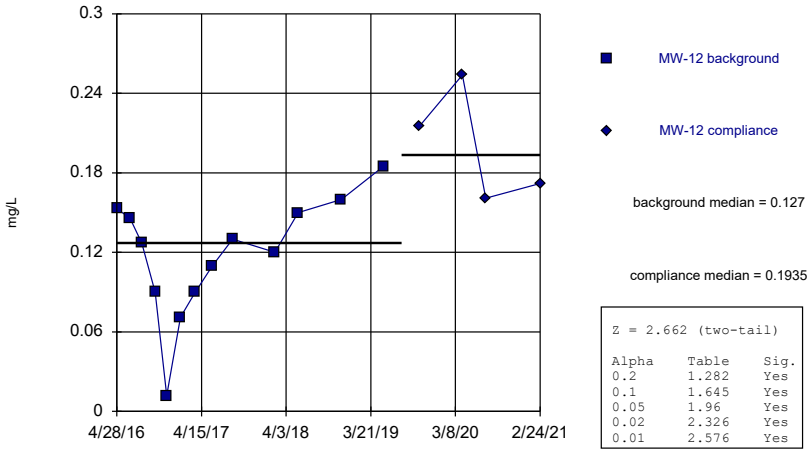
Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Fluoride Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-12



Z = 2.662 (two-tail)

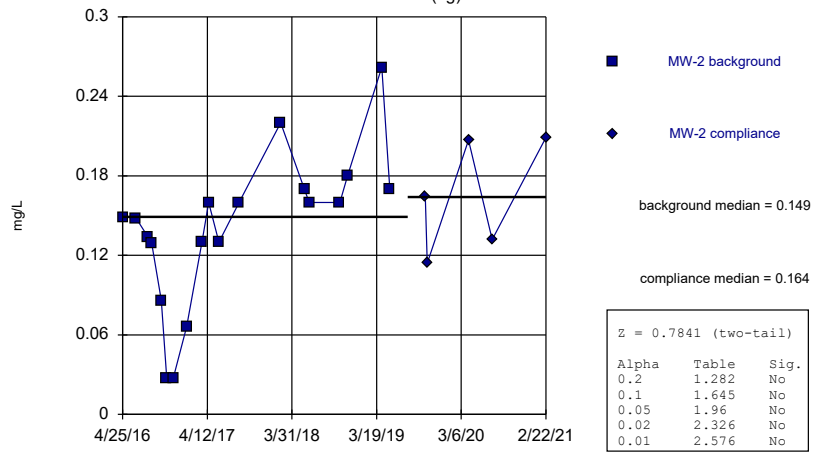
Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	Yes
0.02	2.326	Yes
0.01	2.576	Yes

Constituent: Fluoride Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-2 (bg)



Z = 0.7841 (two-tail)

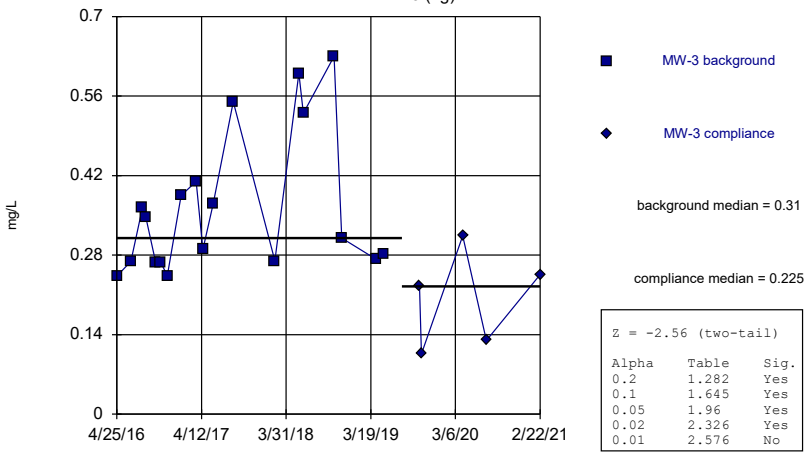
Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Fluoride Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-3 (bg)



Z = -2.56 (two-tail)

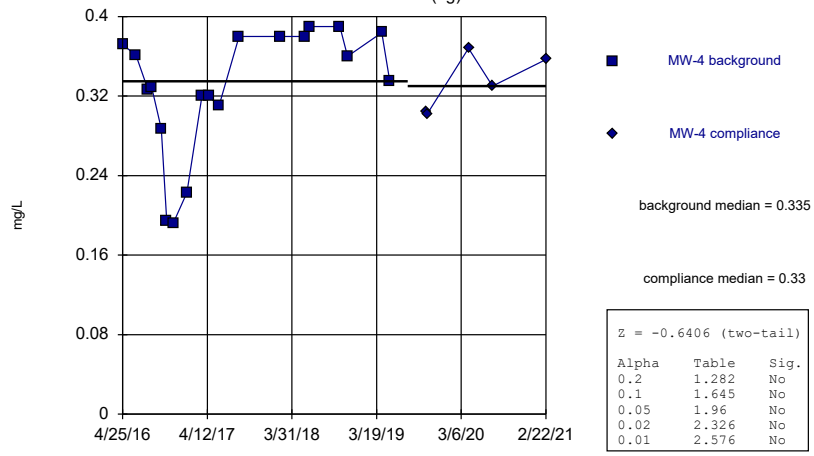
Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	Yes
0.02	2.326	Yes
0.01	2.576	No

Constituent: Fluoride Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-4 (bg)



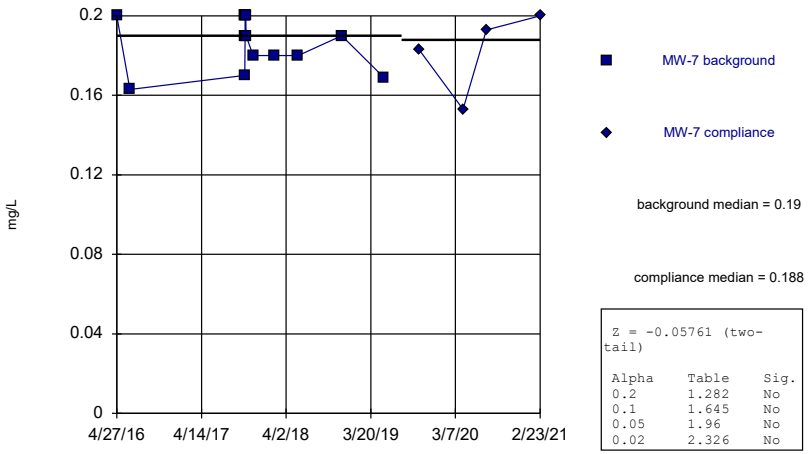
Z = -0.6406 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Fluoride Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-7



background median = 0.19

compliance median = 0.188

Z = -0.05761 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No

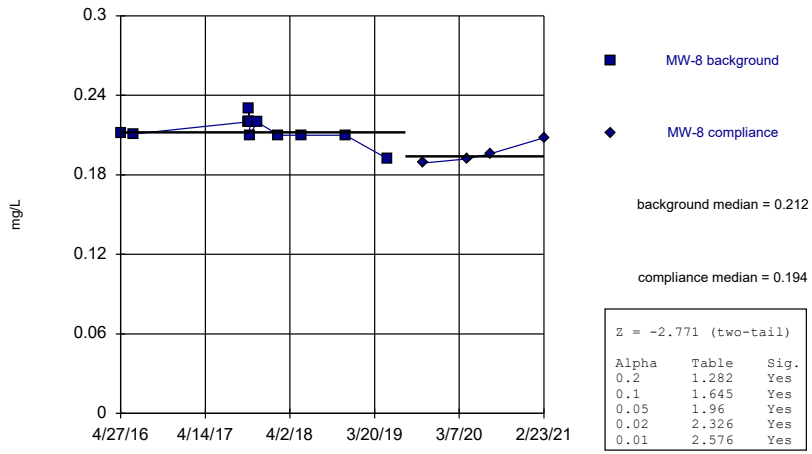
Constituent: Fluoride Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-8



background median = 0.212

compliance median = 0.194

Z = -2.771 (two-tail)

Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	Yes
0.02	2.326	Yes
0.01	2.576	Yes

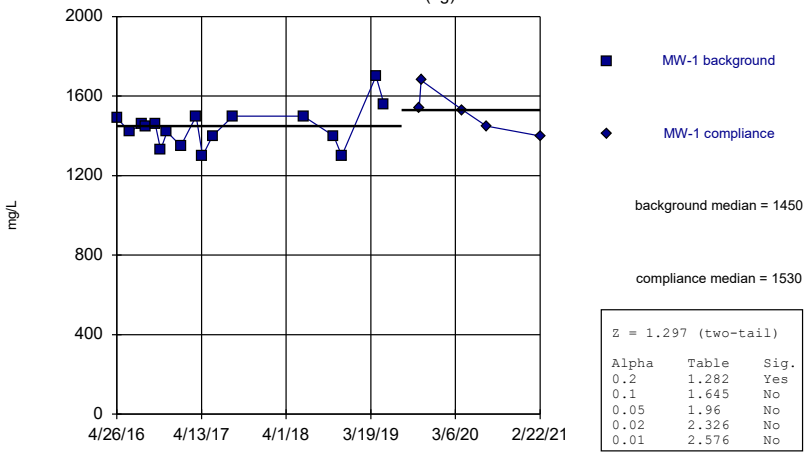
Constituent: Fluoride Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-1 (bg)



background median = 1450

compliance median = 1530

Z = 1.297 (two-tail)

Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

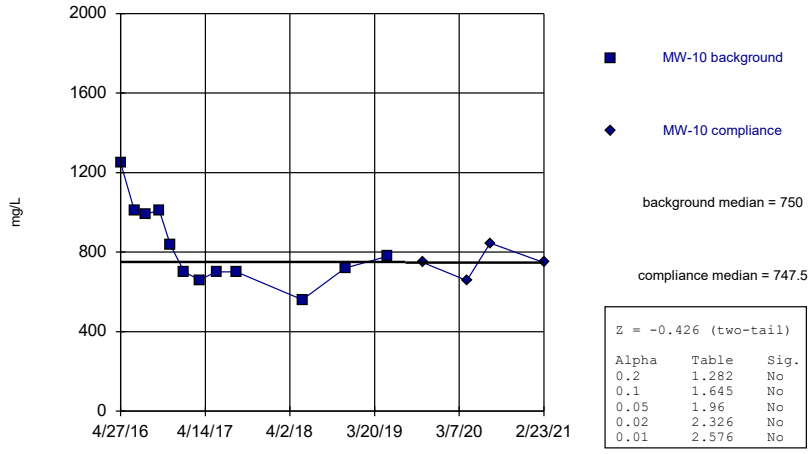
Constituent: Sulfate Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-10



background median = 750

compliance median = 747.5

Z = -0.426 (two-tail)

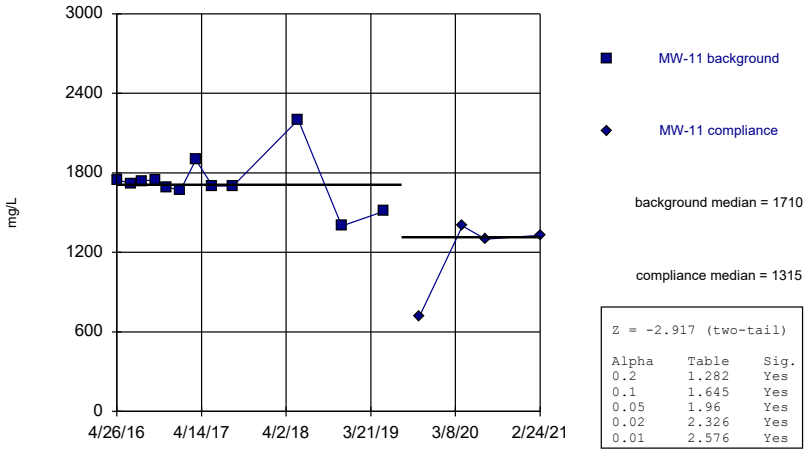
Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Sulfate Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-11



Z = -2.917 (two-tail)

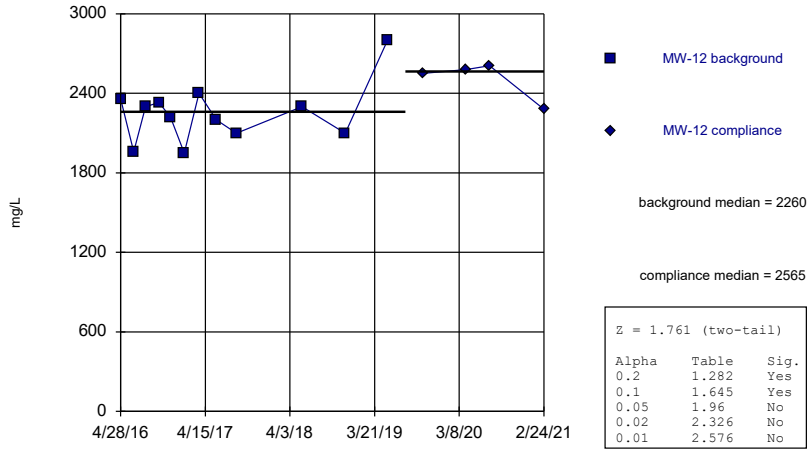
Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	Yes
0.02	2.326	Yes
0.01	2.576	Yes

Constituent: Sulfate Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-12



Z = 1.761 (two-tail)

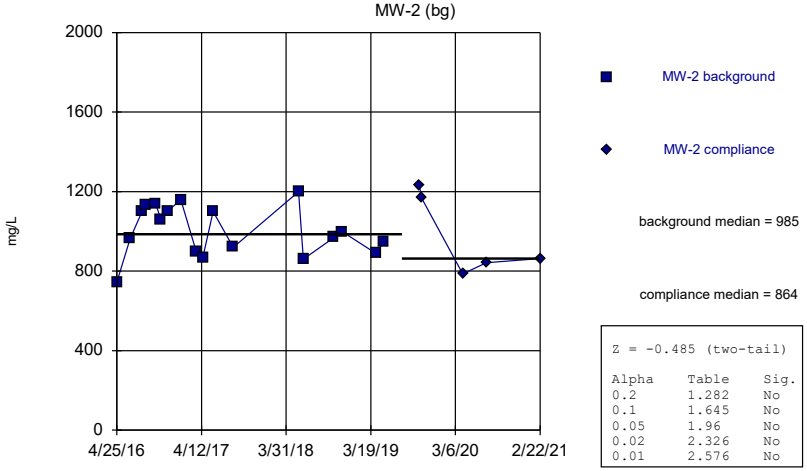
Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Sulfate Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-2 (bg)



Z = -0.485 (two-tail)

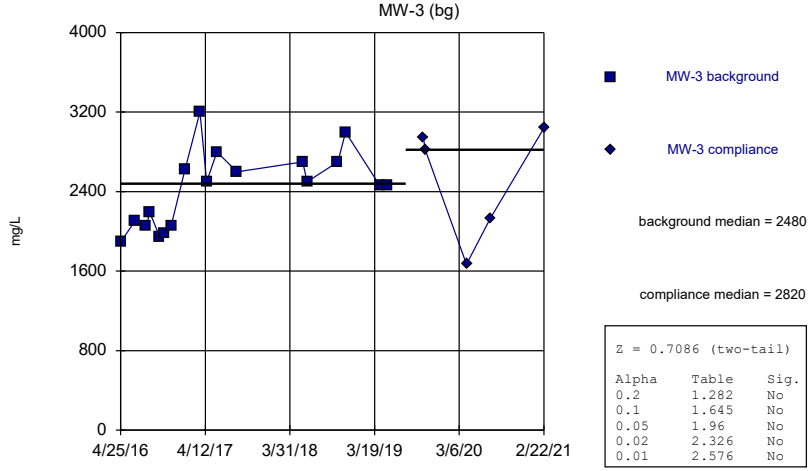
Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Sulfate Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-3 (bg)



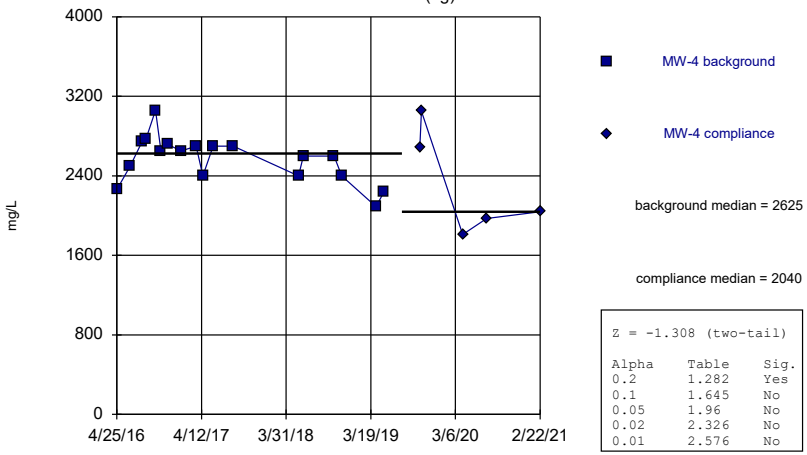
Z = 0.7086 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Sulfate Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-4 (bg)



background median = 2625

compliance median = 2040

Z = -1.308 (two-tail)

Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

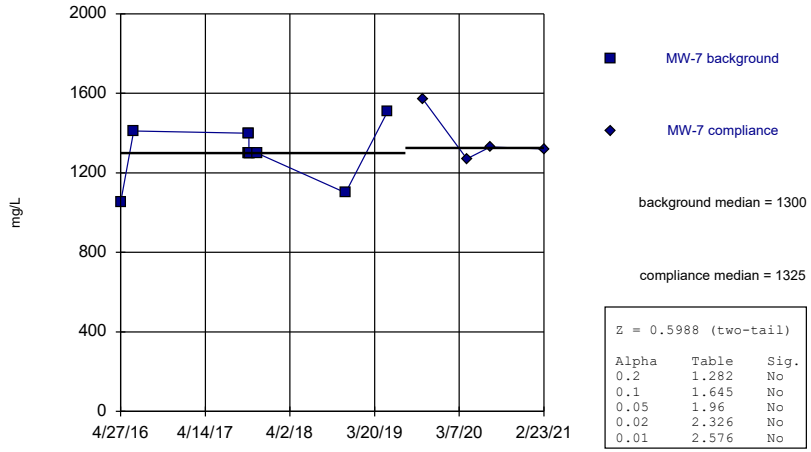
Constituent: Sulfate Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-7



background median = 1300

compliance median = 1325

Z = 0.5988 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

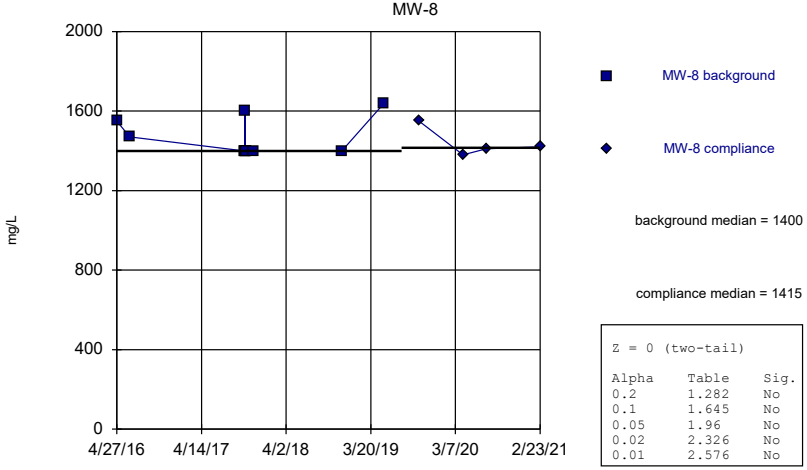
Constituent: Sulfate Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-8



background median = 1400

compliance median = 1415

Z = 0 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

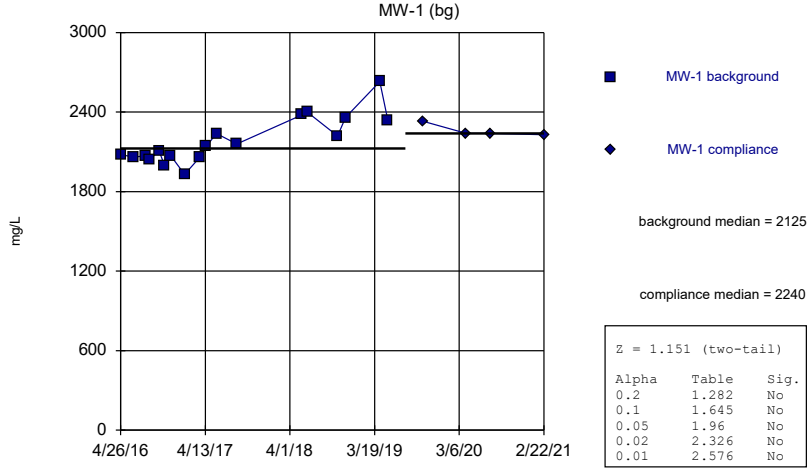
Constituent: Sulfate Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-1 (bg)



background median = 2125

compliance median = 2240

Z = 1.151 (two-tail)

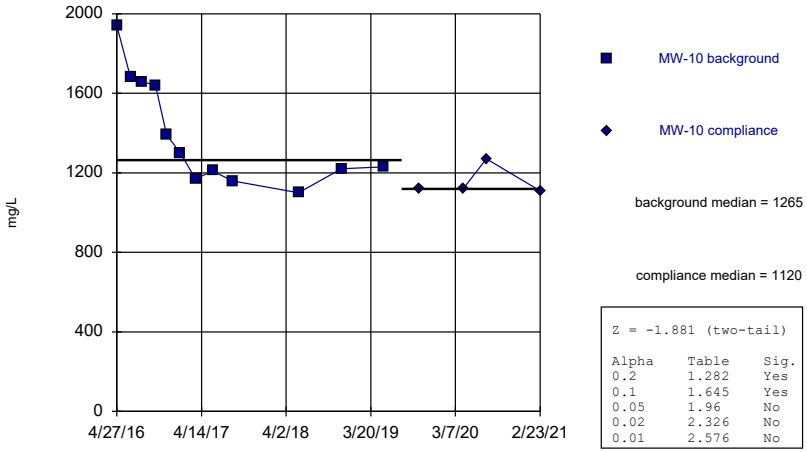
Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Total Dissolved Solids Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-10



Z = -1.881 (two-tail)

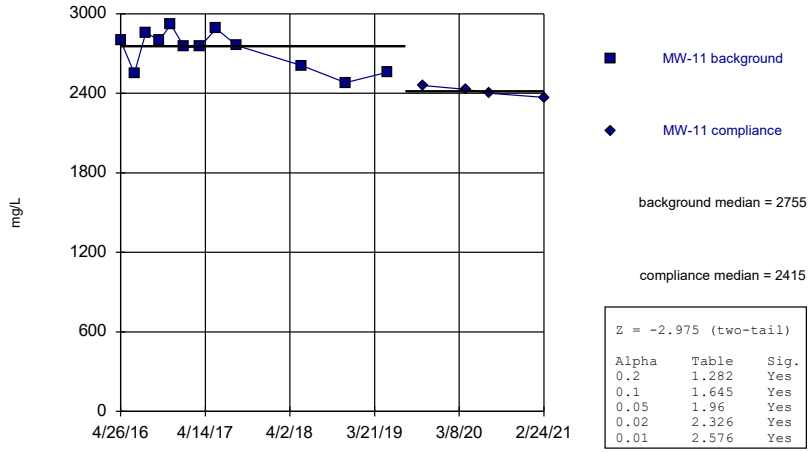
Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Total Dissolved Solids Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-11



Z = -2.975 (two-tail)

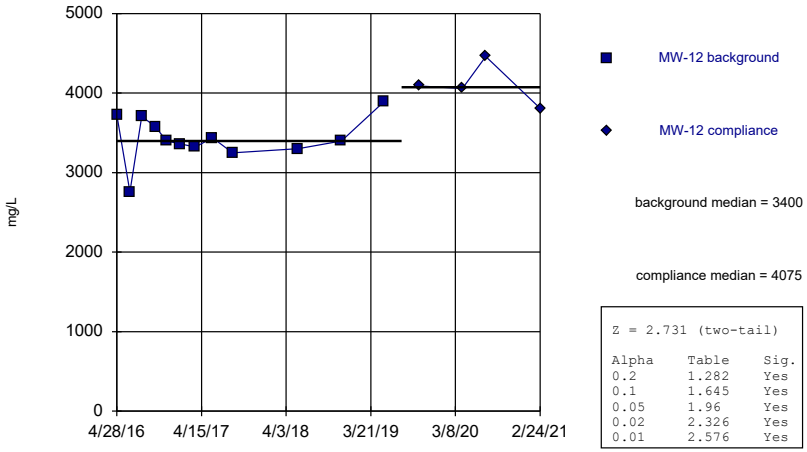
Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	Yes
0.02	2.326	Yes
0.01	2.576	Yes

Constituent: Total Dissolved Solids Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-12



Z = 2.731 (two-tail)

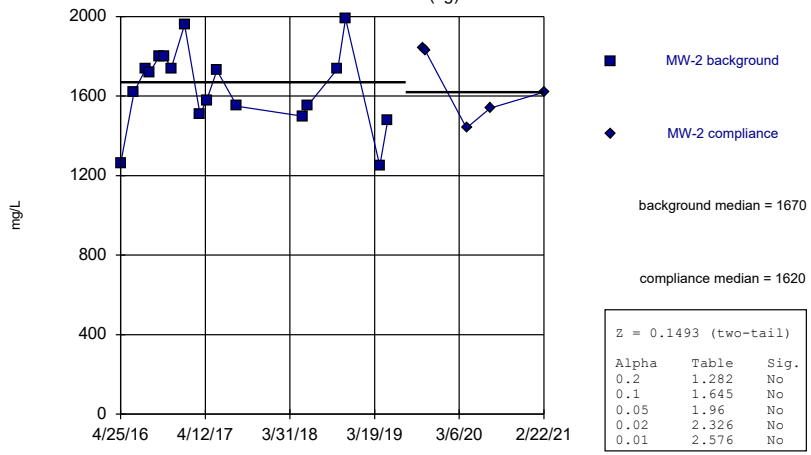
Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	Yes
0.02	2.326	Yes
0.01	2.576	Yes

Constituent: Total Dissolved Solids Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-2 (bg)



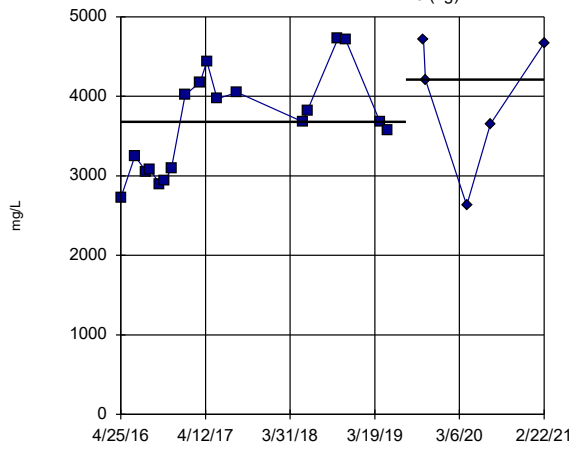
Z = 0.1493 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Total Dissolved Solids Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-3 (bg)



MW-3 background

MW-3 compliance

background median = 3680

compliance median = 4210

Z = 0.7828 (two-tail)

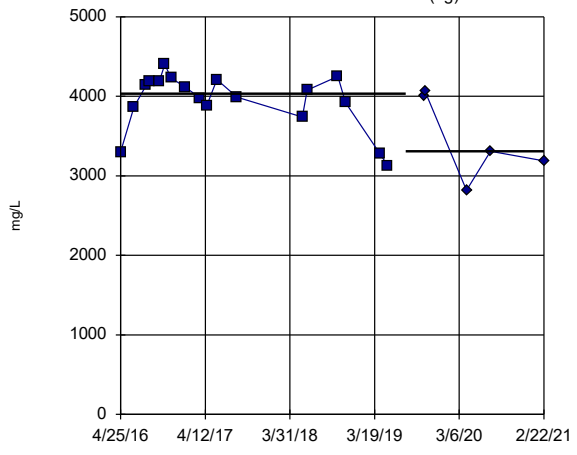
Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Total Dissolved Solids Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-4 (bg)



MW-4 background

MW-4 compliance

background median = 4035

compliance median = 3310

Z = -1.752 (two-tail)

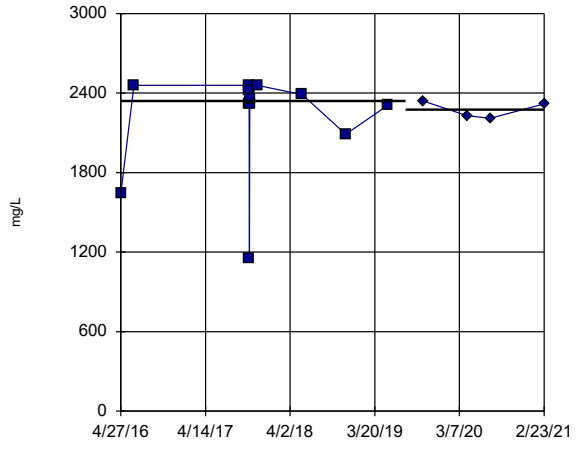
Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Total Dissolved Solids Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-7



MW-7 background

MW-7 compliance

background median = 2340

compliance median = 2275

Z = -0.9149 (two-tail)

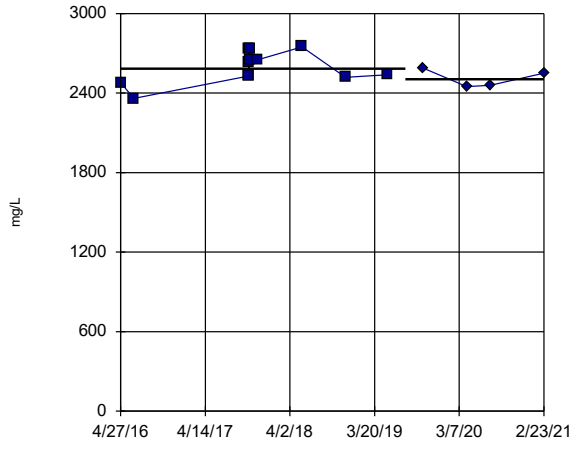
Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Total Dissolved Solids Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-8



MW-8 background

MW-8 compliance

background median = 2585

compliance median = 2505

Z = -1.276 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: Total Dissolved Solids Analysis Run 11/10/2021 10:58 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	147	
6/20/2016	152	
8/8/2016	150	
8/24/2016	142	
10/3/2016	139	
10/26/2016	133	
11/21/2016	144	
1/17/2017	131	
3/22/2017	141	
4/18/2017	149	
5/30/2017	140	
8/23/2017	152	
5/22/2018	166	
6/12/2018	203	
10/17/2018	171	
11/19/2018	154	
4/10/2019	243	
5/14/2019	167	
10/8/2019		157
10/16/2019		157
4/6/2020		149
7/13/2020		147
2/22/2021		151

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	279	
6/23/2016	256	
8/10/2016	245	
10/5/2016	225	
11/21/2016	179	
1/17/2017	168	
3/21/2017	152	
5/31/2017	130	
8/23/2017	147	
5/24/2018	159	
11/19/2018	160	
5/15/2019	186	
10/9/2019		146
4/8/2020		164
7/14/2020		208
2/23/2021		151

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	400	
6/22/2016	398	
8/9/2016	399	
10/4/2016	389	
11/21/2016	386	
1/17/2017	344	
3/21/2017	396	
5/30/2017	370	
8/23/2017	374	
5/22/2018	375	
11/20/2018	370	
5/15/2019	380	
10/10/2019		373
4/6/2020		333
7/13/2020		350
2/24/2021		325

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	349	
6/22/2016	374	
8/10/2016	348	
10/5/2016	344	
11/22/2016	342	
1/18/2017	359	
3/21/2017	352	
5/31/2017	313	
8/23/2017	349	
5/24/2018	349	
11/19/2018	348	
5/15/2019	411	
10/9/2019		359
4/6/2020		354
7/13/2020		392
2/24/2021		346

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	123	
6/20/2016	168	
8/8/2016	180	
8/24/2016	180	
10/3/2016	184	
10/26/2016	171	
11/21/2016	179	
1/17/2017	188	
3/22/2017	155	
4/18/2017	156	
5/31/2017	151	
8/23/2017	155	
5/22/2018	172	
6/12/2018	179	
10/17/2018	200	
11/19/2018	221	
4/10/2019	200	
5/14/2019	168	
10/8/2019		190
10/16/2019		194
4/6/2020		152
7/13/2020		163
2/22/2021		178

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	224	
6/22/2016	266	
8/9/2016	260	
8/24/2016	274	
10/4/2016	243	
10/26/2016	254	
11/21/2016	263	
1/18/2017	431	
3/22/2017	318	
4/18/2017	296	
5/31/2017	306	
8/23/2017	298	
5/24/2018	297	
6/12/2018	318	
10/17/2018	392	
11/19/2018	387	
4/10/2019	348	
5/14/2019	254	
10/8/2019		371
10/16/2019		346
4/6/2020		177
7/13/2020		264
2/22/2021		312

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	261	
6/20/2016	295	
8/9/2016	318	
8/24/2016	319	
10/3/2016	293	
10/26/2016	311	
11/21/2016	320	
1/18/2017	417	
3/22/2017	292	
4/18/2017	302	
5/31/2017	284	
8/23/2017	297	
5/23/2018	296	
6/12/2018	355	
10/17/2018	342	
11/19/2018	289	
4/10/2019	356	
5/14/2019	254	
10/10/2019		302
10/16/2019		356
4/6/2020		222
7/14/2020		259
2/22/2021		271

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	198	
6/21/2016	327	
10/12/2017	317	
10/13/2017	302	
10/14/2017	283	
10/15/2017	294	
10/16/2017	284	
10/17/2017	294	
11/16/2017	299	
5/23/2018	321	
11/20/2018	306	
5/15/2019	302	
10/8/2019		294
4/8/2020		280
7/14/2020		261
2/23/2021		292

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	282	
6/21/2016	291	
10/12/2017	300	
10/13/2017	298	
10/14/2017	299	
10/15/2017	307	
10/16/2017	299	
10/17/2017	294	
11/16/2017	308	
5/23/2018	344	
11/20/2018	327	
5/15/2019	305	
10/9/2019		329
4/8/2020		281
7/15/2020		280
2/23/2021		306

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	0.146 (J)	
6/20/2016	0.148 (J)	
8/8/2016	0.137 (J)	
8/24/2016	0.133 (J)	
10/3/2016	0.103 (J)	
10/26/2016	0.05 (J)	
11/21/2016	0.047 (J)	
1/17/2017	0.09 (J)	
3/22/2017	0.12	
4/18/2017	0.12	
5/30/2017	0.13	
8/23/2017	0.16	
2/13/2018	0.14	
5/22/2018	0.16	
6/12/2018	0.16	
10/17/2018	0.18	
11/19/2018	0.15	
4/10/2019	0.102	
5/14/2019	0.119	
10/8/2019		0.0924 (J)
10/16/2019		0.0756 (J)
4/6/2020		0.101
7/13/2020		0.0678 (J)
2/22/2021		0.082 (J)

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	0.337	
6/23/2016	0.155 (J)	
8/10/2016	0.123 (J)	
10/5/2016	0.086 (J)	
11/21/2016	0.056 (J)	
1/17/2017	0.103 (J)	
3/21/2017	0.15	
5/31/2017	0.18	
8/23/2017	0.23	
2/15/2018	0.23	
5/24/2018	0.13	
11/19/2018	0.26	
5/15/2019	0.276	
10/9/2019		0.142
4/8/2020		0.243
7/14/2020		0.224
2/23/2021		0.202

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	0.084 (J)	
6/22/2016	0.106 (J)	
8/9/2016	0.092 (J)	
10/4/2016	0.049 (J)	
11/21/2016	<0.3	
1/17/2017	0.044 (J)	
3/21/2017	0.08 (J)	
5/30/2017	0.096 (J)	
8/23/2017	0.11	
2/14/2018	0.1	
5/22/2018	0.1	
11/20/2018	0.1	
5/15/2019	0.1	
10/10/2019		0.0915 (J)
4/6/2020		0.118
7/13/2020		0.108
2/24/2021		0.107

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	0.153 (J)	
6/22/2016	0.146 (J)	
8/10/2016	0.127 (J)	
10/5/2016	0.09 (J)	
11/22/2016	0.012 (J)	
1/18/2017	0.071 (J)	
3/21/2017	0.09 (J)	
5/31/2017	0.11	
8/23/2017	0.13	
2/15/2018	0.12	
5/24/2018	0.15	
11/19/2018	0.16	
5/15/2019	0.185	
10/9/2019		0.215
4/6/2020		0.254
7/13/2020		0.161
2/24/2021		0.172

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	0.149 (J)	
6/20/2016	0.148 (J)	
8/8/2016	0.134 (J)	
8/24/2016	0.129 (J)	
10/3/2016	0.086 (J)	
10/26/2016	0.027 (J)	
11/21/2016	0.027 (J)	
1/17/2017	0.066 (J)	
3/22/2017	0.13	
4/18/2017	0.16	
5/31/2017	0.13	
8/23/2017	0.16	
2/13/2018	0.22	
5/22/2018	0.17	
6/12/2018	0.16	
10/17/2018	0.16	
11/19/2018	0.18	
4/10/2019	0.262	
5/14/2019	0.17	
10/8/2019		0.164
10/16/2019		0.114
4/6/2020		0.207
7/13/2020		0.132
2/22/2021		0.209

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	0.243 (J)	
6/22/2016	0.269 (J)	
8/9/2016	0.363	
8/24/2016	0.346	
10/4/2016	0.266 (J)	
10/26/2016	0.266 (J)	
11/21/2016	0.244 (J)	
1/18/2017	0.385	
3/22/2017	0.41	
4/18/2017	0.29	
5/31/2017	0.37	
8/23/2017	0.55	
2/13/2018	0.27	
5/24/2018	0.6	
6/12/2018	0.53	
10/17/2018	0.63	
11/19/2018	0.31	
4/10/2019	0.273	
5/14/2019	0.281	
10/8/2019		0.225
10/16/2019		0.106
4/6/2020		0.314
7/13/2020		0.13
2/22/2021		0.246

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	0.372	
6/20/2016	0.361	
8/9/2016	0.326	
8/24/2016	0.329	
10/3/2016	0.287 (J)	
10/26/2016	0.194 (J)	
11/21/2016	0.192 (J)	
1/18/2017	0.223 (J)	
3/22/2017	0.32	
4/18/2017	0.32	
5/31/2017	0.31	
8/23/2017	0.38	
2/13/2018	0.38	
5/23/2018	0.38	
6/12/2018	0.39	
10/17/2018	0.39	
11/19/2018	0.36	
4/10/2019	0.384	
5/14/2019	0.335	
10/10/2019		0.304
10/16/2019		0.302
4/6/2020		0.368
7/14/2020		0.33
2/22/2021		0.357

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	0.2 (J)	
6/21/2016	0.163 (J)	
10/12/2017	0.17	
10/13/2017	0.19	
10/14/2017	0.2	
10/15/2017	0.2	
10/16/2017	0.2	
10/17/2017	0.19	
11/16/2017	0.18	
2/14/2018	0.18	
5/23/2018	0.18	
11/20/2018	0.19	
5/15/2019	0.169	
10/8/2019		0.183
4/8/2020		0.153
7/14/2020		0.193
2/23/2021		0.2

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	0.212 (J)	
6/21/2016	0.211 (J)	
10/12/2017	0.22	
10/13/2017	0.23	
10/14/2017	0.22	
10/15/2017	0.22	
10/16/2017	0.22	
10/17/2017	0.21	
11/16/2017	0.22	
2/14/2018	0.21	
5/23/2018	0.21	
11/20/2018	0.21	
5/15/2019	0.192	
10/9/2019		0.189
4/8/2020		0.192
7/15/2020		0.196
2/23/2021		0.208

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	1490	
6/20/2016	1420	
8/8/2016	1460	
8/24/2016	1450	
10/3/2016	1460	
10/26/2016	1330	
11/21/2016	1420	
1/17/2017	1350	
3/22/2017	1500	
4/18/2017	1300	
5/30/2017	1400	
8/23/2017	1500	
5/22/2018	2100 (o)	
6/12/2018	1500	
10/17/2018	1400	
11/19/2018	1300	
4/10/2019	1700	
5/14/2019	1560	
10/8/2019		1540
10/16/2019		1680
4/6/2020		1530
7/13/2020		1450
2/22/2021		1400

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	1250	
6/23/2016	1010	
8/10/2016	992	
10/5/2016	1010	
11/21/2016	834	
1/17/2017	700	
3/21/2017	660	
5/31/2017	700	
8/23/2017	700	
5/24/2018	560	
11/19/2018	720	
5/15/2019	780	
10/9/2019		748
4/8/2020		658
7/14/2020		845
2/23/2021		747

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	1750	
6/22/2016	1720	
8/9/2016	1740	
10/4/2016	1750	
11/21/2016	1690	
1/17/2017	1670	
3/21/2017	1900	
5/30/2017	1700	
8/23/2017	1700	
5/22/2018	2200	
11/20/2018	1400	
5/15/2019	1510	
10/10/2019		719
4/6/2020		1400
7/13/2020		1300
2/24/2021		1330

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	2360	
6/22/2016	1960	
8/10/2016	2300	
10/5/2016	2330	
11/22/2016	2220	
1/18/2017	1950	
3/21/2017	2400	
5/31/2017	2200	
8/23/2017	2100	
5/24/2018	2300	
11/19/2018	2100	
5/15/2019	2800	
10/9/2019		2550
4/6/2020		2580
7/13/2020		2610
2/24/2021		2280

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	745	
6/20/2016	964	
8/8/2016	1100	
8/24/2016	1130	
10/3/2016	1140	
10/26/2016	1060	
11/21/2016	1100	
1/17/2017	1160	
3/22/2017	900	
4/18/2017	870	
5/31/2017	1100	
8/23/2017	920	
5/22/2018	1200	
6/12/2018	860	
10/17/2018	970	
11/19/2018	1000	
4/10/2019	889	
5/14/2019	948	
10/8/2019		1230
10/16/2019		1170
4/6/2020		786
7/13/2020		843
2/22/2021		864

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	1890	
6/22/2016	2100	
8/9/2016	2050	
8/24/2016	2190	
10/4/2016	1950	
10/26/2016	1980	
11/21/2016	2060	
1/18/2017	2620	
3/22/2017	3200	
4/18/2017	2500	
5/31/2017	2800	
8/23/2017	2600	
5/24/2018	2700	
6/12/2018	2500	
10/17/2018	2700	
11/19/2018	3000	
4/10/2019	2460	
5/14/2019	2460	
10/8/2019		2950
10/16/2019		2820
4/6/2020		1670
7/13/2020		2130
2/22/2021		3040

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	2260	
6/20/2016	2500	
8/9/2016	2750	
8/24/2016	2770	
10/3/2016	3060	
10/26/2016	2650	
11/21/2016	2720	
1/18/2017	2650	
3/22/2017	2700	
4/18/2017	2400	
5/31/2017	2700	
8/23/2017	2700	
5/23/2018	2400	
6/12/2018	2600	
10/17/2018	2600	
11/19/2018	2400	
4/10/2019	2090	
5/14/2019	2240	
10/10/2019		2690
10/16/2019		3050
4/6/2020		1810
7/14/2020		1970
2/22/2021		2040

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	1050	
6/21/2016	1410	
10/12/2017	1400	
10/13/2017	1400	
10/14/2017	1300	
10/15/2017	1300	
10/16/2017	1300	
10/17/2017	1300	
11/16/2017	1300	
5/23/2018	1900 (o)	
11/20/2018	1100	
5/15/2019	1510	
10/8/2019		1570
4/8/2020		1270
7/14/2020		1330
2/23/2021		1320

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	1550	
6/21/2016	1470	
10/12/2017	1400	
10/13/2017	1600	
10/14/2017	1400	
10/15/2017	1400	
10/16/2017	1400	
10/17/2017	1400	
11/16/2017	1400	
5/23/2018	2100 (o)	
11/20/2018	1400	
5/15/2019	1640	
10/9/2019		1550
4/8/2020		1380
7/15/2020		1410
2/23/2021		1420

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	2080	
6/20/2016	2060	
8/8/2016	2070	
8/24/2016	2040	
10/3/2016	2110	
10/26/2016	2000	
11/21/2016	2070	
1/17/2017	1930	
3/22/2017	2060	
4/18/2017	2140	
5/30/2017	2240	
8/23/2017	2160	
5/22/2018	2380	
6/12/2018	2400	
10/17/2018	2220	
11/19/2018	2360	
4/10/2019	2630	
5/14/2019	2340	
10/8/2019		2330
10/16/2019	3650 (o)	
4/6/2020		2240
7/13/2020		2240
2/22/2021		2230

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	1940	
6/23/2016	1680	
8/10/2016	1660	
10/5/2016	1640	
11/21/2016	1390	
1/17/2017	1300	
3/21/2017	1170	
5/31/2017	1210	
8/23/2017	1160	
5/24/2018	1100	
11/19/2018	1220	
5/15/2019	1230	
10/9/2019		1120
4/8/2020		1120
7/14/2020		1270
2/23/2021		1110

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	2800	
6/22/2016	2550	
8/9/2016	2860	
10/4/2016	2800	
11/21/2016	2920	
1/17/2017	2750	
3/21/2017	2750	
5/30/2017	2890	
8/23/2017	2760	
5/22/2018	2610	
11/20/2018	2480	
5/15/2019	2560	
10/10/2019		2460
4/6/2020		2430
7/13/2020		2400
2/24/2021		2370

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	3730	
6/22/2016	2760	
8/10/2016	3710	
10/5/2016	3580	
11/22/2016	3400	
1/18/2017	3360	
3/21/2017	3320	
5/31/2017	3440	
8/23/2017	3250	
5/24/2018	3300	
11/19/2018	3400	
5/15/2019	3890	
10/9/2019		4090
4/6/2020		4060
7/13/2020		4460
2/24/2021		3810

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	1260	
6/20/2016	1620	
8/8/2016	1740	
8/24/2016	1720	
10/3/2016	1800	
10/26/2016	1800	
11/21/2016	1740	
1/17/2017	1960	
3/22/2017	1510	
4/18/2017	1580	
5/31/2017	1730	
8/23/2017	1550	
5/22/2018	1500	
6/12/2018	1550	
10/17/2018	1740	
11/19/2018	1990	
4/10/2019	1250	
5/14/2019	1480	
10/8/2019		1840
10/16/2019		1830
4/6/2020		1440
7/13/2020		1540
2/22/2021		1620

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	2720	
6/22/2016	3250	
8/9/2016	3050	
8/24/2016	3080	
10/4/2016	2900	
10/26/2016	2940	
11/21/2016	3090	
1/18/2017	4020	
3/22/2017	4180	
4/18/2017	4440	
5/31/2017	3970	
8/23/2017	4050	
5/24/2018	3680	
6/12/2018	3820	
10/17/2018	4730	
11/19/2018	4710	
4/10/2019	3680	
5/14/2019	3580	
10/8/2019		4720
10/16/2019		4210
4/6/2020		2630
7/13/2020		3650
2/22/2021		4670

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	3300	
6/20/2016	3870	
8/9/2016	4140	
8/24/2016	4190	
10/3/2016	4190	
10/26/2016	4400	
11/21/2016	4230	
1/18/2017	4120	
3/22/2017	3980	
4/18/2017	3880	
5/31/2017	4210	
8/23/2017	3990	
5/23/2018	3740	
6/12/2018	4080	
10/17/2018	4250	
11/19/2018	3920	
4/10/2019	3280	
5/14/2019	3130	
10/10/2019		4000
10/16/2019		4060
4/6/2020		2820
7/14/2020		3310
2/22/2021		3190

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	1640	
6/21/2016	2460	
10/12/2017	2460	
10/13/2017	2420	
10/14/2017	2320	
10/15/2017	1150	
10/16/2017	2320	
10/17/2017	2360	
11/16/2017	2460	
5/23/2018	2390	
11/20/2018	2090	
5/15/2019	2310	
10/8/2019		2340
4/8/2020		2230
7/14/2020		2210
2/23/2021		2320

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/10/2021 11:00 PM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	2480	
6/21/2016	2360	
10/12/2017	2530	
10/13/2017	2740	
10/14/2017	2630	
10/15/2017	2530	
10/16/2017	2740	
10/17/2017	2650	
11/16/2017	2650	
5/23/2018	2750	
11/20/2018	2520	
5/15/2019	2540	
10/9/2019		2590
4/8/2020		2450
7/15/2020		2460
2/23/2021		2550

FIGURE E.

Upgradient Wells Trend Tests - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**MW-2 (bg)**	**0.00734**	**127**	**105**	**Yes**	**24**	**25**	**n/a**	**n/a**	**0.01**	**NP**

Upgradient Wells Trend Tests - All Results

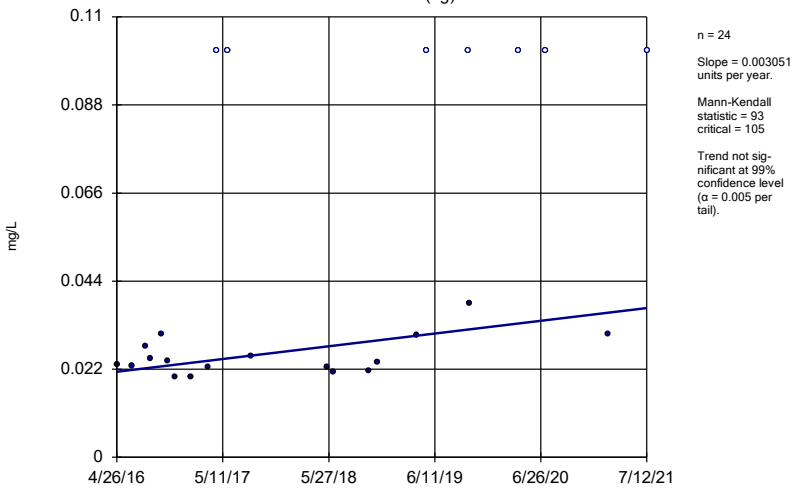
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:25 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW-1 (bg)	0.003051	93	105	No	24	29.17	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-2 (bg)**	**0.00734**	**127**	**105**	**Yes**	**24**	**25**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-3 (bg)	0.006876	97	105	No	24	25	n/a	n/a	0.01	NP
Boron (mg/L)	MW-4 (bg)	-0.000257	-17	-98	No	23	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-1 (bg)	-0.0204	-17	-105	No	24	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-2 (bg)	-0.05131	-15	-105	No	24	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-3 (bg)	0.06882	59	105	No	24	8.333	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-4 (bg)	-0.06862	-70	-105	No	24	4.167	n/a	n/a	0.01	NP
pH (SU)	MW-1 (bg)	-0.01437	-88	-105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-2 (bg)	0.04162	102	105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-3 (bg)	-0.01603	-16	-111	No	25	0	n/a	n/a	0.01	NP
pH (SU)	MW-4 (bg)	0.01244	57	111	No	25	0	n/a	n/a	0.01	NP

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-1 (bg)



n = 24

Slope = 0.003051 units per year.

Mann-Kendall statistic = 93
critical = 105

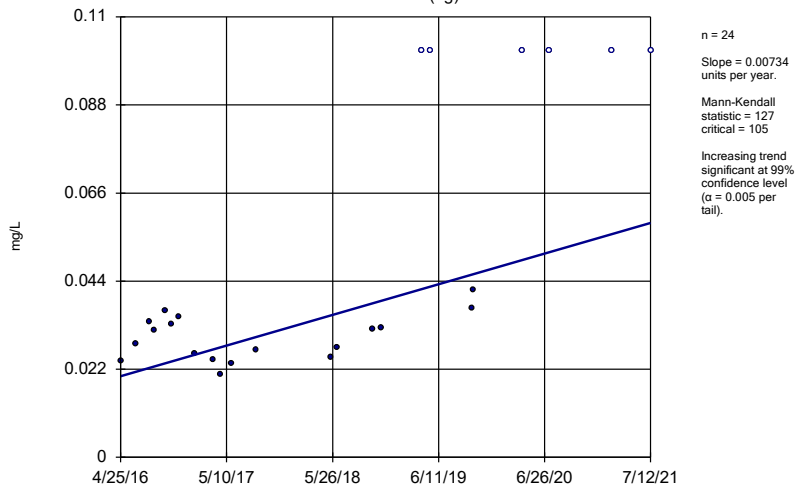
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-2 (bg)



n = 24

Slope = 0.00734 units per year.

Mann-Kendall statistic = 127
critical = 105

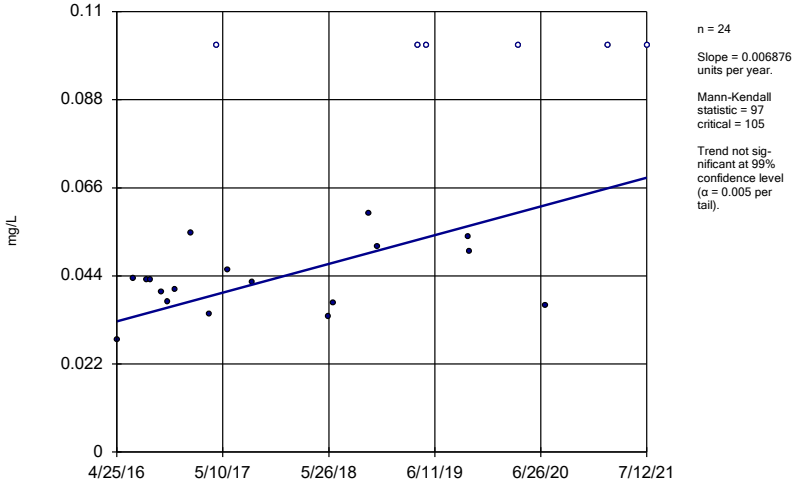
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-3 (bg)



n = 24

Slope = 0.006876 units per year.

Mann-Kendall statistic = 97
critical = 105

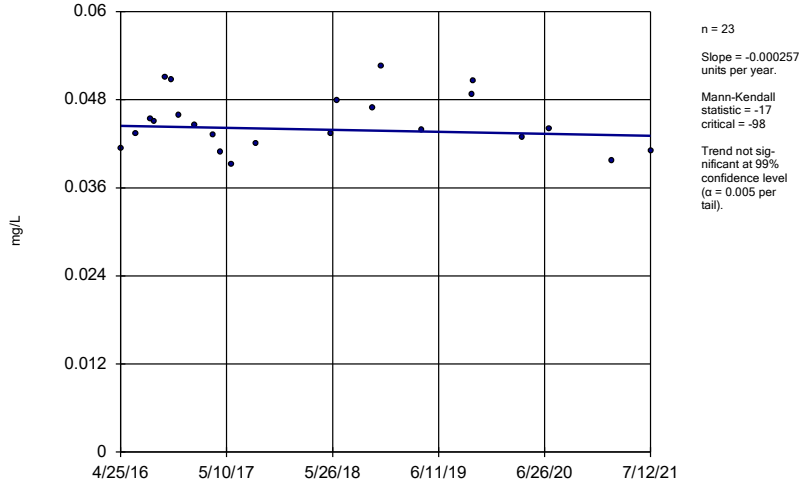
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-4 (bg)



n = 23

Slope = -0.000257 units per year.

Mann-Kendall statistic = -17
critical = -98

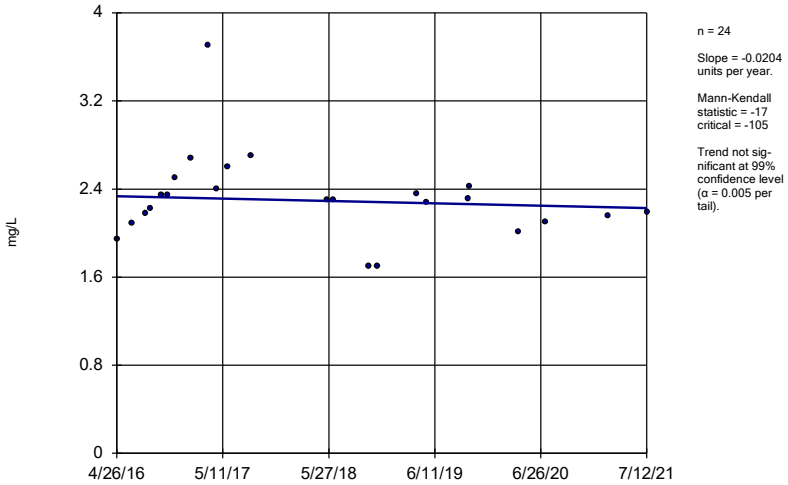
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-1 (bg)



n = 24

Slope = -0.0204 units per year.

Mann-Kendall statistic = -17 critical = -105

Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

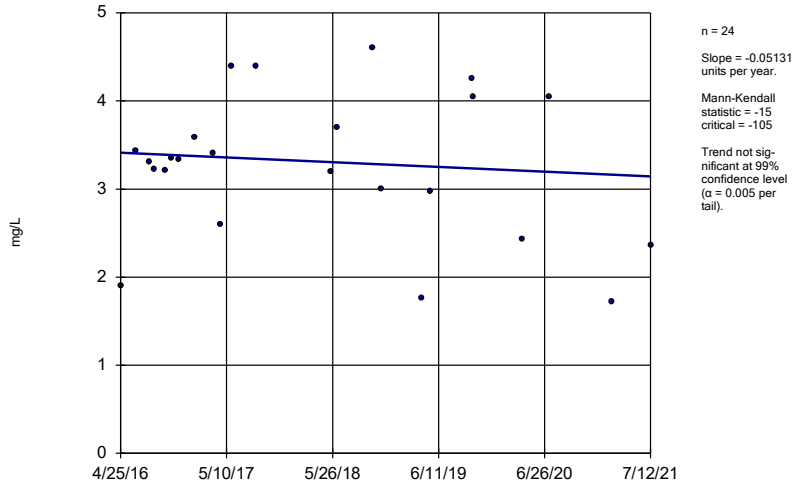
Constituent: Chloride Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-2 (bg)



n = 24

Slope = -0.05131 units per year.

Mann-Kendall statistic = -15 critical = -105

Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests

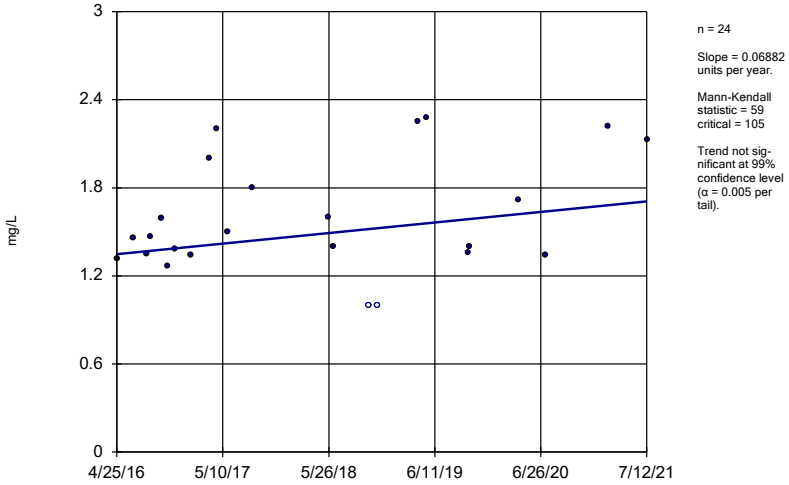
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-3 (bg)



n = 24

Slope = 0.06882 units per year.

Mann-Kendall statistic = 59 critical = 105

Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests

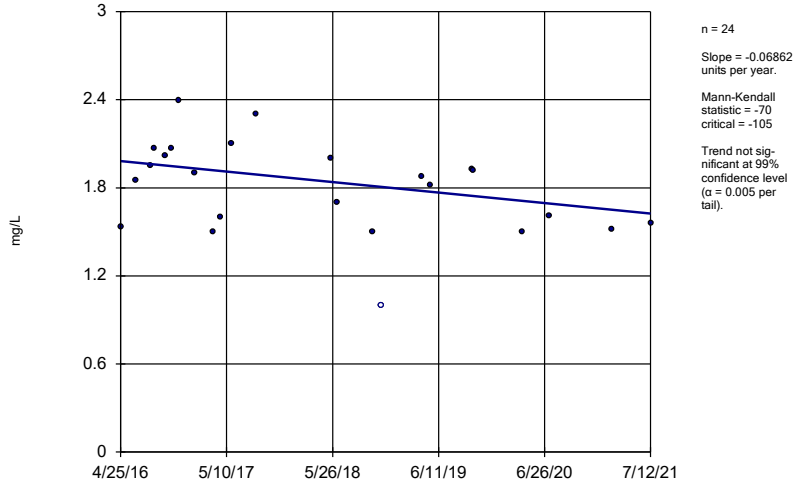
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-4 (bg)



n = 24

Slope = -0.06862 units per year.

Mann-Kendall statistic = -70 critical = -105

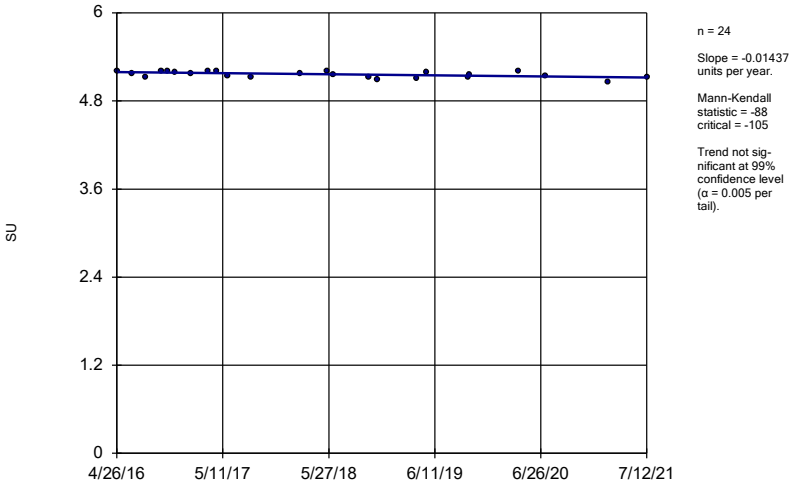
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sen's Slope Estimator

MW-1 (bg)



n = 24

Slope = -0.01437 units per year.

Mann-Kendall statistic = -88
critical = -105

Trend not significant at 99% confidence level (α = 0.005 per tail).

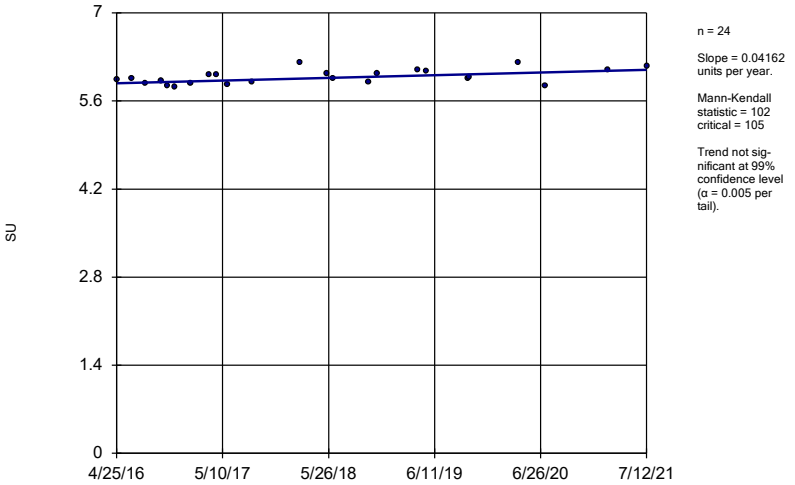
Constituent: pH Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-2 (bg)



n = 24

Slope = 0.04162 units per year.

Mann-Kendall statistic = 102
critical = 105

Trend not significant at 99% confidence level (α = 0.005 per tail).

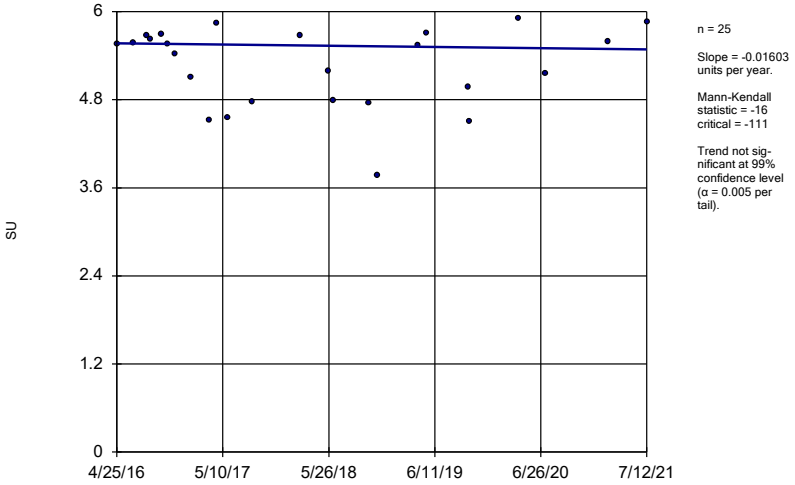
Constituent: pH Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-3 (bg)



n = 25

Slope = -0.01603 units per year.

Mann-Kendall statistic = -16
critical = -111

Trend not significant at 99% confidence level (α = 0.005 per tail).

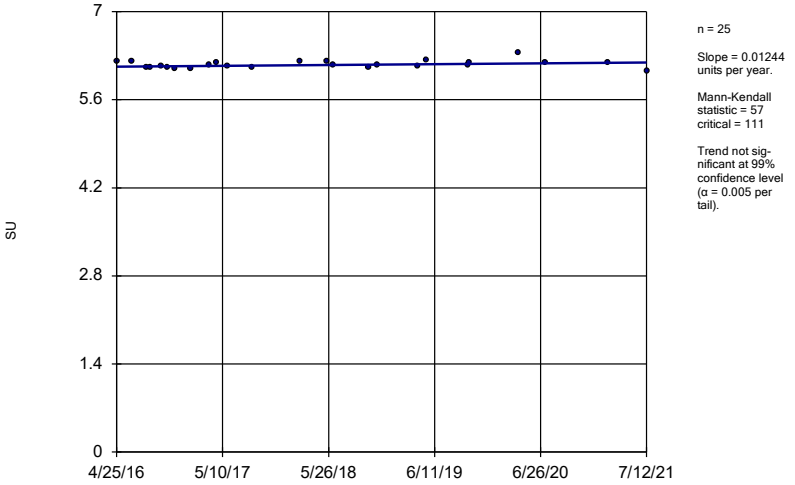
Constituent: pH Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-4 (bg)



n = 25

Slope = 0.01244 units per year.

Mann-Kendall statistic = 57
critical = 111

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 12/6/2021 10:22 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

FIGURE F.

Appendix III Intrawell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 11/11/2021, 9:09 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	**MW-11**	**0.1477**	**n/a**	**7/21/2021**	**0.16**	**Yes**	**17**	**0.09621**	**0.0242**	**5.882**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**
Fluoride (mg/L)	**MW-7**	**0.2155**	**n/a**	**7/20/2021**	**0.286**	**Yes**	**17**	**0.1848**	**0.01443**	**0**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**
Fluoride (mg/L)	**MW-8**	**0.2349**	**n/a**	**7/20/2021**	**0.262**	**Yes**	**17**	**0.21**	**0.01171**	**0**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**

Appendix III Intrawell Prediction Limits - All Results

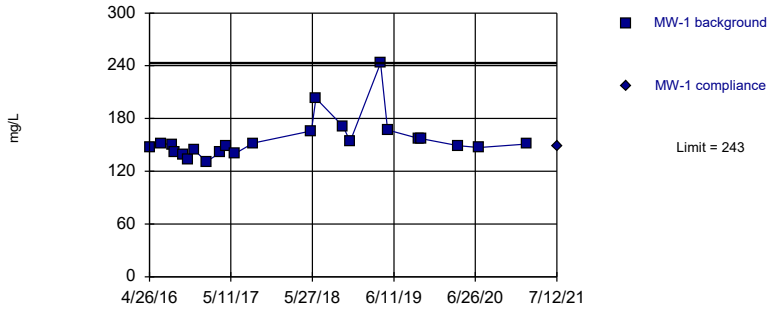
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 11/11/2021, 9:09 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-1	243	n/a	7/12/2021	149	No	23	n/a	n/a	0	n/a	n/a	0.003415	NP Intra (normality) 1 of 2
Calcium (mg/L)	MW-10	280.7	n/a	7/20/2021	149	No	16	184.7	44.65	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-11	423.3	n/a	7/21/2021	322	No	16	372.6	23.56	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-12	402.8	n/a	7/20/2021	330	No	16	355.6	21.98	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-2	216.2	n/a	7/12/2021	159	No	23	174.2	20.8	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-3	420.1	n/a	7/12/2021	252	No	23	300	59.54	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-4	388.9	n/a	7/12/2021	242	No	23	304.8	41.68	0	None	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-7	345.2	n/a	7/20/2021	254	No	16	85434	15683	0	None	x^2	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-8	341.3	n/a	7/20/2021	281	No	16	303.1	17.76	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-1	0.1903	n/a	7/12/2021	0.125	No	24	0.1172	0.03644	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-10	0.3437	n/a	7/20/2021	0.268	No	17	0.1839	0.0751	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	**MW-11**	**0.1477**	**n/a**	**7/21/2021**	**0.16**	**Yes**	**17**	**0.09621**	**0.0242**	**5.882**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**
Fluoride (mg/L)	MW-12	0.2219	n/a	7/20/2021	0.219	No	13	0.1188	0.04526	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.2565	n/a	7/12/2021	0.196	No	24	0.1456	0.05538	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-3	0.5975	n/a	7/12/2021	0.287	No	24	0.3299	0.1336	0	None	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-4	0.4243	n/a	7/12/2021	0.35	No	24	0.1114	0.03425	0	None	x^2	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	**MW-7**	**0.2155**	**n/a**	**7/20/2021**	**0.286**	**Yes**	**17**	**0.1848**	**0.01443**	**0**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**
Fluoride (mg/L)	**MW-8**	**0.2349**	**n/a**	**7/20/2021**	**0.262**	**Yes**	**17**	**0.21**	**0.01171**	**0**	**None**	**No**	**0.001504**	**Param Intra 1 of 2**
Sulfate (mg/L)	MW-1	1672	n/a	7/12/2021	1560	No	22	1461	104.1	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-10	1188	n/a	7/20/2021	665	No	16	807.1	176.9	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-11	2292	n/a	7/21/2021	1420	No	16	1592	325.4	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-12	2822	n/a	7/20/2021	2500	No	16	2315	235.6	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-2	1284	n/a	7/12/2021	763	No	23	997.8	141.7	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	3300	n/a	7/12/2021	2380	No	23	2451	421.1	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3165	n/a	7/12/2021	1930	No	23	2511	324	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-7	1614	n/a	7/20/2021	1170	No	15	1324	132.3	0	None	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-8	1640	n/a	7/20/2021	1500	No	15	n/a	n/a	0	n/a	n/a	0.007533	NP Intra (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-1	2530	n/a	7/12/2021	2210	No	22	2197	164	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-10	1925	n/a	7/20/2021	1080	No	16	7.179	0.1783	0	None	ln(x)	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-11	3052	n/a	7/21/2021	2210	No	16	2649	187.2	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-12	4477	n/a	7/20/2021	3680	No	16	3598	408.9	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-2	2034	n/a	7/12/2021	1390	No	23	1643	193.7	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	5097	n/a	7/12/2021	3510	No	23	3729	678.1	0	None	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-4	4623	n/a	7/12/2021	3000	No	23	1.5e7	3201096	0	None	x^2	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-7	2598	n/a	7/20/2021	2110	No	16	6.3e16	2.6e16	0	None	x^5	0.001504	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-8	2817	n/a	7/20/2021	2420	No	16	2573	113.3	0	None	No	0.001504	Param Intra 1 of 2

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 23 background values. Well-constituent pair annual alpha = 0.006819. Individual comparison alpha = 0.003415 (1 of 2).

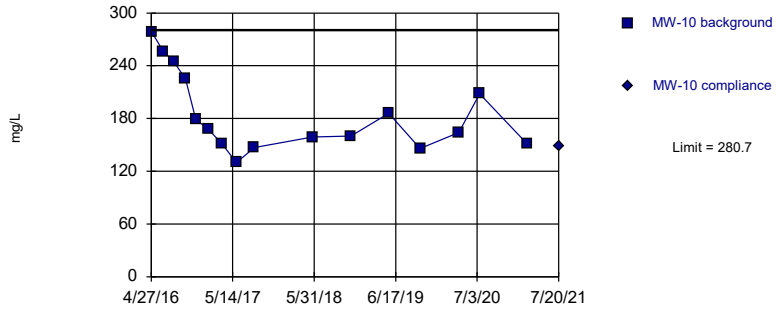
Constituent: Calcium Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=184.7, Std. Dev.=44.65, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.884, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

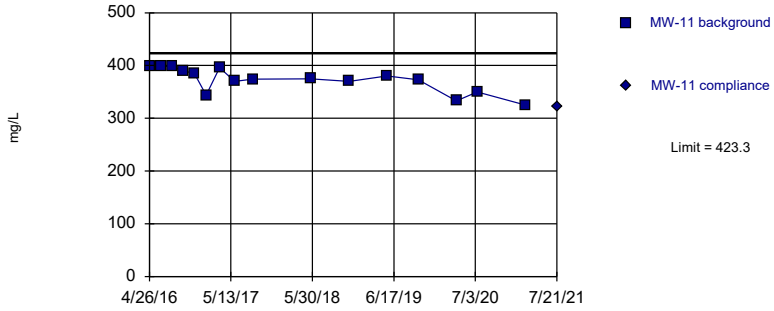
Constituent: Calcium Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=372.6, Std. Dev.=23.56, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.908, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

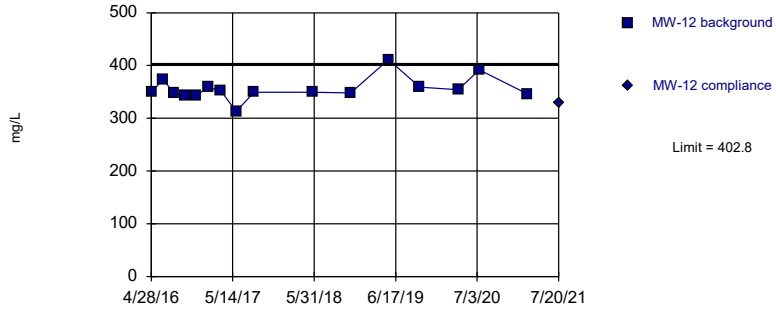
Constituent: Calcium Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



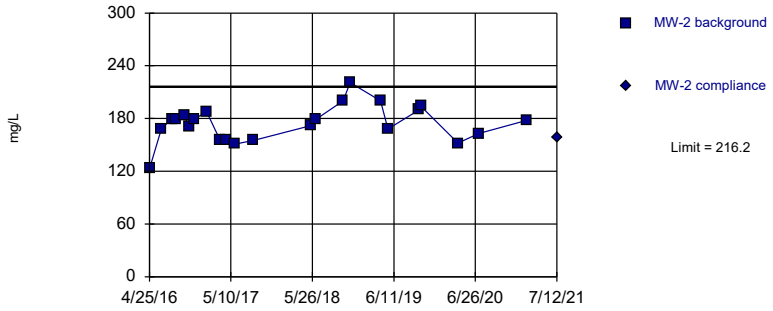
Background Data Summary: Mean=355.6, Std. Dev.=21.98, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8497, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=174.2, Std. Dev.=20.8, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9781, critical = 0.881. Kappa = 2.017 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

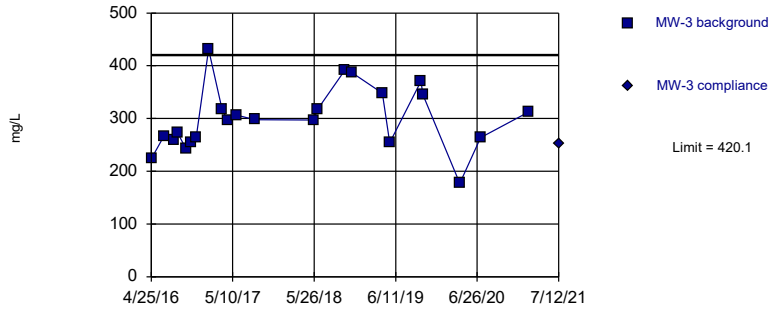
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=300, Std. Dev.=59.54, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9749, critical = 0.881. Kappa = 2.017 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

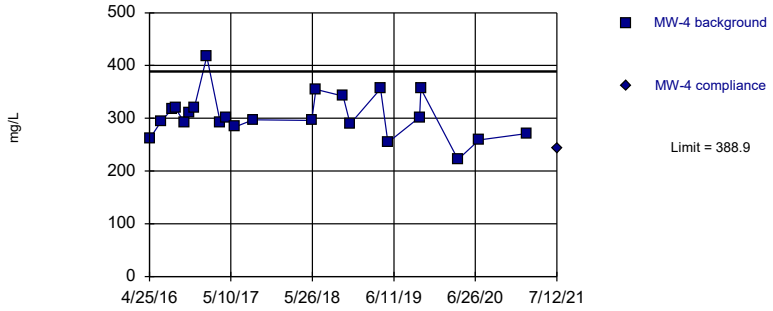
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=304.8, Std. Dev.=41.68, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9567, critical = 0.881. Kappa = 2.017 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

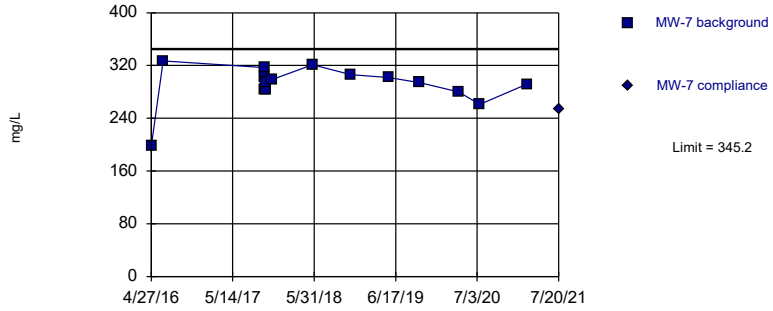
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=85434, Std. Dev.=15683, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8569, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

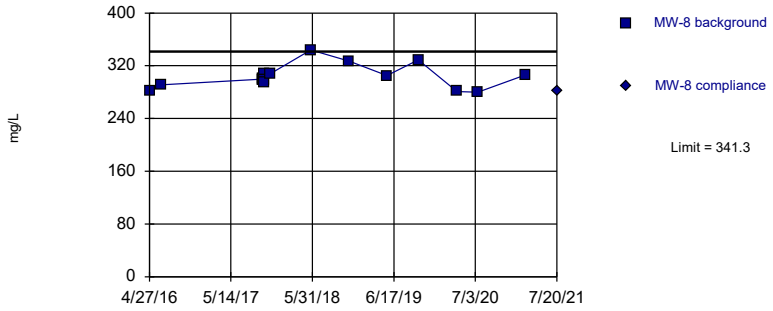
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=303.1, Std. Dev.=17.76, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9165, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Calcium Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

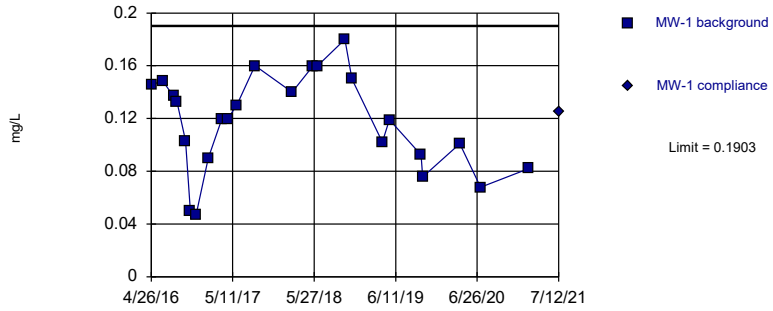
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1172, Std. Dev.=0.03644, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9658, critical = 0.884. Kappa = 2.004 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

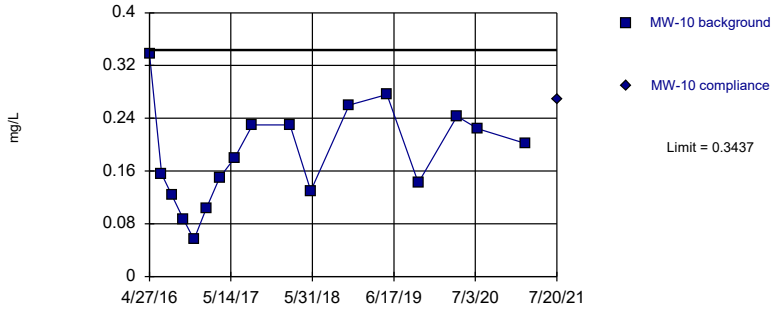
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1839, Std. Dev.=0.0751, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9812, critical = 0.851. Kappa = 2.127 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

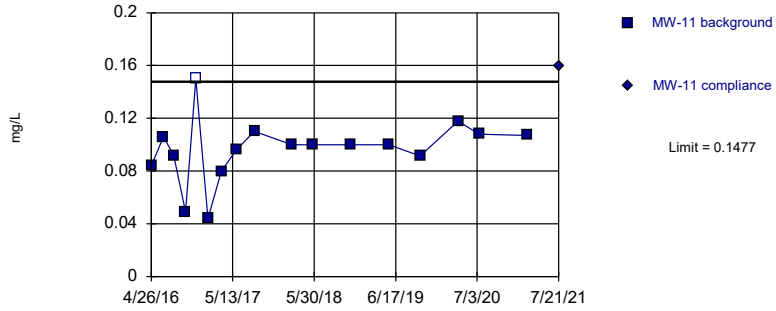
Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.09621, Std. Dev.=0.0242, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8998, critical = 0.851. Kappa = 2.127 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

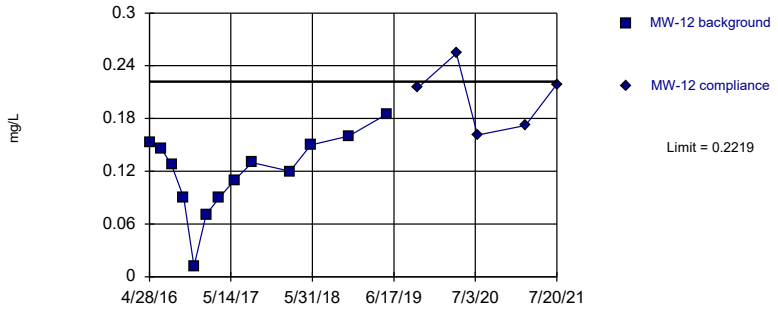
Constituent: Fluoride Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1188, Std. Dev.=0.04526, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9427, critical = 0.814. Kappa = 2.279 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

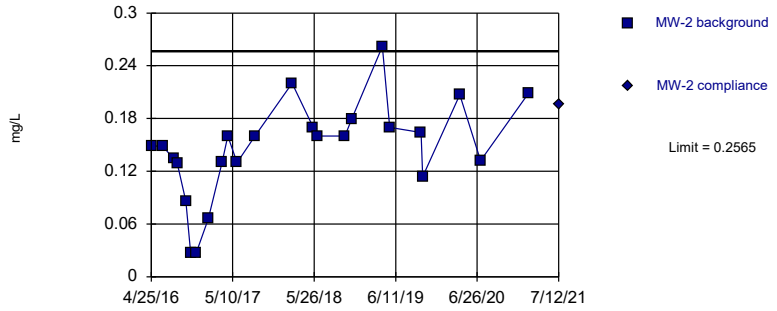
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1456, Std. Dev.=0.05538, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9466, critical = 0.884. Kappa = 2.004 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

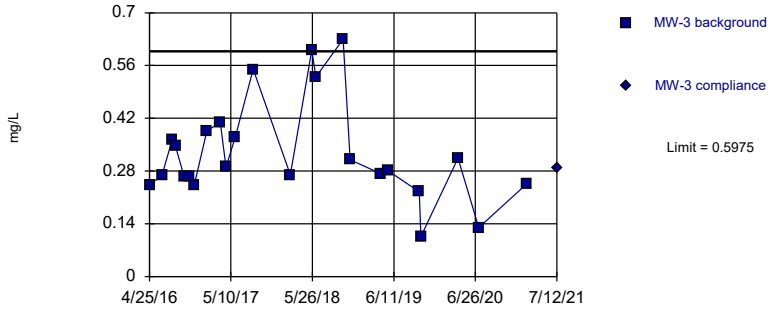
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.3299, Std. Dev.=0.1336, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9032, critical = 0.884. Kappa = 2.004 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

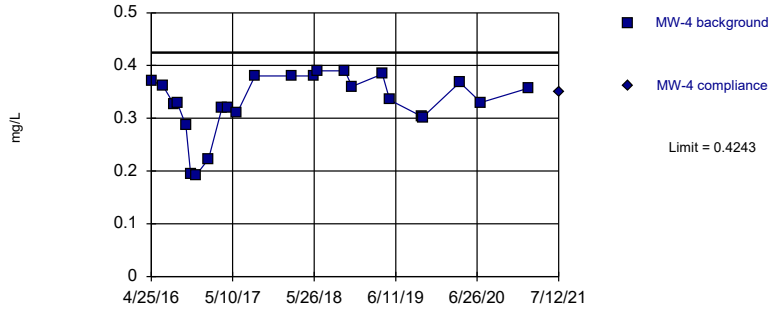
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=0.1114, Std. Dev.=0.03425, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.897, critical = 0.884. Kappa = 2.004 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

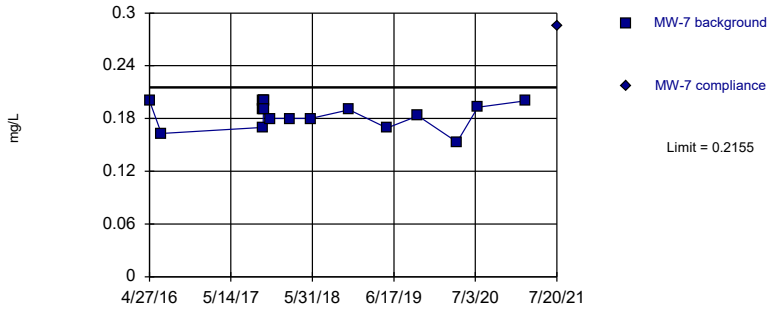
Constituent: Fluoride Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1848, Std. Dev.=0.01443, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9003, critical = 0.851. Kappa = 2.127 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

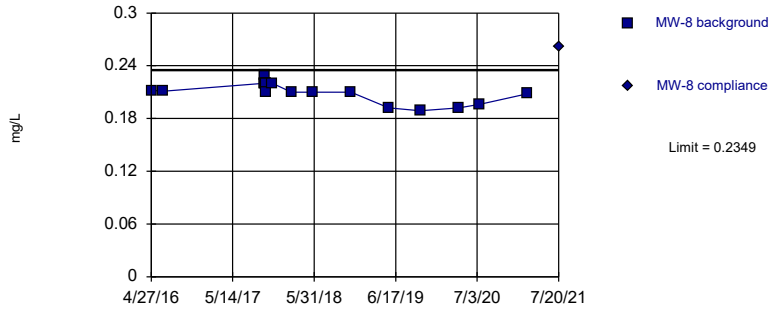
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.21, Std. Dev.=0.01171, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.904, critical = 0.851. Kappa = 2.127 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Fluoride Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

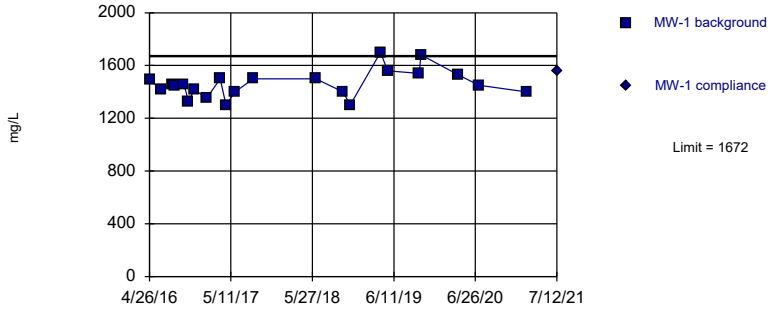
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1461, Std. Dev.=104.1, n=22. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9462, critical = 0.878. Kappa = 2.031 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

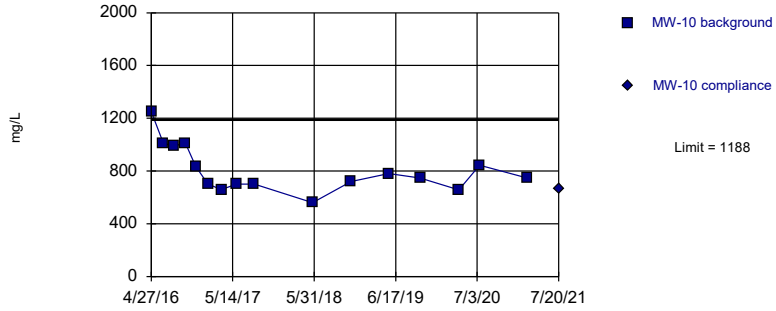
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=807.1, Std. Dev.=176.9, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8929, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

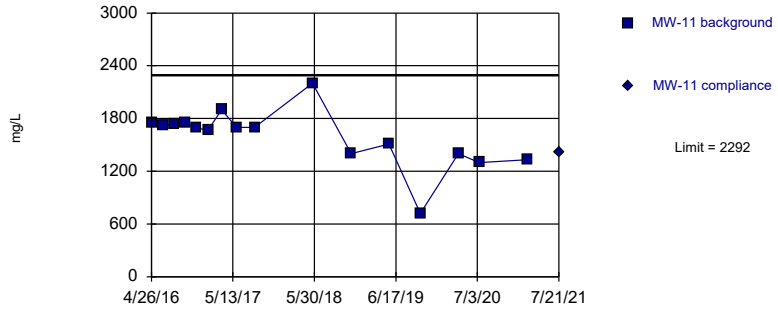
Constituent: Sulfate Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1592, Std. Dev.=325.4, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8949, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

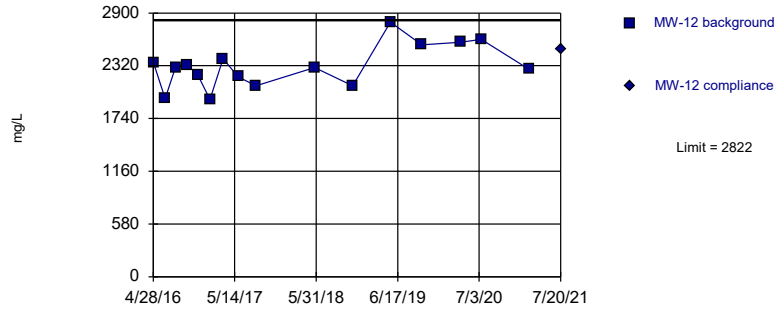
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2315, Std. Dev.=235.6, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.968, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

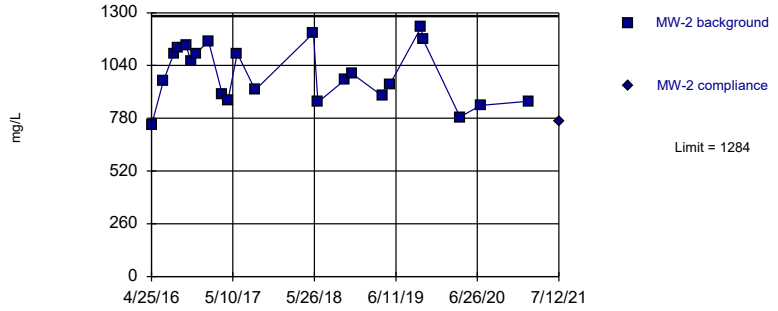
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=997.8, Std. Dev.=141.7, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9515, critical = 0.881. Kappa = 2.017 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

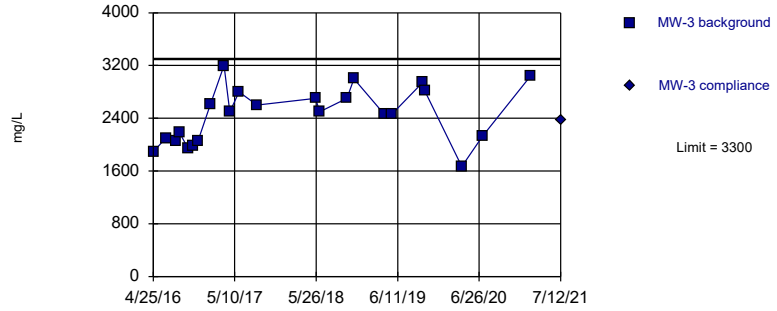
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2451, Std. Dev.=421.1, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9657, critical = 0.881. Kappa = 2.017 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

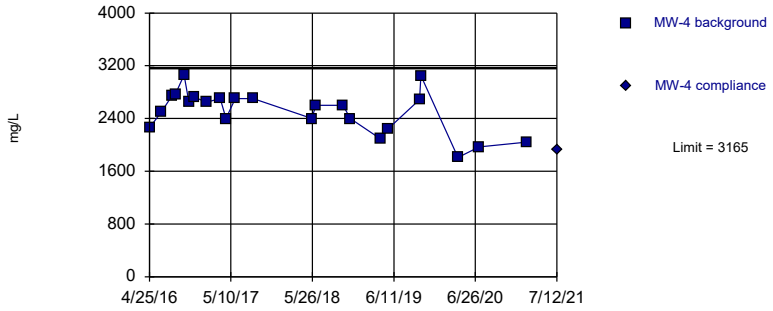
Constituent: Sulfate Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2511, Std. Dev.=324, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9443, critical = 0.881. Kappa = 2.017 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

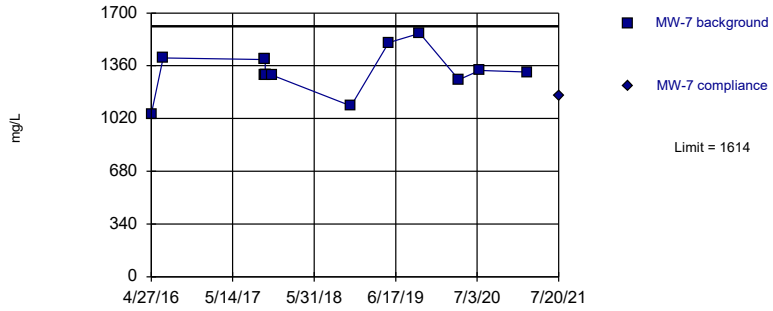
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1324, Std. Dev.=132.3, n=15. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9168, critical = 0.835. Kappa = 2.193 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Sulfate Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

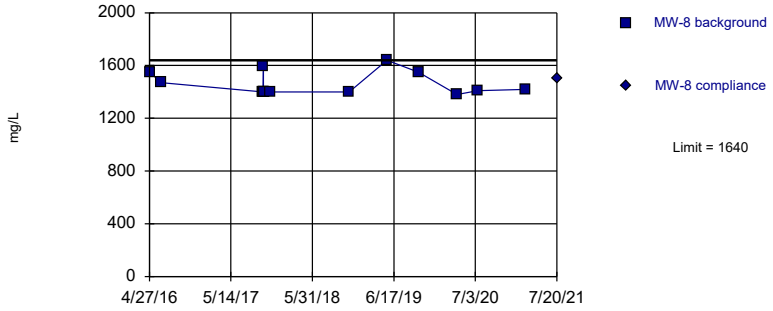
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 15 background values. Well-constituent pair annual alpha = 0.01501. Individual comparison alpha = 0.007533 (1 of 2).

Constituent: Sulfate Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

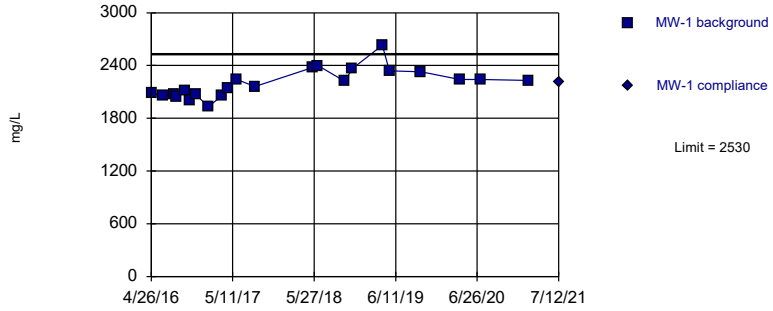
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2197, Std. Dev.=164, n=22. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9479, critical = 0.878. Kappa = 2.031 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

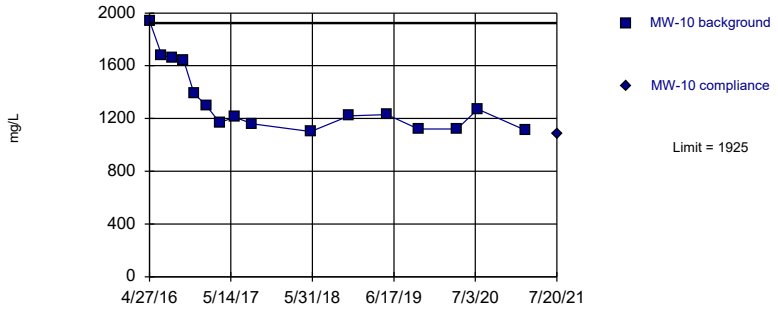
Constituent: Total Dissolved Solids Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=7.179, Std. Dev.=0.1783, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8482, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

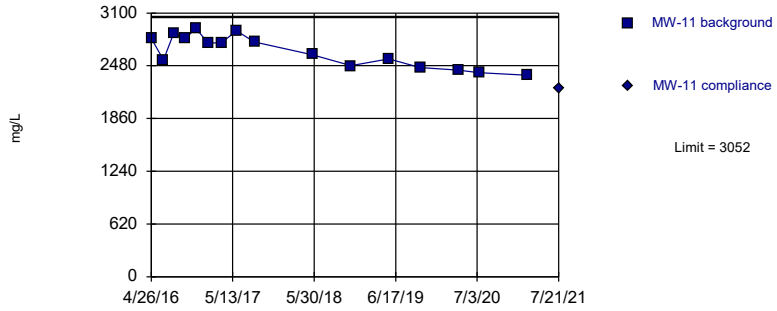
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2649, Std. Dev.=187.2, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9189, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

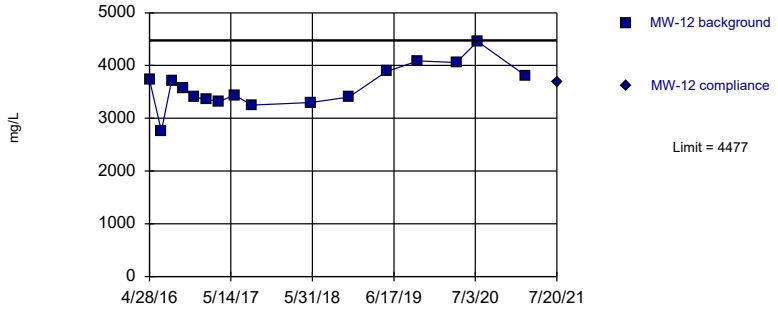
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3598, Std. Dev.=408.9, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9669, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

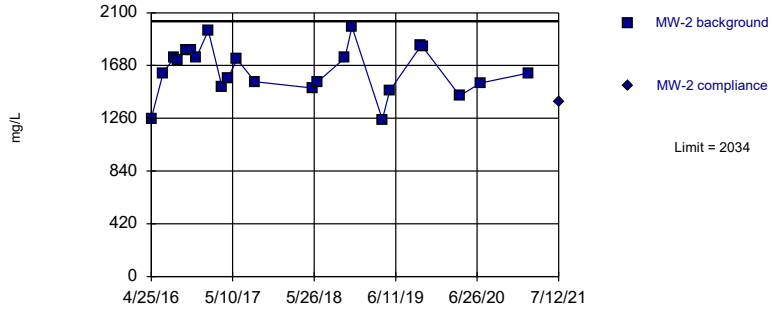
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1643, Std. Dev.=193.7, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9661, critical = 0.881. Kappa = 2.017 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

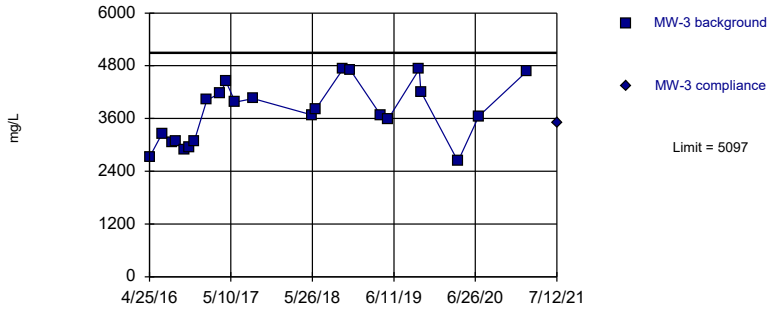
Constituent: Total Dissolved Solids Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3729, Std. Dev.=678.1, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9398, critical = 0.881. Kappa = 2.017 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

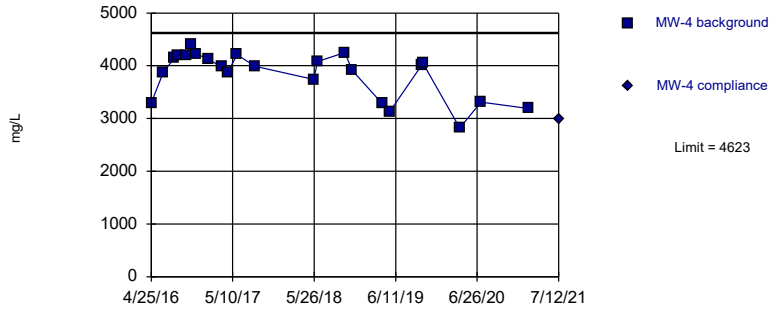
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=1.5e7, Std. Dev.=3201096, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8861, critical = 0.881. Kappa = 2.017 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

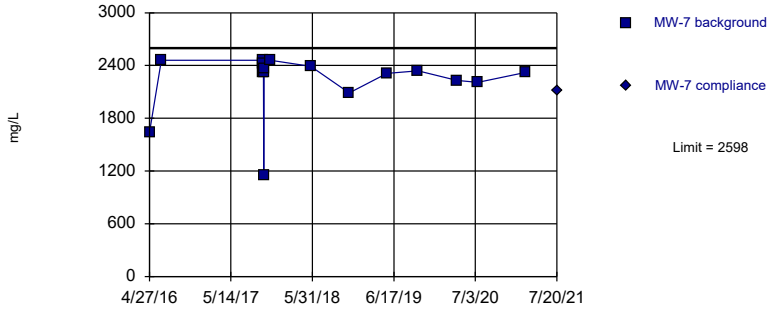
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on x^5 transformation): Mean=6.3e16, Std. Dev.=2.6e16, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8587, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

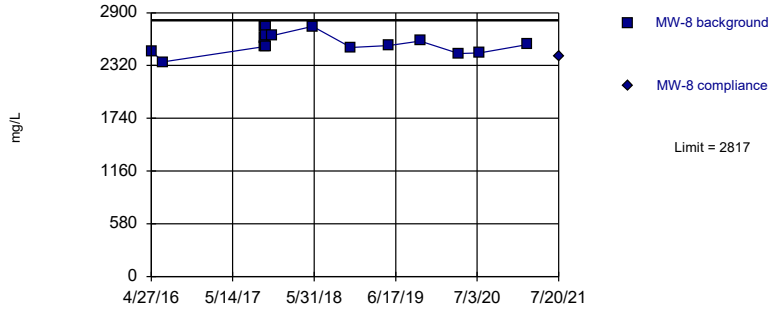
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.31 Groundwater Stats Consulting. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2573, Std. Dev.=113.3, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9548, critical = 0.844. Kappa = 2.15 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Total Dissolved Solids Analysis Run 11/11/2021 9:07 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	147	
6/20/2016	152	
8/8/2016	150	
8/24/2016	142	
10/3/2016	139	
10/26/2016	133	
11/21/2016	144	
1/17/2017	131	
3/22/2017	141	
4/18/2017	149	
5/30/2017	140	
8/23/2017	152	
5/22/2018	166	
6/12/2018	203	
10/17/2018	171	
11/19/2018	154	
4/10/2019	243	
5/14/2019	167	
10/8/2019	157	
10/16/2019	157	
4/6/2020	149	
7/13/2020	147	
2/22/2021	151	
7/12/2021		149

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	279	
6/23/2016	256	
8/10/2016	245	
10/5/2016	225	
11/21/2016	179	
1/17/2017	168	
3/21/2017	152	
5/31/2017	130	
8/23/2017	147	
5/24/2018	159	
11/19/2018	160	
5/15/2019	186	
10/9/2019	146	
4/8/2020	164	
7/14/2020	208	
2/23/2021	151	
7/20/2021		149

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	400	
6/22/2016	398	
8/9/2016	399	
10/4/2016	389	
11/21/2016	386	
1/17/2017	344	
3/21/2017	396	
5/30/2017	370	
8/23/2017	374	
5/22/2018	375	
11/20/2018	370	
5/15/2019	380	
10/10/2019	373	
4/6/2020	333	
7/13/2020	350	
2/24/2021	325	
7/21/2021		322

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	349	
6/22/2016	374	
8/10/2016	348	
10/5/2016	344	
11/22/2016	342	
1/18/2017	359	
3/21/2017	352	
5/31/2017	313	
8/23/2017	349	
5/24/2018	349	
11/19/2018	348	
5/15/2019	411	
10/9/2019	359	
4/6/2020	354	
7/13/2020	392	
2/24/2021	346	
7/20/2021		330

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	123	
6/20/2016	168	
8/8/2016	180	
8/24/2016	180	
10/3/2016	184	
10/26/2016	171	
11/21/2016	179	
1/17/2017	188	
3/22/2017	155	
4/18/2017	156	
5/31/2017	151	
8/23/2017	155	
5/22/2018	172	
6/12/2018	179	
10/17/2018	200	
11/19/2018	221	
4/10/2019	200	
5/14/2019	168	
10/8/2019	190	
10/16/2019	194	
4/6/2020	152	
7/13/2020	163	
2/22/2021	178	
7/12/2021		159

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	224	
6/22/2016	266	
8/9/2016	260	
8/24/2016	274	
10/4/2016	243	
10/26/2016	254	
11/21/2016	263	
1/18/2017	431	
3/22/2017	318	
4/18/2017	296	
5/31/2017	306	
8/23/2017	298	
5/24/2018	297	
6/12/2018	318	
10/17/2018	392	
11/19/2018	387	
4/10/2019	348	
5/14/2019	254	
10/8/2019	371	
10/16/2019	346	
4/6/2020	177	
7/13/2020	264	
2/22/2021	312	
7/12/2021		252

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	261	
6/20/2016	295	
8/9/2016	318	
8/24/2016	319	
10/3/2016	293	
10/26/2016	311	
11/21/2016	320	
1/18/2017	417	
3/22/2017	292	
4/18/2017	302	
5/31/2017	284	
8/23/2017	297	
5/23/2018	296	
6/12/2018	355	
10/17/2018	342	
11/19/2018	289	
4/10/2019	356	
5/14/2019	254	
10/10/2019	302	
10/16/2019	356	
4/6/2020	222	
7/14/2020	259	
2/22/2021	271	
7/12/2021		242

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	198	
6/21/2016	327	
10/12/2017	317	
10/13/2017	302	
10/14/2017	283	
10/15/2017	294	
10/16/2017	284	
10/17/2017	294	
11/16/2017	299	
5/23/2018	321	
11/20/2018	306	
5/15/2019	302	
10/8/2019	294	
4/8/2020	280	
7/14/2020	261	
2/23/2021	292	
7/20/2021		254

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	282	
6/21/2016	291	
10/12/2017	300	
10/13/2017	298	
10/14/2017	299	
10/15/2017	307	
10/16/2017	299	
10/17/2017	294	
11/16/2017	308	
5/23/2018	344	
11/20/2018	327	
5/15/2019	305	
10/9/2019	329	
4/8/2020	281	
7/15/2020	280	
2/23/2021	306	
7/20/2021		281

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	0.146 (J)	
6/20/2016	0.148 (J)	
8/8/2016	0.137 (J)	
8/24/2016	0.133 (J)	
10/3/2016	0.103 (J)	
10/26/2016	0.05 (J)	
11/21/2016	0.047 (J)	
1/17/2017	0.09 (J)	
3/22/2017	0.12	
4/18/2017	0.12	
5/30/2017	0.13	
8/23/2017	0.16	
2/13/2018	0.14	
5/22/2018	0.16	
6/12/2018	0.16	
10/17/2018	0.18	
11/19/2018	0.15	
4/10/2019	0.102	
5/14/2019	0.119	
10/8/2019	0.0924 (J)	
10/16/2019	0.0756 (J)	
4/6/2020	0.101	
7/13/2020	0.0678 (J)	
2/22/2021	0.082 (J)	
7/12/2021		0.125

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	0.337	
6/23/2016	0.155 (J)	
8/10/2016	0.123 (J)	
10/5/2016	0.086 (J)	
11/21/2016	0.056 (J)	
1/17/2017	0.103 (J)	
3/21/2017	0.15	
5/31/2017	0.18	
8/23/2017	0.23	
2/15/2018	0.23	
5/24/2018	0.13	
11/19/2018	0.26	
5/15/2019	0.276	
10/9/2019	0.142	
4/8/2020	0.243	
7/14/2020	0.224	
2/23/2021	0.202	
7/20/2021		0.268

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	0.084 (J)	
6/22/2016	0.106 (J)	
8/9/2016	0.092 (J)	
10/4/2016	0.049 (J)	
11/21/2016	<0.3	
1/17/2017	0.044 (J)	
3/21/2017	0.08 (J)	
5/30/2017	0.096 (J)	
8/23/2017	0.11	
2/14/2018	0.1	
5/22/2018	0.1	
11/20/2018	0.1	
5/15/2019	0.1	
10/10/2019	0.0915 (J)	
4/6/2020	0.118	
7/13/2020	0.108	
2/24/2021	0.107	
7/21/2021		0.16

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	0.153 (J)	
6/22/2016	0.146 (J)	
8/10/2016	0.127 (J)	
10/5/2016	0.09 (J)	
11/22/2016	0.012 (J)	
1/18/2017	0.071 (J)	
3/21/2017	0.09 (J)	
5/31/2017	0.11	
8/23/2017	0.13	
2/15/2018	0.12	
5/24/2018	0.15	
11/19/2018	0.16	
5/15/2019	0.185	
10/9/2019		0.215
4/6/2020		0.254
7/13/2020		0.161
2/24/2021		0.172
7/20/2021		0.219

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	0.149 (J)	
6/20/2016	0.148 (J)	
8/8/2016	0.134 (J)	
8/24/2016	0.129 (J)	
10/3/2016	0.086 (J)	
10/26/2016	0.027 (J)	
11/21/2016	0.027 (J)	
1/17/2017	0.066 (J)	
3/22/2017	0.13	
4/18/2017	0.16	
5/31/2017	0.13	
8/23/2017	0.16	
2/13/2018	0.22	
5/22/2018	0.17	
6/12/2018	0.16	
10/17/2018	0.16	
11/19/2018	0.18	
4/10/2019	0.262	
5/14/2019	0.17	
10/8/2019	0.164	
10/16/2019	0.114	
4/6/2020	0.207	
7/13/2020	0.132	
2/22/2021	0.209	
7/12/2021		0.196

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	0.243 (J)	
6/22/2016	0.269 (J)	
8/9/2016	0.363	
8/24/2016	0.346	
10/4/2016	0.266 (J)	
10/26/2016	0.266 (J)	
11/21/2016	0.244 (J)	
1/18/2017	0.385	
3/22/2017	0.41	
4/18/2017	0.29	
5/31/2017	0.37	
8/23/2017	0.55	
2/13/2018	0.27	
5/24/2018	0.6	
6/12/2018	0.53	
10/17/2018	0.63	
11/19/2018	0.31	
4/10/2019	0.273	
5/14/2019	0.281	
10/8/2019	0.225	
10/16/2019	0.106	
4/6/2020	0.314	
7/13/2020	0.13	
2/22/2021	0.246	
7/12/2021		0.287

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	0.372	
6/20/2016	0.361	
8/9/2016	0.326	
8/24/2016	0.329	
10/3/2016	0.287 (J)	
10/26/2016	0.194 (J)	
11/21/2016	0.192 (J)	
1/18/2017	0.223 (J)	
3/22/2017	0.32	
4/18/2017	0.32	
5/31/2017	0.31	
8/23/2017	0.38	
2/13/2018	0.38	
5/23/2018	0.38	
6/12/2018	0.39	
10/17/2018	0.39	
11/19/2018	0.36	
4/10/2019	0.384	
5/14/2019	0.335	
10/10/2019	0.304	
10/16/2019	0.302	
4/6/2020	0.368	
7/14/2020	0.33	
2/22/2021	0.357	
7/12/2021		0.35

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	0.2 (J)	
6/21/2016	0.163 (J)	
10/12/2017	0.17	
10/13/2017	0.19	
10/14/2017	0.2	
10/15/2017	0.2	
10/16/2017	0.2	
10/17/2017	0.19	
11/16/2017	0.18	
2/14/2018	0.18	
5/23/2018	0.18	
11/20/2018	0.19	
5/15/2019	0.169	
10/8/2019	0.183	
4/8/2020	0.153	
7/14/2020	0.193	
2/23/2021	0.2	
7/20/2021		0.286

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	0.212 (J)	
6/21/2016	0.211 (J)	
10/12/2017	0.22	
10/13/2017	0.23	
10/14/2017	0.22	
10/15/2017	0.22	
10/16/2017	0.22	
10/17/2017	0.21	
11/16/2017	0.22	
2/14/2018	0.21	
5/23/2018	0.21	
11/20/2018	0.21	
5/15/2019	0.192	
10/9/2019	0.189	
4/8/2020	0.192	
7/15/2020	0.196	
2/23/2021	0.208	
7/20/2021		0.262

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	1490	
6/20/2016	1420	
8/8/2016	1460	
8/24/2016	1450	
10/3/2016	1460	
10/26/2016	1330	
11/21/2016	1420	
1/17/2017	1350	
3/22/2017	1500	
4/18/2017	1300	
5/30/2017	1400	
8/23/2017	1500	
5/22/2018	2100 (o)	
6/12/2018	1500	
10/17/2018	1400	
11/19/2018	1300	
4/10/2019	1700	
5/14/2019	1560	
10/8/2019	1540	
10/16/2019	1680	
4/6/2020	1530	
7/13/2020	1450	
2/22/2021	1400	
7/12/2021		1560

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	1250	
6/23/2016	1010	
8/10/2016	992	
10/5/2016	1010	
11/21/2016	834	
1/17/2017	700	
3/21/2017	660	
5/31/2017	700	
8/23/2017	700	
5/24/2018	560	
11/19/2018	720	
5/15/2019	780	
10/9/2019	748	
4/8/2020	658	
7/14/2020	845	
2/23/2021	747	
7/20/2021		665

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	1750	
6/22/2016	1720	
8/9/2016	1740	
10/4/2016	1750	
11/21/2016	1690	
1/17/2017	1670	
3/21/2017	1900	
5/30/2017	1700	
8/23/2017	1700	
5/22/2018	2200	
11/20/2018	1400	
5/15/2019	1510	
10/10/2019	719	
4/6/2020	1400	
7/13/2020	1300	
2/24/2021	1330	
7/21/2021		1420

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	2360	
6/22/2016	1960	
8/10/2016	2300	
10/5/2016	2330	
11/22/2016	2220	
1/18/2017	1950	
3/21/2017	2400	
5/31/2017	2200	
8/23/2017	2100	
5/24/2018	2300	
11/19/2018	2100	
5/15/2019	2800	
10/9/2019	2550	
4/6/2020	2580	
7/13/2020	2610	
2/24/2021	2280	
7/20/2021		2500

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	745	
6/20/2016	964	
8/8/2016	1100	
8/24/2016	1130	
10/3/2016	1140	
10/26/2016	1060	
11/21/2016	1100	
1/17/2017	1160	
3/22/2017	900	
4/18/2017	870	
5/31/2017	1100	
8/23/2017	920	
5/22/2018	1200	
6/12/2018	860	
10/17/2018	970	
11/19/2018	1000	
4/10/2019	889	
5/14/2019	948	
10/8/2019	1230	
10/16/2019	1170	
4/6/2020	786	
7/13/2020	843	
2/22/2021	864	
7/12/2021		763

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	1890	
6/22/2016	2100	
8/9/2016	2050	
8/24/2016	2190	
10/4/2016	1950	
10/26/2016	1980	
11/21/2016	2060	
1/18/2017	2620	
3/22/2017	3200	
4/18/2017	2500	
5/31/2017	2800	
8/23/2017	2600	
5/24/2018	2700	
6/12/2018	2500	
10/17/2018	2700	
11/19/2018	3000	
4/10/2019	2460	
5/14/2019	2460	
10/8/2019	2950	
10/16/2019	2820	
4/6/2020	1670	
7/13/2020	2130	
2/22/2021	3040	
7/12/2021		2380

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	2260	
6/20/2016	2500	
8/9/2016	2750	
8/24/2016	2770	
10/3/2016	3060	
10/26/2016	2650	
11/21/2016	2720	
1/18/2017	2650	
3/22/2017	2700	
4/18/2017	2400	
5/31/2017	2700	
8/23/2017	2700	
5/23/2018	2400	
6/12/2018	2600	
10/17/2018	2600	
11/19/2018	2400	
4/10/2019	2090	
5/14/2019	2240	
10/10/2019	2690	
10/16/2019	3050	
4/6/2020	1810	
7/14/2020	1970	
2/22/2021	2040	
7/12/2021		1930

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	1050	
6/21/2016	1410	
10/12/2017	1400	
10/13/2017	1400	
10/14/2017	1300	
10/15/2017	1300	
10/16/2017	1300	
10/17/2017	1300	
11/16/2017	1300	
5/23/2018	1900 (o)	
11/20/2018	1100	
5/15/2019	1510	
10/8/2019	1570	
4/8/2020	1270	
7/14/2020	1330	
2/23/2021	1320	
7/20/2021		1170

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	1550	
6/21/2016	1470	
10/12/2017	1400	
10/13/2017	1600	
10/14/2017	1400	
10/15/2017	1400	
10/16/2017	1400	
10/17/2017	1400	
11/16/2017	1400	
5/23/2018	2100 (o)	
11/20/2018	1400	
5/15/2019	1640	
10/9/2019	1550	
4/8/2020	1380	
7/15/2020	1410	
2/23/2021	1420	
7/20/2021		1500

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1
4/26/2016	2080	
6/20/2016	2060	
8/8/2016	2070	
8/24/2016	2040	
10/3/2016	2110	
10/26/2016	2000	
11/21/2016	2070	
1/17/2017	1930	
3/22/2017	2060	
4/18/2017	2140	
5/30/2017	2240	
8/23/2017	2160	
5/22/2018	2380	
6/12/2018	2400	
10/17/2018	2220	
11/19/2018	2360	
4/10/2019	2630	
5/14/2019	2340	
10/8/2019	2330	
10/16/2019	3650 (o)	
4/6/2020	2240	
7/13/2020	2240	
2/22/2021	2230	
7/12/2021		2210

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10
4/27/2016	1940	
6/23/2016	1680	
8/10/2016	1660	
10/5/2016	1640	
11/21/2016	1390	
1/17/2017	1300	
3/21/2017	1170	
5/31/2017	1210	
8/23/2017	1160	
5/24/2018	1100	
11/19/2018	1220	
5/15/2019	1230	
10/9/2019	1120	
4/8/2020	1120	
7/14/2020	1270	
2/23/2021	1110	
7/20/2021		1080

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-11	MW-11
4/26/2016	2800	
6/22/2016	2550	
8/9/2016	2860	
10/4/2016	2800	
11/21/2016	2920	
1/17/2017	2750	
3/21/2017	2750	
5/30/2017	2890	
8/23/2017	2760	
5/22/2018	2610	
11/20/2018	2480	
5/15/2019	2560	
10/10/2019	2460	
4/6/2020	2430	
7/13/2020	2400	
2/24/2021	2370	
7/21/2021		2210

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12
4/28/2016	3730	
6/22/2016	2760	
8/10/2016	3710	
10/5/2016	3580	
11/22/2016	3400	
1/18/2017	3360	
3/21/2017	3320	
5/31/2017	3440	
8/23/2017	3250	
5/24/2018	3300	
11/19/2018	3400	
5/15/2019	3890	
10/9/2019	4090	
4/6/2020	4060	
7/13/2020	4460	
2/24/2021	3810	
7/20/2021		3680

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2
4/25/2016	1260	
6/20/2016	1620	
8/8/2016	1740	
8/24/2016	1720	
10/3/2016	1800	
10/26/2016	1800	
11/21/2016	1740	
1/17/2017	1960	
3/22/2017	1510	
4/18/2017	1580	
5/31/2017	1730	
8/23/2017	1550	
5/22/2018	1500	
6/12/2018	1550	
10/17/2018	1740	
11/19/2018	1990	
4/10/2019	1250	
5/14/2019	1480	
10/8/2019	1840	
10/16/2019	1830	
4/6/2020	1440	
7/13/2020	1540	
2/22/2021	1620	
7/12/2021		1390

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3
4/25/2016	2720	
6/22/2016	3250	
8/9/2016	3050	
8/24/2016	3080	
10/4/2016	2900	
10/26/2016	2940	
11/21/2016	3090	
1/18/2017	4020	
3/22/2017	4180	
4/18/2017	4440	
5/31/2017	3970	
8/23/2017	4050	
5/24/2018	3680	
6/12/2018	3820	
10/17/2018	4730	
11/19/2018	4710	
4/10/2019	3680	
5/14/2019	3580	
10/8/2019	4720	
10/16/2019	4210	
4/6/2020	2630	
7/13/2020	3650	
2/22/2021	4670	
7/12/2021		3510

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4
4/25/2016	3300	
6/20/2016	3870	
8/9/2016	4140	
8/24/2016	4190	
10/3/2016	4190	
10/26/2016	4400	
11/21/2016	4230	
1/18/2017	4120	
3/22/2017	3980	
4/18/2017	3880	
5/31/2017	4210	
8/23/2017	3990	
5/23/2018	3740	
6/12/2018	4080	
10/17/2018	4250	
11/19/2018	3920	
4/10/2019	3280	
5/14/2019	3130	
10/10/2019	4000	
10/16/2019	4060	
4/6/2020	2820	
7/14/2020	3310	
2/22/2021	3190	
7/12/2021		3000

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7
4/27/2016	1640	
6/21/2016	2460	
10/12/2017	2460	
10/13/2017	2420	
10/14/2017	2320	
10/15/2017	1150	
10/16/2017	2320	
10/17/2017	2360	
11/16/2017	2460	
5/23/2018	2390	
11/20/2018	2090	
5/15/2019	2310	
10/8/2019	2340	
4/8/2020	2230	
7/14/2020	2210	
2/23/2021	2320	
7/20/2021		2110

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/11/2021 9:09 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8
4/27/2016	2480	
6/21/2016	2360	
10/12/2017	2530	
10/13/2017	2740	
10/14/2017	2630	
10/15/2017	2530	
10/16/2017	2740	
10/17/2017	2650	
11/16/2017	2650	
5/23/2018	2750	
11/20/2018	2520	
5/15/2019	2540	
10/9/2019	2590	
4/8/2020	2450	
7/15/2020	2460	
2/23/2021	2550	
7/20/2021		2420

FIGURE G.

Appendix III Interwell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 12:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**MW-10**	**0.0596**	**n/a**	**7/20/2021**	**0.201**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-11**	**0.0596**	**n/a**	**7/21/2021**	**0.104**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-12**	**0.0596**	**n/a**	**7/20/2021**	**0.227**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**MW-11**	**3.837**	**n/a**	**7/21/2021**	**73.8**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-12**	**3.837**	**n/a**	**7/20/2021**	**9.85**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-7**	**3.837**	**n/a**	**7/20/2021**	**6.35**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-8**	**3.837**	**n/a**	**7/20/2021**	**14.3**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
pH (SU)	**MW-10**	**6.35**	**3.77**	**7/20/2021**	**6.46**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-11**	**6.35**	**3.77**	**7/21/2021**	**6.74**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-7**	**6.35**	**3.77**	**7/20/2021**	**6.58**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-8**	**6.35**	**3.77**	**7/20/2021**	**6.64**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**

Appendix III Interwell Prediction Limits - All Results

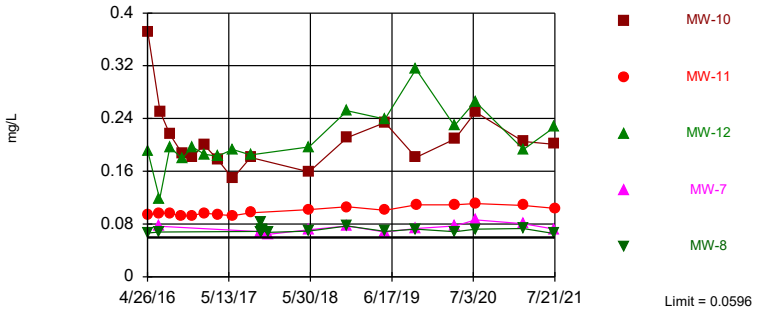
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 12:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**MW-10**	**0.0596**	**n/a**	**7/20/2021**	**0.201**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-11**	**0.0596**	**n/a**	**7/21/2021**	**0.104**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**MW-12**	**0.0596**	**n/a**	**7/20/2021**	**0.227**	**Yes**	**95**	**n/a**	**n/a**	**20**	**n/a**	**n/a**	**0.0002155**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	MW-7	0.0596	n/a	7/20/2021	0.0721J	No	95	n/a	n/a	20	n/a	n/a	0.0002155	NP Inter (normality) 1 of 2
Boron (mg/L)	MW-8	0.0596	n/a	7/20/2021	0.0656J	No	95	n/a	n/a	20	n/a	n/a	0.0002155	NP Inter (normality) 1 of 2
Chloride (mg/L)	MW-10	3.837	n/a	7/20/2021	3.64	No	96	1.291	0.1517	3.125	None	x^(1/3)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	**MW-11**	**3.837**	**n/a**	**7/21/2021**	**73.8**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-12**	**3.837**	**n/a**	**7/20/2021**	**9.85**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-7**	**3.837**	**n/a**	**7/20/2021**	**6.35**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Chloride (mg/L)	**MW-8**	**3.837**	**n/a**	**7/20/2021**	**14.3**	**Yes**	**96**	**1.291**	**0.1517**	**3.125**	**None**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
pH (SU)	**MW-10**	**6.35**	**3.77**	**7/20/2021**	**6.46**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-11**	**6.35**	**3.77**	**7/21/2021**	**6.74**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	MW-12	6.35	3.77	7/20/2021	5.53	No	98	n/a	n/a	0	n/a	n/a	0.0004044	NP Inter (normality) 1 of 2
pH (SU)	**MW-7**	**6.35**	**3.77**	**7/20/2021**	**6.58**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**
pH (SU)	**MW-8**	**6.35**	**3.77**	**7/20/2021**	**6.64**	**Yes**	**98**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.0004044**	**NP Inter (normality) 1 of 2**

Exceeds Limit: MW-10, MW-11, MW-12

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 95 background values. 20% NDs. Annual per-constituent alpha = 0.002153. Individual comparison alpha = 0.0002155 (1 of 2). Comparing 5 points to limit.

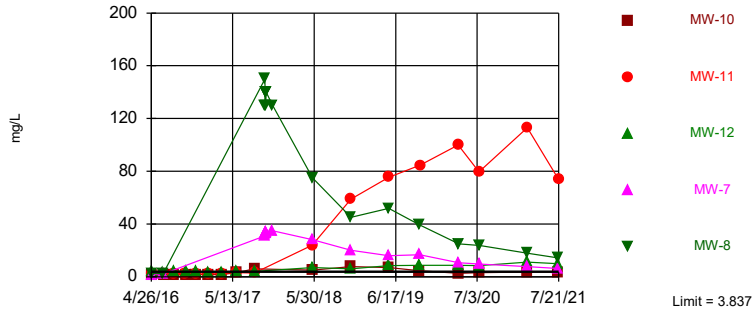
Constituent: Boron Analysis Run 12/6/2021 12:04 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Exceeds Limit: MW-11, MW-12, MW-7, MW-8

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=1.291, Std. Dev.=0.1517, n=96, 3.125% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9671, critical = 0.965. Kappa = 1.808 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

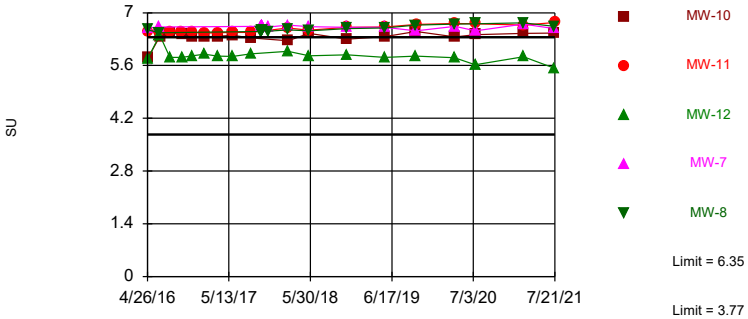
Constituent: Chloride Analysis Run 12/6/2021 12:04 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Exceeds Limits: MW-10, MW-11, MW-7, MW-8

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 98 background values. Annual per-constituent alpha = 0.004041. Individual comparison alpha = 0.0004044 (1 of 2). Comparing 5 points to limit.

Constituent: pH Analysis Run 12/6/2021 12:04 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/6/2021 12:07 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-4 (bg)	MW-3 (bg)	MW-1 (bg)	MW-11	MW-10	MW-8	MW-12	MW-7
4/25/2016	0.0241 (J)	0.0414 (J)	0.028 (J)						
4/26/2016				0.0231 (J)	0.094 (J)				
4/27/2016						0.371	0.0662 (J)		0.253 (o)
4/28/2016								0.19	
6/20/2016	0.0284 (J)	0.0434 (J)		0.0227 (J)					
6/21/2016							0.0681 (J)		0.0768 (J)
6/22/2016			0.0433 (J)		0.0959 (J)			0.118	
6/23/2016						0.251			
8/8/2016	0.034 (J)			0.0278 (J)					
8/9/2016		0.0453 (J)	0.0429 (J)		0.0964 (J)				
8/10/2016						0.216		0.197	
8/24/2016	0.0316 (J)	0.0451 (J)	0.0431 (J)	0.0247 (J)					
10/3/2016	0.0367 (J)	0.0511 (J)		0.0307 (J)					
10/4/2016			0.04 (J)		0.0916 (J)				
10/5/2016						0.187		0.179	
10/26/2016	0.0331 (J)	0.0507 (J)	0.0375 (J)	0.0241 (J)					
11/21/2016	0.035 (J)	0.0458 (J)	0.0406 (J)	0.0202 (J)	0.0929 (J)	0.182			
11/22/2016								0.197	
1/17/2017	0.0259 (J)			0.0201 (J)	0.0963 (J)	0.2			
1/18/2017		0.0445 (J)	0.0548 (J)					0.186	
3/21/2017					0.0947 (J)	0.178		0.183	
3/22/2017	0.0243 (J)	0.0432 (J)	0.0344 (J)	0.0224 (J)					
4/18/2017	0.0206 (J)	0.0409 (J)	<0.1015	<0.1015					
5/30/2017				<0.1015	0.0926 (J)				
5/31/2017	0.0234 (J)	0.0392 (J)	0.0454 (J)			0.149		0.193	
8/23/2017	0.0267 (J)	0.042 (J)	0.0425 (J)	0.0253 (J)	0.0968 (J)	0.181		0.185	
10/12/2017							0.0687 (J)		0.0685 (J)
10/13/2017							0.0831 (J)		0.0674 (J)
10/14/2017							0.0702 (J)		0.0756 (J)
10/15/2017							0.0702 (J)		0.0719 (J)
10/16/2017							0.0707 (J)		0.0726 (J)
10/17/2017							0.0695 (J)		0.0716 (J)
11/16/2017							0.0675 (J)		0.0644 (J)
5/22/2018	0.0251 (J)			0.0224 (J)	0.102				
5/23/2018		0.0433 (J)					0.0693 (J)		0.0715 (J)
5/24/2018			0.0339 (J)			0.159		0.197	
6/12/2018	0.0275 (J)	0.0478 (J)	0.0371 (J)	0.0214 (J)					
10/17/2018	0.0321 (J)	0.0468 (J)	0.0596 (J)	0.0216 (J)					
11/19/2018	0.0324 (J)	0.0526 (J)	0.0514 (J)	0.0237 (J)		0.211		0.252	
11/20/2018					0.106		0.0771 (J)		0.0772 (J)
4/10/2019	<0.1015	0.0438 (J)	<0.1015	0.0304 (J)					
5/14/2019	<0.1015	<0.203 (o)	<0.1015	<0.1015					
5/15/2019					0.101 (J)	0.234	0.0689 (J)	0.239	0.0678 (J)
10/8/2019	0.0371 (J)		0.0537 (J)	<0.1015					0.073 (J)
10/9/2019						0.181	0.0723 (J)	0.315	
10/10/2019		0.0487 (J)			0.109				
10/16/2019	0.0419 (J)	0.0505 (J)	0.05 (J)	0.0385 (J)					
4/6/2020	<0.1015	0.0428 (J)	<0.1015	<0.1015	0.109			0.229	
4/8/2020						0.209	0.0683 (J)		0.077 (J)
7/13/2020	<0.1015		0.0366 (J)	<0.1015	0.111			0.266	
7/14/2020		0.0441 (J)				0.25			0.0865 (J)
7/15/2020							0.0723 (J)		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/6/2021 12:07 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2 (bg)	MW-4 (bg)	MW-3 (bg)	MW-1 (bg)	MW-11	MW-10	MW-8	MW-12	MW-7
2/22/2021	<0.1015	0.0397 (J)	<0.1015	0.0307 (J)					
2/23/2021						0.205	0.0731 (J)		0.0803 (J)
2/24/2021					0.108			0.193	
7/12/2021	<0.1015	0.0411 (J)	<0.1015	<0.1015					
7/20/2021						0.201	0.0656 (J)	0.227	0.0721 (J)
7/21/2021					0.104				

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/6/2021 12:07 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3 (bg)	MW-4 (bg)	MW-2 (bg)	MW-11	MW-1 (bg)	MW-8	MW-7	MW-10	MW-12
4/25/2016	1.32	1.53	1.9						
4/26/2016				2.16	1.94				
4/27/2016						2.34	1.71	1.46	
4/28/2016									4.12
6/20/2016		1.85	3.43		2.09				
6/21/2016						2.29	2.04		
6/22/2016	1.46			2.16					3.44
6/23/2016								1.49	
8/8/2016			3.31		2.18				
8/9/2016	1.35	1.95		2.19					
8/10/2016								1.55	4.15
8/24/2016	1.47	2.07	3.23		2.22				
10/3/2016		2.02	3.21		2.34				
10/4/2016	1.59			2.21					
10/5/2016								1.58	4.12
10/26/2016	1.27	2.07	3.35		2.34				
11/21/2016	1.38	2.39	3.34	2.24	2.5			1.62	
11/22/2016									3.98
1/17/2017			3.58	2.23	2.68			1.61	
1/18/2017	1.34	1.9							3.6
3/21/2017				2.5				1.6 (J)	3.6
3/22/2017	2	1.5 (J)	3.4		3.7				
4/18/2017	2.2	1.6 (J)	2.6		2.4				
5/30/2017				3.2	2.6				
5/31/2017	1.5 (J)	2.1	4.4					3.2	3.9
8/23/2017	1.8 (J)	2.3	4.4	2.8	2.7			6.1	4.2
10/12/2017						150	31		
10/13/2017						130	32		
10/14/2017						140	33		
10/15/2017						130	34		
10/16/2017						140	34		
10/17/2017						140	34		
11/16/2017						130	35		
5/22/2018			3.2	24	2.3				
5/23/2018		2				75	28		
5/24/2018	1.6 (J)							5	7.1
6/12/2018	1.4 (J)	1.7 (J)	3.7		2.3				
10/17/2018	<2	1.5 (J)	4.6		1.7 (J)				
11/19/2018	<2	<2	3		1.7 (J)			7.8	6.1
11/20/2018				59		45	20		
4/10/2019	2.25	1.88	1.76		2.36				
5/14/2019	2.28	1.82	2.98		2.28				
5/15/2019				75.4		52	15.9	6.93	8.51
10/8/2019	1.36		4.26		2.31		16.8		
10/9/2019						39.2		4.51	8.73
10/10/2019		1.93		84.6					
10/16/2019	1.4	1.92	4.04		2.42				
4/6/2020	1.72	1.5	2.43	100	2.01				8.58
4/8/2020						24.9	10.6	2.64	
7/13/2020	1.34		4.05	79.6	2.1				8.35
7/14/2020		1.61					9.68	3.09	
7/15/2020						23.8			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/6/2021 12:07 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3 (bg)	MW-4 (bg)	MW-2 (bg)	MW-11	MW-1 (bg)	MW-8	MW-7	MW-10	MW-12
2/22/2021	2.22	1.52	1.72		2.16				
2/23/2021						17.9	7.85	3.63	
2/24/2021				113					11.2
7/12/2021	2.13	1.56	2.36		2.19				
7/20/2021						14.3	6.35	3.64	9.85
7/21/2021				73.8					

Prediction Limit

Constituent: pH (SU) Analysis Run 12/6/2021 12:07 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3 (bg)	MW-4 (bg)	MW-2 (bg)	MW-1 (bg)	MW-11	MW-8	MW-10	MW-7	MW-12
4/25/2016	5.56	6.22	5.94						
4/26/2016				5.2	6.49				
4/27/2016						6.55	5.8	6.6	
4/28/2016									5.78
6/20/2016		6.21	5.96	5.18					
6/21/2016						6.47		6.62	
6/22/2016	5.57				6.51				6.41
6/23/2016							6.38		
8/8/2016			5.88	5.12					
8/9/2016	5.67	6.11			6.49				
8/10/2016							6.47		5.82
8/24/2016	5.63	6.11							
10/3/2016		6.13 (D)	5.91 (D)	5.21 (D)					
10/4/2016	5.69 (D)				6.51 (D)				
10/5/2016							6.42 (D)		5.82 (D)
10/26/2016	5.56	6.12	5.84	5.2					
11/21/2016	5.42 (D)	6.09 (D)	5.82 (D)	5.19 (D)	6.48		6.38		
11/22/2016									5.86
1/17/2017			5.87 (D)	5.17 (D)	6.46		6.35		
1/18/2017	5.11 (D)	6.09 (D)							5.9
3/21/2017					6.47		6.38		5.85
3/22/2017	4.52 (D)	6.15 (D)	6.01 (D)	5.2 (D)					
4/18/2017	5.84	6.19	6.02	5.2					
5/30/2017				5.14 (D)	6.48				
5/31/2017	4.56 (D)	6.13 (D)	5.85 (D)				6.4		5.84
8/23/2017	4.77 (D)	6.12 (D)	5.89 (D)	5.12 (D)	6.48		6.33		5.91
10/12/2017						6.5		6.64	
10/13/2017						6.51		6.64	
10/14/2017						6.53		6.66	
10/15/2017						6.53		6.67	
10/16/2017						6.54		6.67	
10/17/2017						6.54		6.66	
11/16/2017						6.51		6.62	
2/13/2018	5.67	6.22	6.21	5.18					
2/14/2018					6.6	6.55		6.67	
2/15/2018							6.26		5.98
5/22/2018			6.04	5.2	6.54				
5/23/2018		6.21				6.52		6.63	
5/24/2018	5.19						6.45		5.86
6/12/2018	4.79	6.16	5.95	5.15					
10/17/2018	4.75	6.12	5.9	5.12					
11/19/2018	3.77 (E)	6.16	6.03	5.09			6.3		5.88
11/20/2018					6.61	6.58		6.61	
4/10/2019	5.54	6.14	6.1	5.11					
5/14/2019	5.71	6.23	6.07	5.19					
5/15/2019					6.62	6.6	6.37	6.61	5.82
10/8/2019	4.98		5.96	5.12				6.52	
10/9/2019						6.67	6.5		5.85
10/10/2019		6.15			6.69				
10/16/2019	4.51	6.19	5.98	5.16					
4/6/2020	5.91	6.35	6.21	5.21	6.72				5.81
4/8/2020						6.7	6.36	6.64	

Prediction Limit

Constituent: pH (SU) Analysis Run 12/6/2021 12:07 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3 (bg)	MW-4 (bg)	MW-2 (bg)	MW-1 (bg)	MW-11	MW-8	MW-10	MW-7	MW-12
7/13/2020	5.16		5.84	5.14	6.71				5.62
7/14/2020		6.2					6.42	6.52	
7/15/2020						6.71			
2/22/2021	5.59	6.19	6.1	5.06					
2/23/2021						6.73	6.45	6.7	
2/24/2021					6.67				5.83
7/12/2021	5.86	6.06	6.16	5.13					
7/20/2021						6.64	6.46	6.58	5.53
7/21/2021					6.74				

FIGURE H.

Appendix III Trend Tests - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:21 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	**MW-11**	**0.003449**	**83**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	**MW-2 (bg)**	**0.004722**	**127**	**105**	**Yes**	**24**	**25**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-11**	**20.55**	**117**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-12**	**1.362**	**88**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Fluoride (mg/L)	**MW-2 (bg)**	**0.01443**	**123**	**111**	**Yes**	**25**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**MW-11**	**0.05218**	**92**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**MW-8**	**0.05301**	**105**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix III Trend Tests - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:21 AM

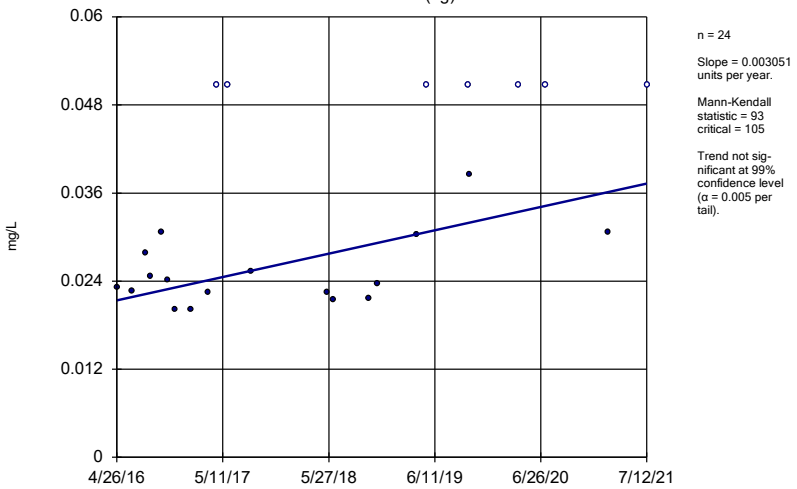
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW-1 (bg)	0.003051	93	105	No	24	29.17	n/a	n/a	0.01	NP
Boron (mg/L)	MW-10	-0.002309	-15	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-11**	**0.003449**	**83**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-12	0.013	62	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	**MW-2 (bg)**	**0.004722**	**127**	**105**	**Yes**	**24**	**25**	**n/a**	**n/a**	**0.01**	**NP**
Boron (mg/L)	MW-3 (bg)	0.002231	69	105	No	24	25	n/a	n/a	0.01	NP
Boron (mg/L)	MW-4 (bg)	-0.000257	-17	-98	No	23	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-1 (bg)	-0.0204	-17	-105	No	24	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**MW-11**	**20.55**	**117**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	**MW-12**	**1.362**	**88**	**63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	MW-2 (bg)	-0.05131	-15	-105	No	24	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-3 (bg)	0.06882	59	105	No	24	8.333	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-4 (bg)	-0.06862	-70	-105	No	24	4.167	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-7	-6.069	-33	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-8	-30.38	-58	-63	No	17	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-1 (bg)	-0.006304	-46	-111	No	25	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-11	0.004859	57	68	No	18	5.556	n/a	n/a	0.01	NP
Fluoride (mg/L)	**MW-2 (bg)**	**0.01443**	**123**	**111**	**Yes**	**25**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Fluoride (mg/L)	MW-3 (bg)	-0.007263	-15	-111	No	25	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-4 (bg)	0.005907	41	111	No	25	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-7	0	7	68	No	18	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-8	-0.003792	-58	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	MW-1 (bg)	-0.01437	-88	-105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-10	0.01449	30	68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	**MW-11**	**0.05218**	**92**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	MW-2 (bg)	0.04162	102	105	No	24	0	n/a	n/a	0.01	NP
pH (SU)	MW-3 (bg)	-0.01603	-16	-111	No	25	0	n/a	n/a	0.01	NP
pH (SU)	MW-4 (bg)	0.01244	57	111	No	25	0	n/a	n/a	0.01	NP
pH (SU)	MW-7	-0.008049	-21	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	**MW-8**	**0.05301**	**105**	**68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-1 (bg)



n = 24

Slope = 0.003051 units per year.

Mann-Kendall statistic = 93
critical = 105

Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

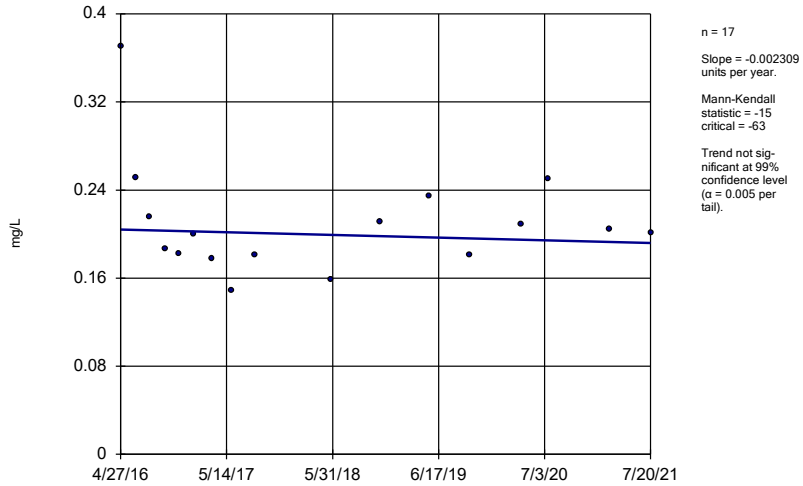
Constituent: Boron Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-10



n = 17

Slope = -0.002309 units per year.

Mann-Kendall statistic = -15
critical = -63

Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

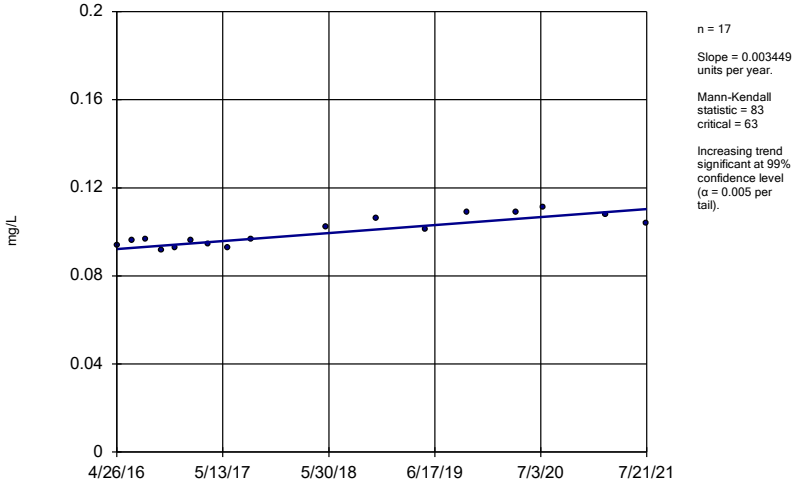
Constituent: Boron Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-11



n = 17

Slope = 0.003449 units per year.

Mann-Kendall statistic = 83
critical = 63

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

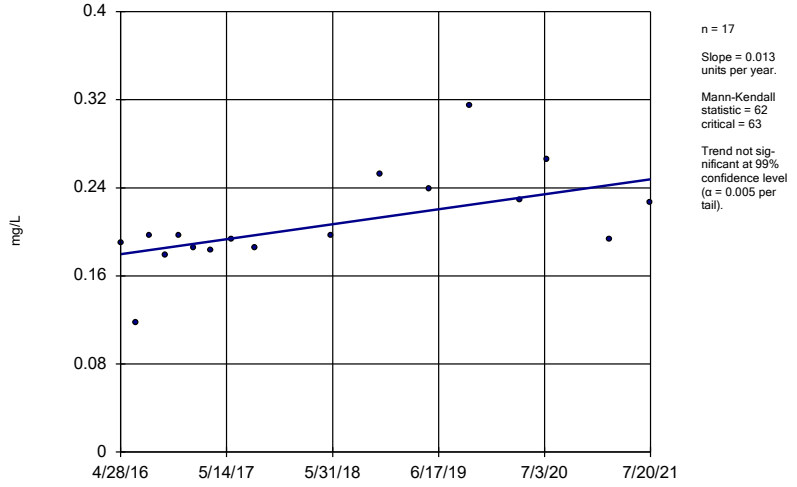
Constituent: Boron Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-12



n = 17

Slope = 0.013 units per year.

Mann-Kendall statistic = 62
critical = 63

Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

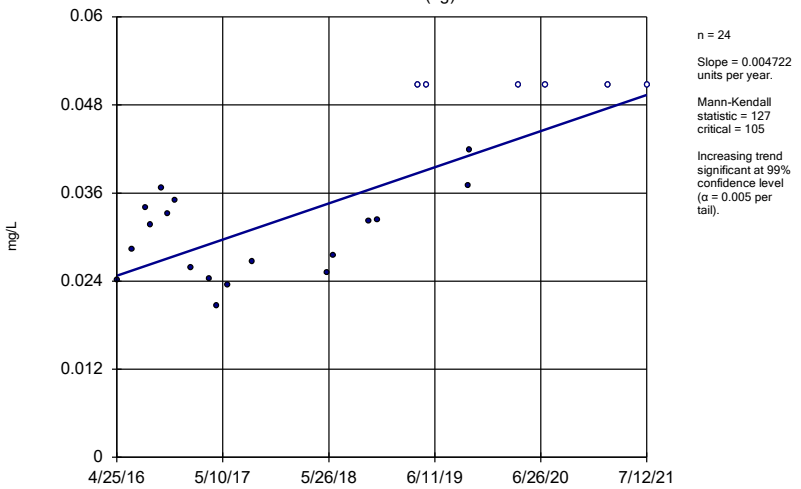
Constituent: Boron Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-2 (bg)



n = 24

Slope = 0.004722 units per year.

Mann-Kendall statistic = 127
critical = 105

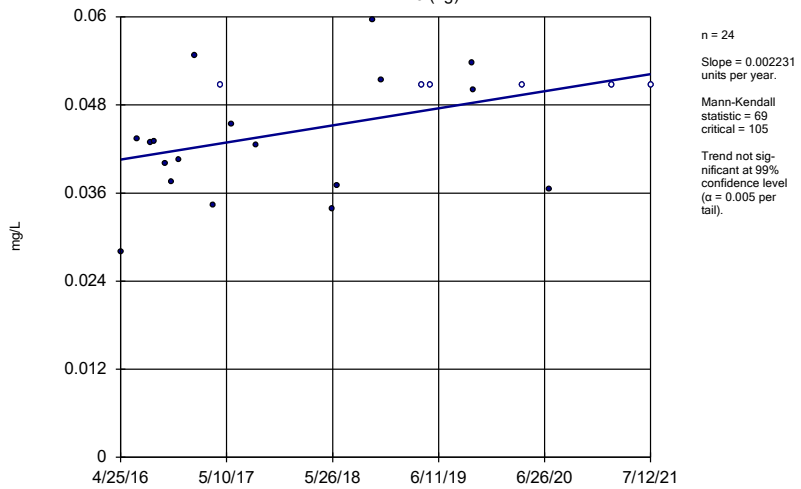
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-3 (bg)



n = 24

Slope = 0.002231 units per year.

Mann-Kendall statistic = 69
critical = 105

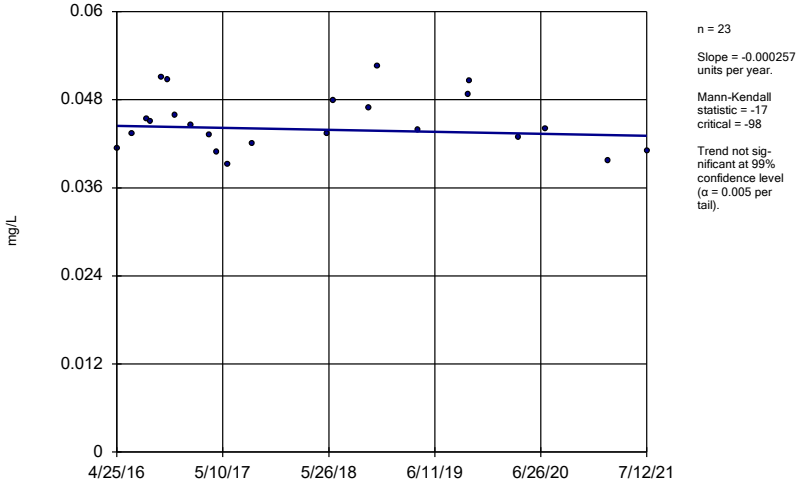
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-4 (bg)



n = 23

Slope = -0.000257 units per year.

Mann-Kendall statistic = -17
critical = -98

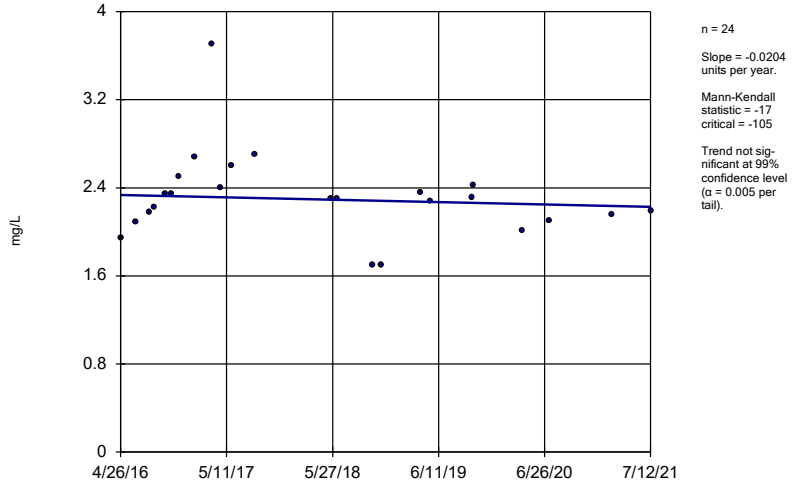
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-1 (bg)



n = 24

Slope = -0.0204 units per year.

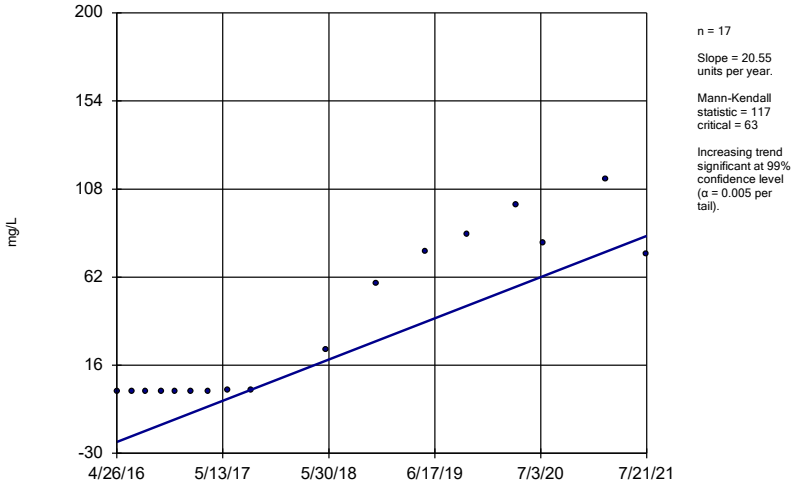
Mann-Kendall statistic = -17
critical = -105

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sen's Slope Estimator

MW-11



n = 17

Slope = 20.55 units per year.

Mann-Kendall statistic = 117
critical = 63

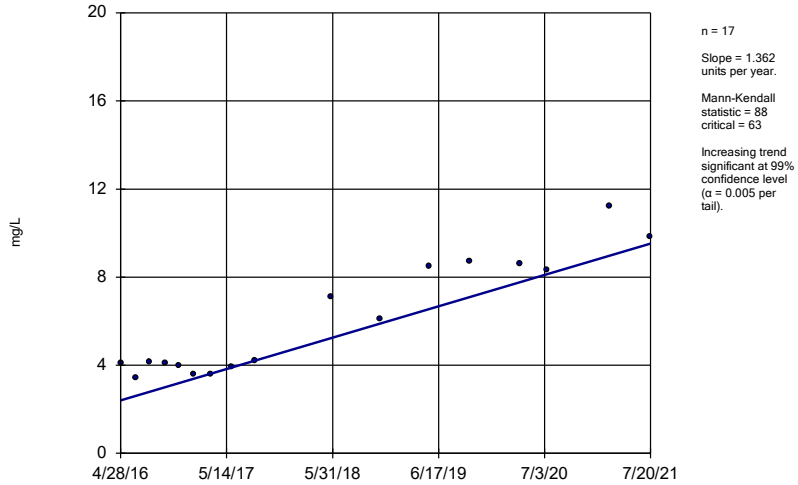
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sen's Slope Estimator

MW-12



n = 17

Slope = 1.362 units per year.

Mann-Kendall statistic = 88
critical = 63

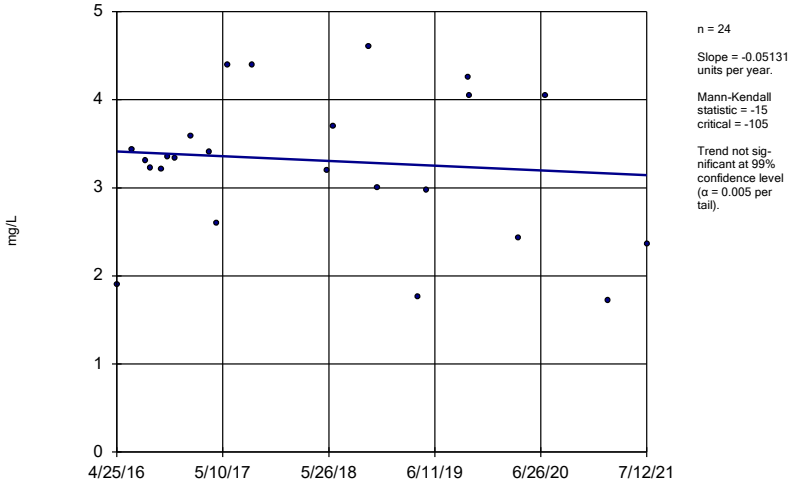
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sen's Slope Estimator

MW-2 (bg)



n = 24

Slope = -0.05131 units per year.

Mann-Kendall statistic = -15
critical = -105

Trend not significant at 99% confidence level (α = 0.005 per tail).

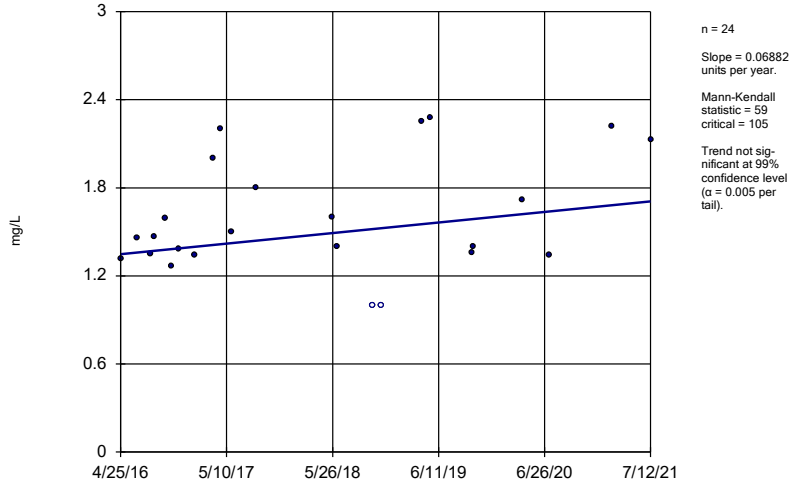
Constituent: Chloride Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-3 (bg)



n = 24

Slope = 0.06882 units per year.

Mann-Kendall statistic = 59
critical = 105

Trend not significant at 99% confidence level (α = 0.005 per tail).

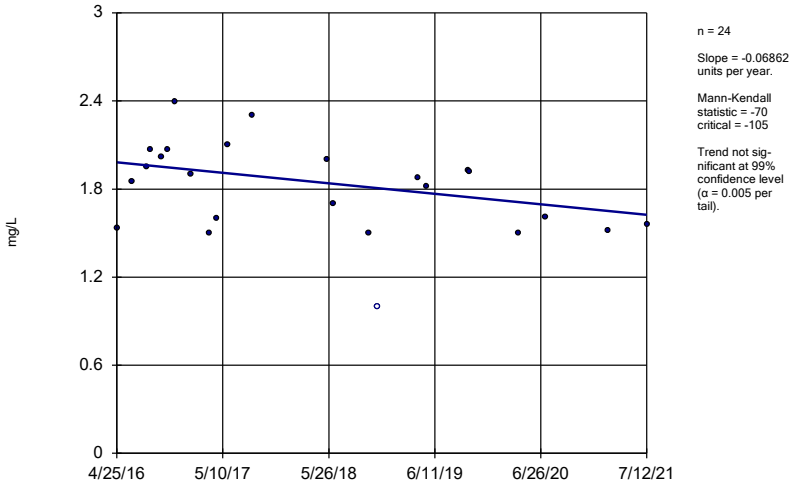
Constituent: Chloride Analysis Run 12/6/2021 10:19 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-4 (bg)



n = 24

Slope = -0.06862 units per year.

Mann-Kendall statistic = -70
critical = -105

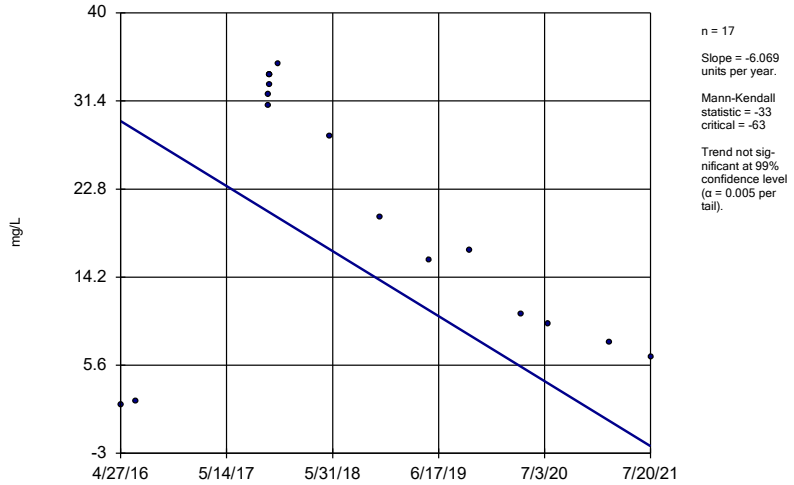
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-7



n = 17

Slope = -6.069 units per year.

Mann-Kendall statistic = -33
critical = -63

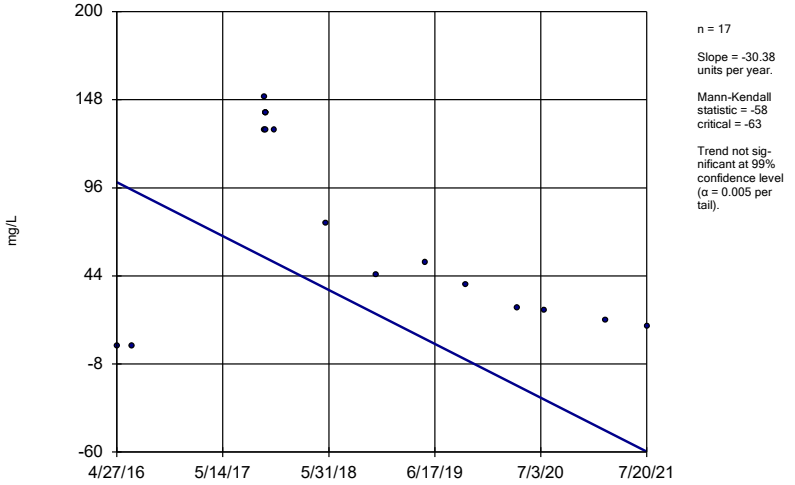
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-8



n = 17

Slope = -30.38 units per year.

Mann-Kendall statistic = -58
critical = -63

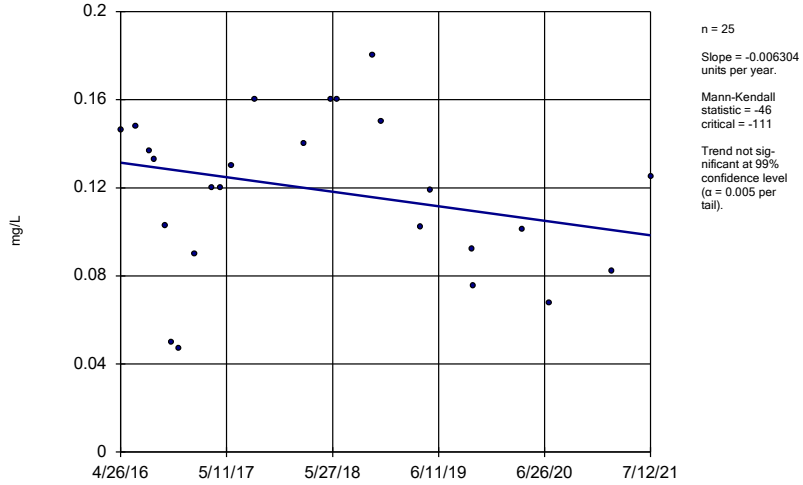
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-1 (bg)



n = 25

Slope = -0.006304 units per year.

Mann-Kendall statistic = -46
critical = -111

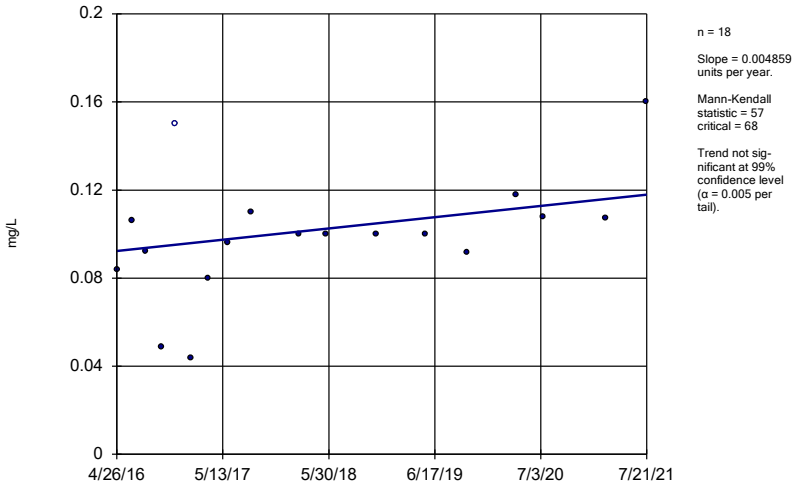
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-11



n = 18

Slope = 0.004859 units per year.

Mann-Kendall statistic = 57
critical = 68

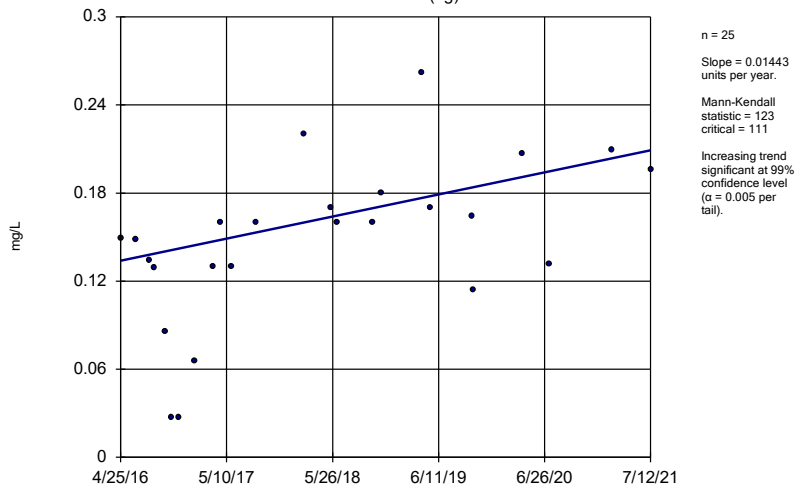
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-2 (bg)



n = 25

Slope = 0.01443 units per year.

Mann-Kendall statistic = 123
critical = 111

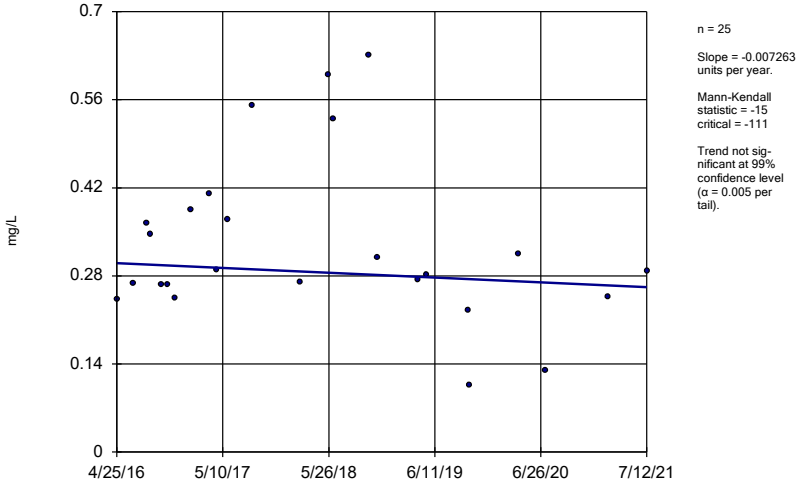
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-3 (bg)



n = 25

Slope = -0.007263 units per year.

Mann-Kendall statistic = -15
critical = -111

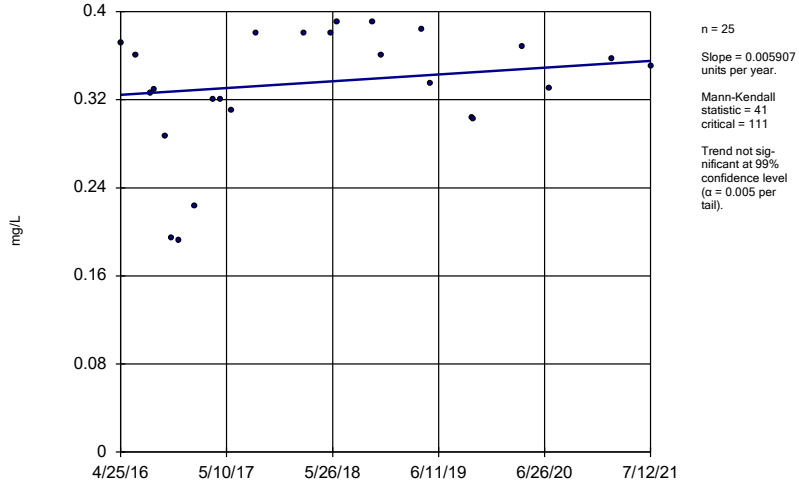
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-4 (bg)



n = 25

Slope = 0.005907 units per year.

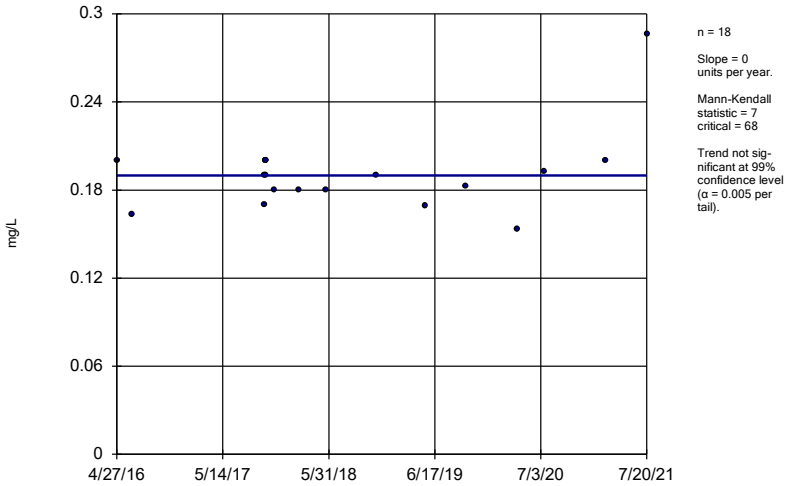
Mann-Kendall statistic = 41
critical = 111

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sen's Slope Estimator

MW-7



n = 18

Slope = 0 units per year.

Mann-Kendall statistic = 7 critical = 68

Trend not significant at 99% confidence level (α = 0.005 per tail).

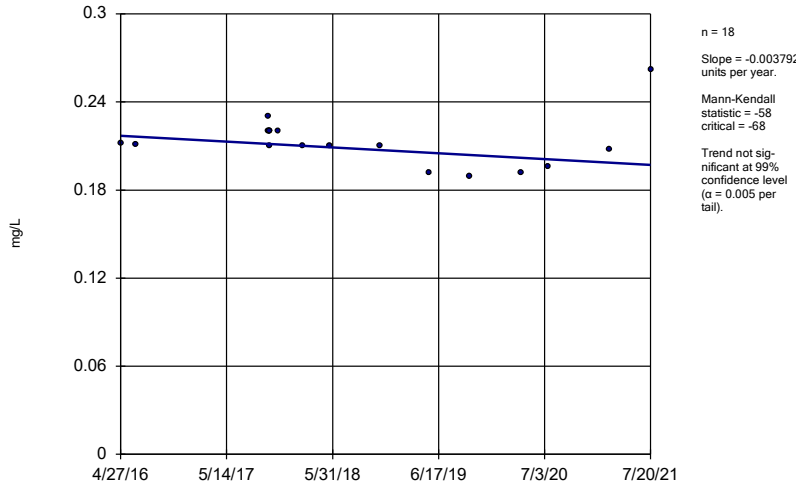
Constituent: Fluoride Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-8



n = 18

Slope = -0.003792 units per year.

Mann-Kendall statistic = -58 critical = -68

Trend not significant at 99% confidence level (α = 0.005 per tail).

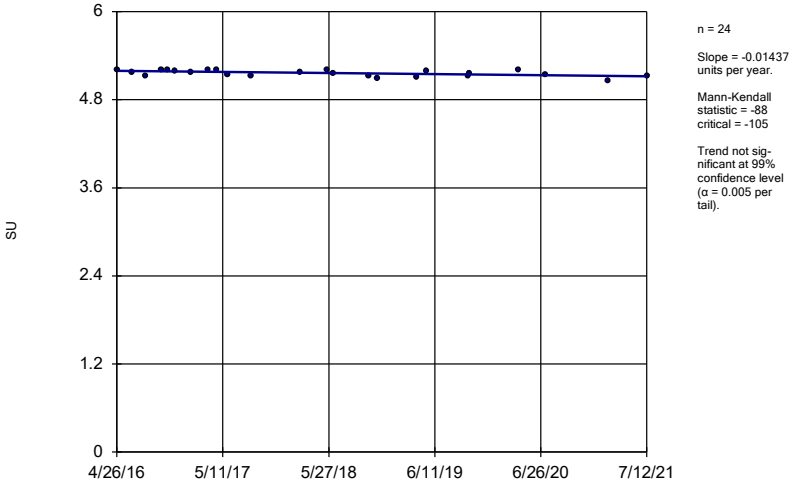
Constituent: Fluoride Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-1 (bg)



n = 24

Slope = -0.01437 units per year.

Mann-Kendall statistic = -88 critical = -105

Trend not significant at 99% confidence level (α = 0.005 per tail).

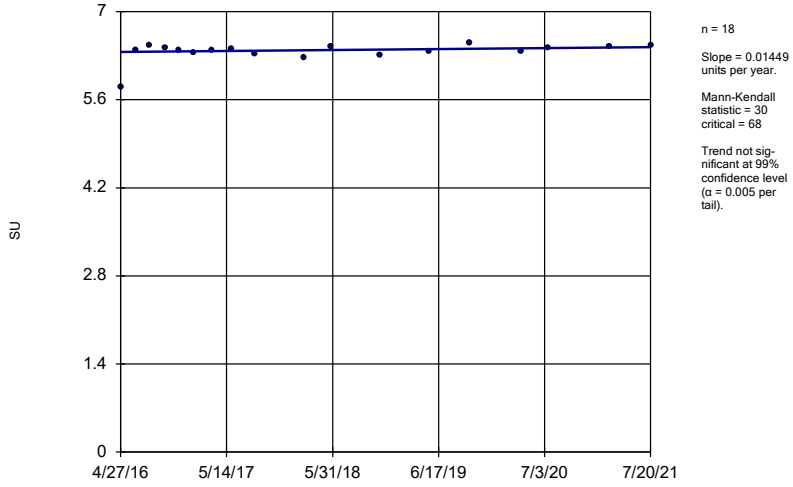
Constituent: pH Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-10



n = 18

Slope = 0.01449 units per year.

Mann-Kendall statistic = 30 critical = 68

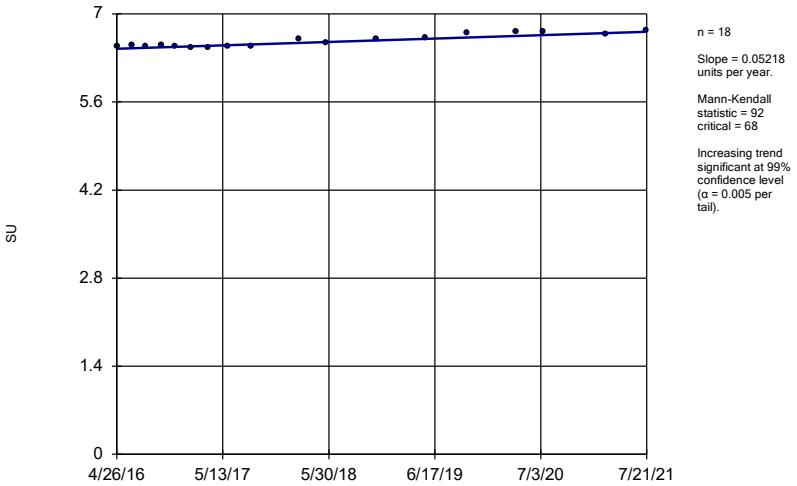
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sen's Slope Estimator

MW-11



n = 18

Slope = 0.05218 units per year.

Mann-Kendall statistic = 92
critical = 68

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

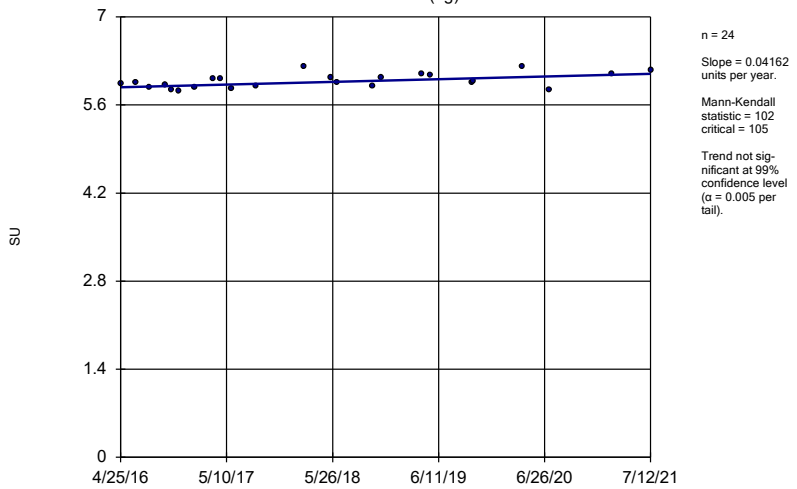
Constituent: pH Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-2 (bg)



n = 24

Slope = 0.04162 units per year.

Mann-Kendall statistic = 102
critical = 105

Trend not significant at 99% confidence level (α = 0.005 per tail).

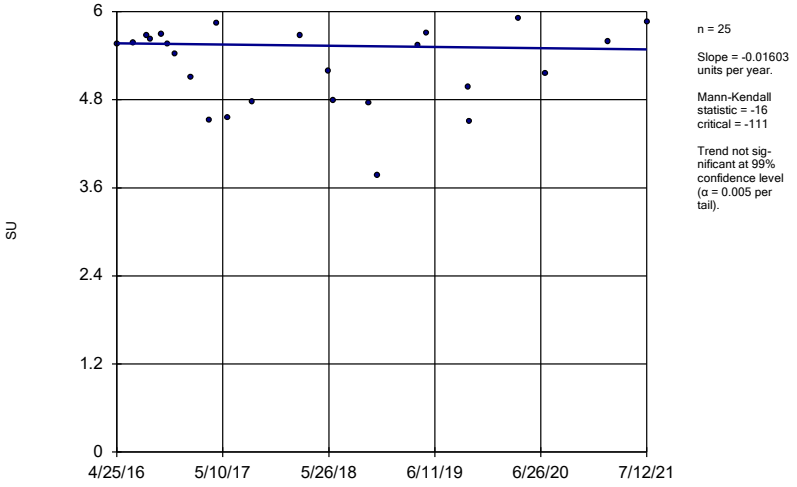
Constituent: pH Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-3 (bg)



n = 25

Slope = -0.01603 units per year.

Mann-Kendall statistic = -16
critical = -111

Trend not significant at 99% confidence level (α = 0.005 per tail).

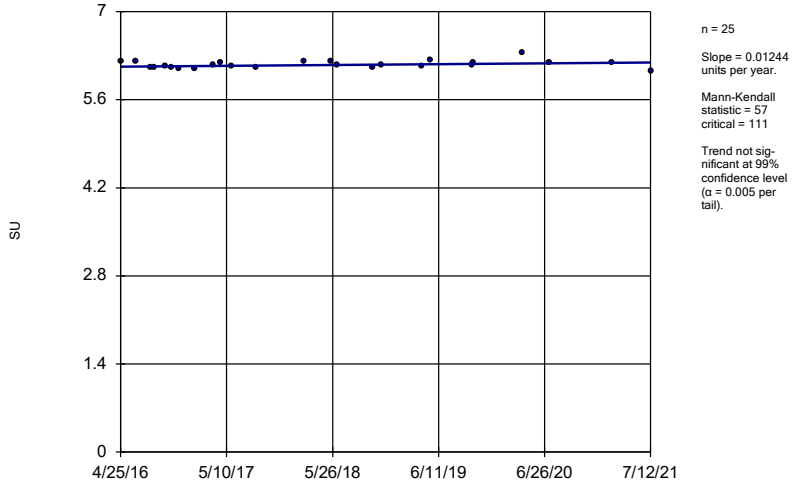
Constituent: pH Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-4 (bg)



n = 25

Slope = 0.01244 units per year.

Mann-Kendall statistic = 57
critical = 111

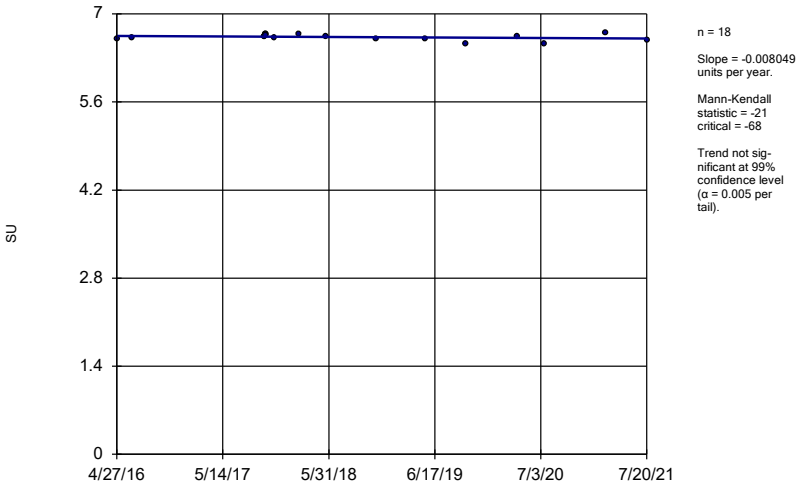
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sen's Slope Estimator

MW-7



n = 18

Slope = -0.008049 units per year.

Mann-Kendall statistic = -21
critical = -68

Trend not significant at 99% confidence level (α = 0.005 per tail).

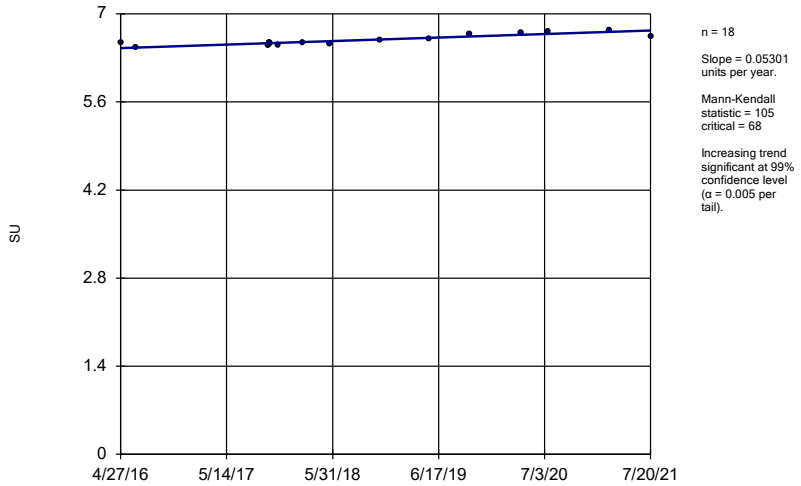
Constituent: pH Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Sen's Slope Estimator

MW-8



n = 18

Slope = 0.05301 units per year.

Mann-Kendall statistic = 105
critical = 68

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 12/6/2021 10:20 AM View: Appendix III - Trend Tests

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

FIGURE I.

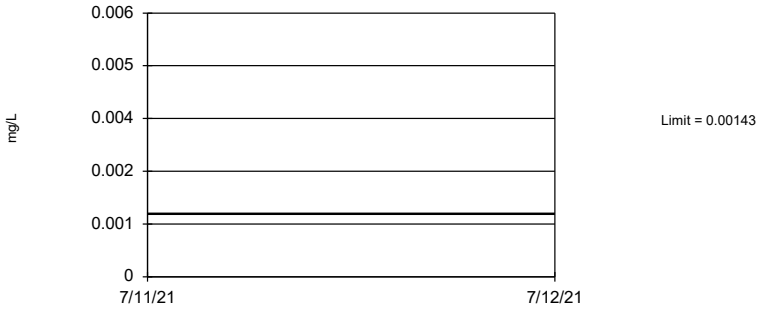
Upper Tolerance Limits Summary Table

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:45 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.00143	n/a	n/a	n/a	96	n/a	n/a	93.75	n/a	n/a	0.007269	NP Inter
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	96	n/a	n/a	83.33	n/a	n/a	0.007269	NP Inter
Barium (mg/L)	n/a	0.0165	n/a	n/a	n/a	96	n/a	n/a	0	n/a	n/a	0.007269	NP Inter
Beryllium (mg/L)	n/a	0.0121	n/a	n/a	n/a	94	n/a	n/a	84.04	n/a	n/a	0.008054	NP Inter
Cadmium (mg/L)	n/a	0.00598	n/a	n/a	n/a	94	n/a	n/a	45.74	n/a	n/a	0.008054	NP Inter
Chromium (mg/L)	n/a	0.0105	n/a	n/a	n/a	96	n/a	n/a	89.58	n/a	n/a	0.007269	NP Inter
Cobalt (mg/L)	n/a	0.49	n/a	n/a	n/a	94	n/a	n/a	26.6	n/a	n/a	0.008054	NP Inter
Combined Radium 226 + 228 (pCi/L)	n/a	1.47	n/a	n/a	n/a	92	n/a	n/a	0	n/a	n/a	0.008924	NP Inter
Fluoride (mg/L)	n/a	0.63	n/a	n/a	n/a	100	n/a	n/a	0	n/a	n/a	0.005921	NP Inter
Lead (mg/L)	n/a	0.00108	n/a	n/a	n/a	95	n/a	n/a	95.79	n/a	n/a	0.007651	NP Inter
Lithium (mg/L)	n/a	0.419	n/a	n/a	n/a	96	n/a	n/a	0	n/a	n/a	0.007269	NP Inter
Mercury (mg/L)	n/a	0.0005	n/a	n/a	n/a	96	n/a	n/a	100	n/a	n/a	0.007269	NP Inter
Molybdenum (mg/L)	n/a	0.0002	n/a	n/a	n/a	96	n/a	n/a	97.92	n/a	n/a	0.007269	NP Inter
Selenium (mg/L)	n/a	0.0209	n/a	n/a	n/a	96	n/a	n/a	60.42	n/a	n/a	0.007269	NP Inter
Thallium (mg/L)	n/a	0.000226	n/a	n/a	n/a	96	n/a	n/a	96.88	n/a	n/a	0.007269	NP Inter

Tolerance Limit

Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 93.75% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Antimony Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

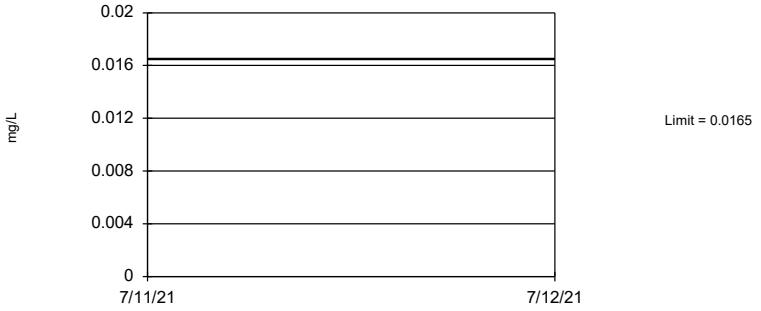
Interwell Non-parametric

NP test selected by user. Limit is highest of 96 background values. 83.33% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Arsenic Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Barium Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

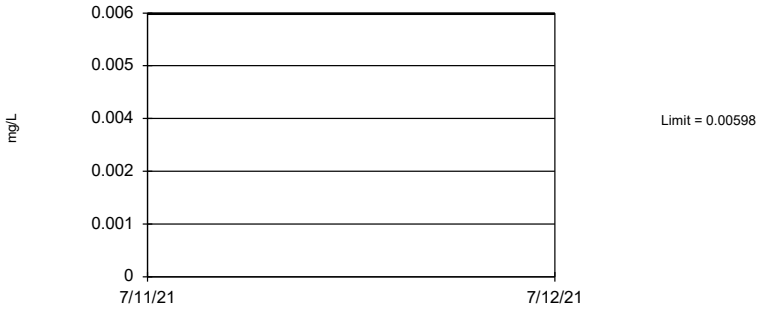
Interwell Non-parametric

NP test selected by user. Limit is highest of 94 background values. 84.04% NDs. 95.12% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.008054.

Constituent: Beryllium Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



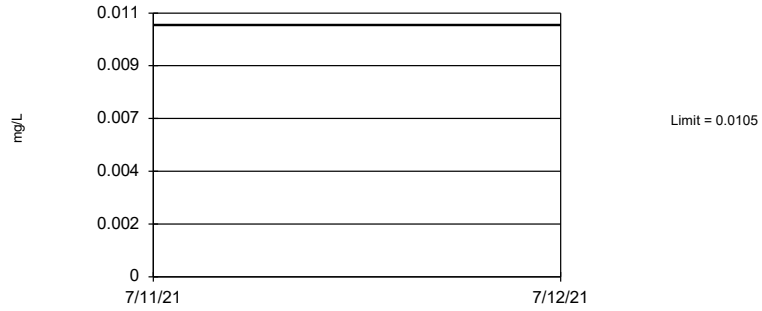
NP test selected by user. Limit is highest of 94 background values. 45.74% NDs. 95.12% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.008054.

Constituent: Cadmium Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Tolerance Limit

Interwell Non-parametric



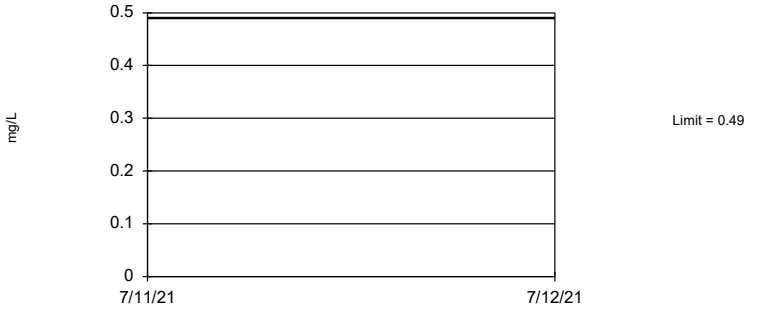
NP test selected by user. Limit is highest of 96 background values. 89.58% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Chromium Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Tolerance Limit

Interwell Non-parametric



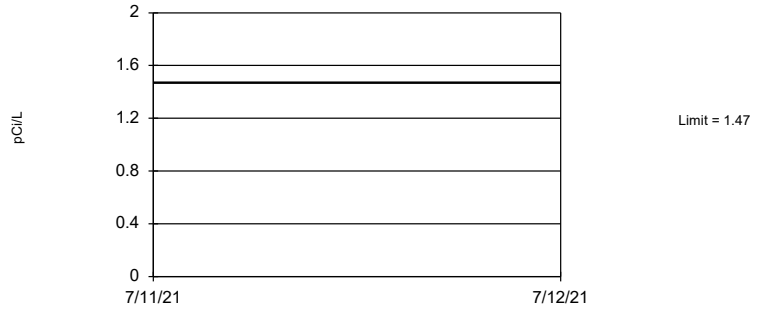
NP test selected by user. Limit is highest of 94 background values. 26.6% NDs. 95.12% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.008054.

Constituent: Cobalt Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Tolerance Limit

Interwell Non-parametric

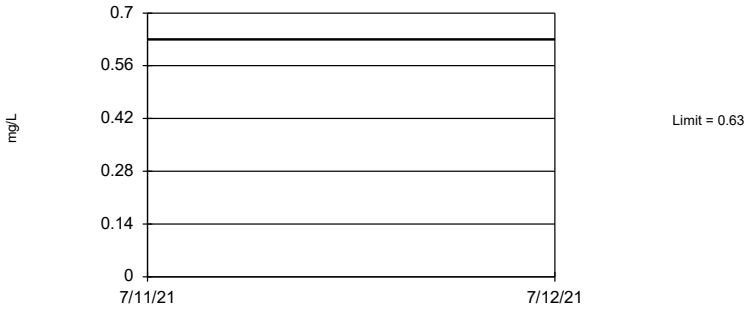


NP test selected by user. Limit is highest of 92 background values. 95.12% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.008924.

Constituent: Combined Radium 226 + 228 Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric

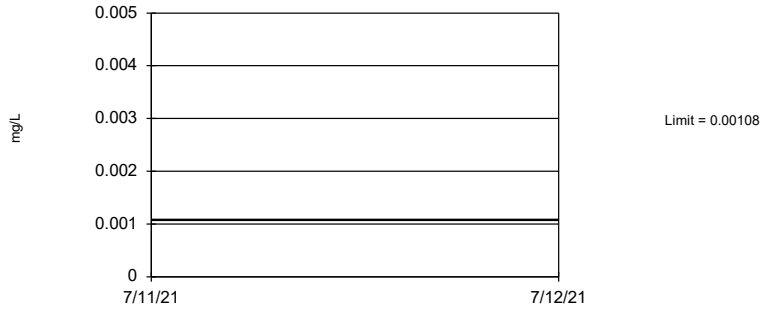


NP test selected by user. Limit is highest of 100 background values. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.005921.

Constituent: Fluoride Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric

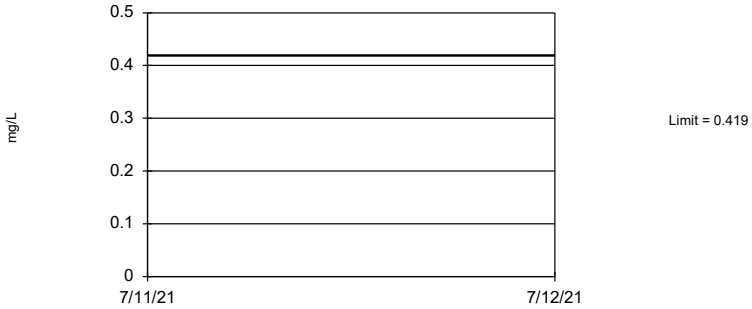


NP test selected by user. Limit is highest of 95 background values. 95.79% NDs. 95.12% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007651.

Constituent: Lead Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric

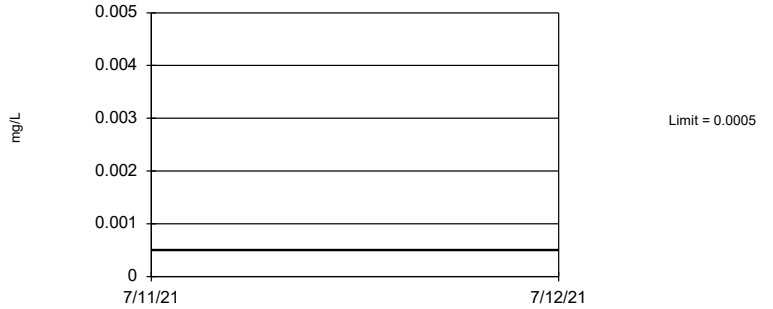


NP test selected by user. Limit is highest of 96 background values. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Lithium Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric

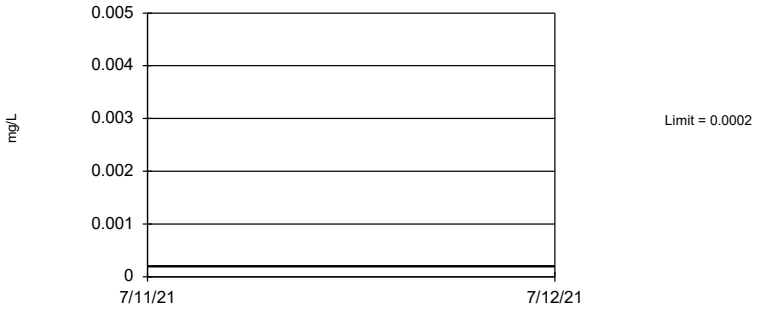


NP test selected by user. All background values were censored; limit is most recent reporting limit. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Mercury Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric

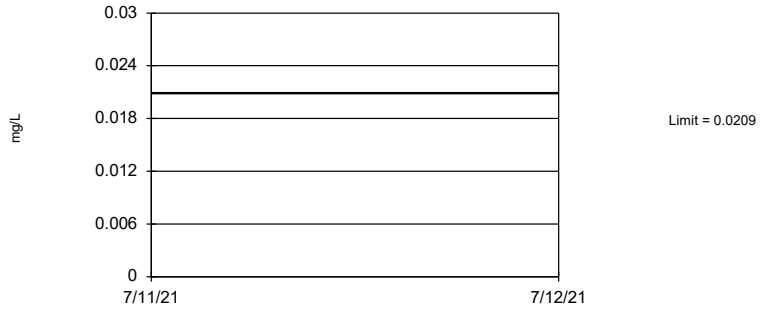


NP test selected by user. Limit is highest of 96 background values. 97.92% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Molybdenum Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric

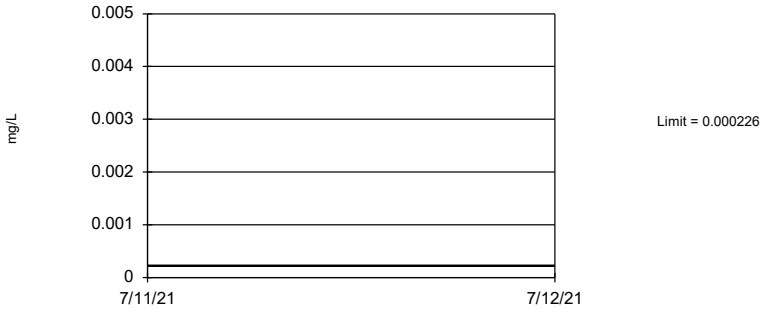


NP test selected by user. Limit is highest of 96 background values. 60.42% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Selenium Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit

Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 96.88% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Thallium Analysis Run 12/6/2021 10:26 AM View: Appendix IV - UTLs
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

FIGURE J.

GORGAS BALF GWPS			
Analyte	**Units**	**Background**	**GWPS**
Antimony	mg/L	0.00143	0.006
Arsenic	mg/L	0.005	0.01
Barium	mg/L	0.0165	2
Beryllium	mg/L	0.0121	0.004
Cadmium	mg/L	0.00598	0.005
Chromium	mg/L	0.0105	0.1
Cobalt	mg/L	0.49	0.49
Combined Radium-226/228	pCi/L	1.47	5
Fluoride	mg/L	0.63	4
Lead	mg/L	0.00108	0.015
Lithium	mg/L	0.419	0.419
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.0002	0.1
Selenium	mg/L	0.0209	0.05
Thallium	mg/L	0.000226	0.002

Notes:

1. mg/L - Milligrams per liter

2. pCi/L - Picocuries per liter

3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.

4. GWPS established during second semi-annual sampling event in 2021.

FIGURE K.

Confidence Intervals - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:51 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	**MW-12**	**0.0626**	**0.04478**	**0.01**	**Yes**	**8**	**0.05369**	**0.008406**	**0**	**None**	**No**	**0.01**	**Param.**

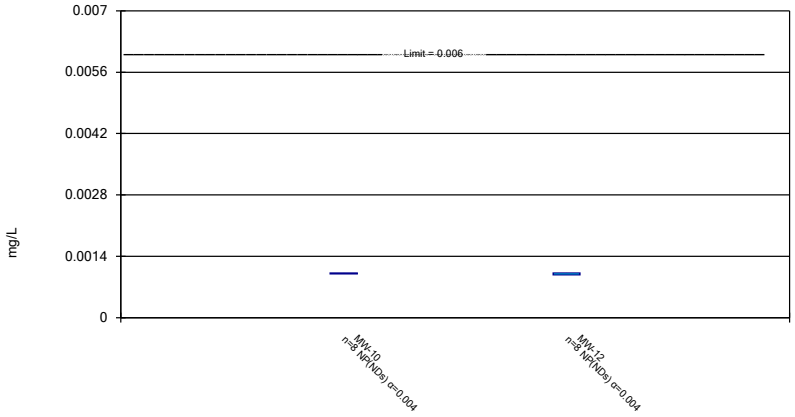
Confidence Intervals - All Results

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/6/2021, 10:51 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	MW-10	0.00102	0.000996	0.006	No	8	0.001017	0.000008485	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-12	0.00102	0.000977	0.006	No	8	0.001015	0.0000152	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-10	0.005	0.00102	0.01	No	8	0.002772	0.001856	37.5	None	No	0.004	NP (normality)
Arsenic (mg/L)	MW-11	0.005	0.000834	0.01	No	8	0.003552	0.002015	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	**MW-12**	**0.0626**	**0.04478**	**0.01**	**Yes**	**8**	**0.05369**	**0.008406**	**0**	**None**	**No**	**0.01**	**Param.**
Arsenic (mg/L)	MW-7	0.001559	0.001339	0.01	No	8	0.001449	0.0001038	0	None	No	0.01	Param.
Arsenic (mg/L)	MW-8	0.001824	0.001051	0.01	No	8	0.001438	0.0003642	0	None	No	0.01	Param.
Barium (mg/L)	MW-10	0.0245	0.0187	2	No	8	0.02041	0.001799	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-11	0.01572	0.01343	2	No	8	0.01458	0.001082	0	None	No	0.01	Param.
Barium (mg/L)	MW-12	0.01277	0.01133	2	No	8	0.01205	0.0006761	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.01472	0.01196	2	No	8	0.01334	0.001303	0	None	No	0.01	Param.
Barium (mg/L)	MW-8	0.0143	0.0122	2	No	8	0.0135	0.0008018	0	None	No	0.004	NP (normality)
Beryllium (mg/L)	MW-10	0.001742	0.0008183	0.004	No	8	0.00128	0.0004356	0	None	No	0.01	Param.
Cadmium (mg/L)	MW-10	0.001	0.00008	0.005	No	8	0.0007785	0.0004105	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-10	0.001015	0.00021	0.1	No	8	0.0009144	0.0002846	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-12	0.001015	0.00028	0.1	No	8	0.0009231	0.0002599	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-10	0.02144	0.01022	0.49	No	8	0.01583	0.005297	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-11	0.005	0.00025	0.49	No	8	0.003814	0.002197	75	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-12	0.05605	0.04277	0.49	No	8	0.04941	0.006263	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-7	0.005712	0.002663	0.49	No	8	0.004187	0.001438	12.5	None	No	0.01	Param.
Cobalt (mg/L)	MW-8	0.008493	0.005549	0.49	No	8	0.007021	0.001389	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-10	0.5644	0.1841	5	No	8	0.3743	0.1794	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-11	1.116	0.5245	5	No	8	0.8201	0.2789	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-12	1.248	0.7475	5	No	8	0.9976	0.2359	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-7	0.6249	0.1729	5	No	8	0.3989	0.2132	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-8	0.8997	0.2834	5	No	8	0.5816	0.3549	0	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	MW-10	0.2776	0.1586	4	No	8	0.2181	0.05614	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-11	0.16	0.0915	4	No	8	0.1106	0.02144	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-12	0.228	0.151	4	No	8	0.1895	0.03635	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-7	0.286	0.153	4	No	8	0.1943	0.03989	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-8	0.262	0.189	4	No	8	0.2074	0.02372	0	None	No	0.004	NP (normality)
Lead (mg/L)	MW-10	0.0002	0.00008	0.015	No	8	0.000185	0.00004243	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-11	0.00145	0.0002	0.015	No	8	0.0003562	0.0004419	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-12	0.00023	0.000178	0.015	No	8	0.000201	0.00001402	75	None	No	0.004	NP (NDs)
Lead (mg/L)	MW-8	0.0002	0.00009	0.015	No	8	0.0001862	0.00003889	87.5	None	No	0.004	NP (NDs)
Lithium (mg/L)	MW-10	0.2398	0.1949	0.419	No	8	0.2174	0.02119	0	None	No	0.01	Param.
Lithium (mg/L)	MW-11	0.2893	0.2467	0.419	No	8	0.268	0.02011	0	None	No	0.01	Param.
Lithium (mg/L)	MW-12	0.08799	0.07444	0.419	No	8	0.08121	0.006391	0	None	No	0.01	Param.
Lithium (mg/L)	MW-7	0.1334	0.1051	0.419	No	8	0.1193	0.01332	0	None	No	0.01	Param.
Lithium (mg/L)	MW-8	0.1812	0.1478	0.419	No	8	0.1645	0.01579	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-10	0.000203	0.00008	0.1	No	8	0.0001876	0.00004349	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-11	0.00148	0.000203	0.1	No	8	0.0004998	0.0005516	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-12	0.000203	0.000088	0.1	No	8	0.0001845	0.00004067	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-7	0.00107	0.000203	0.1	No	8	0.0003935	0.0003572	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	MW-8	0.0129	0.000203	0.1	No	8	0.001806	0.004483	75	None	No	0.004	NP (NDs)
Selenium (mg/L)	MW-10	0.01	0.00098	0.05	No	8	0.006096	0.004212	50	None	No	0.004	NP (normality)

Non-Parametric Confidence Interval

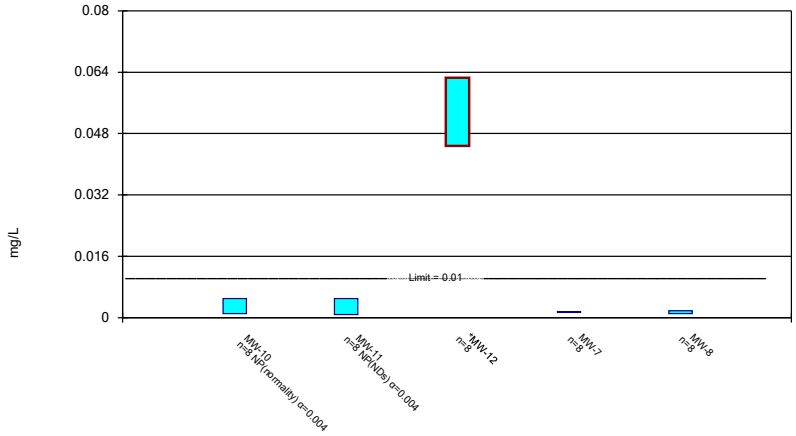
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric and Non-Parametric (NP) Confidence Interval

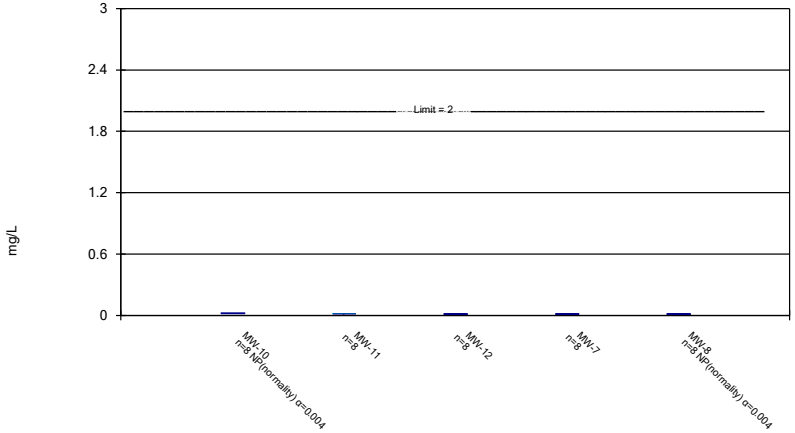
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric and Non-Parametric (NP) Confidence Interval

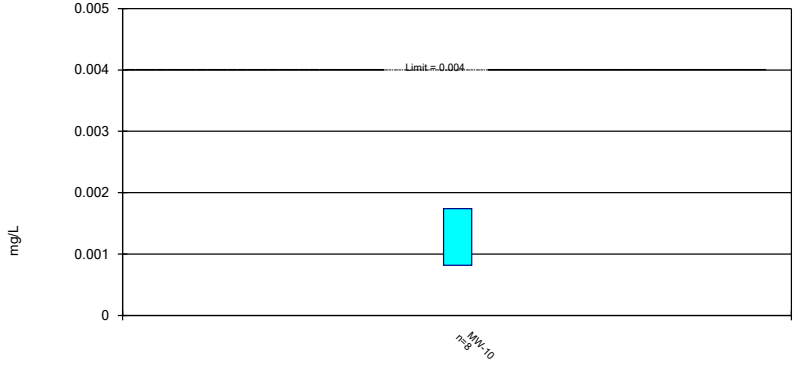
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric Confidence Interval

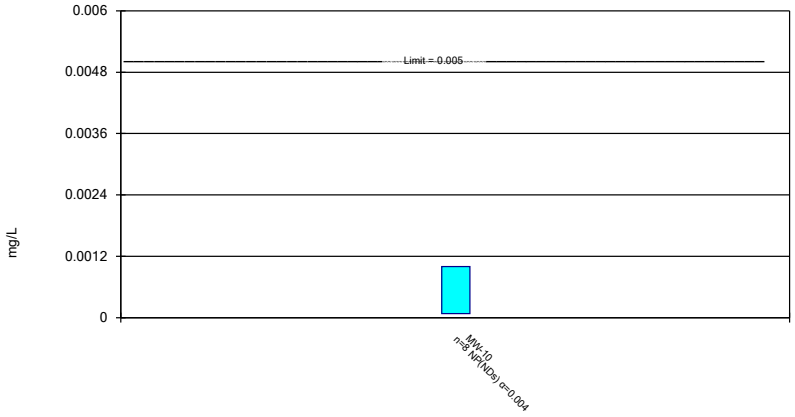
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

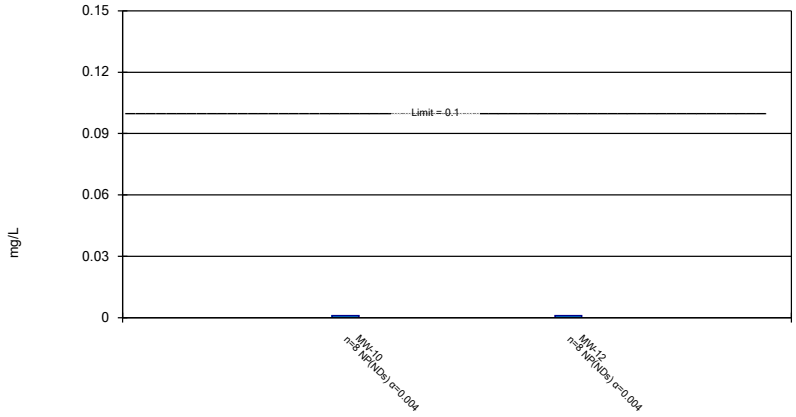


Constituent: Cadmium Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

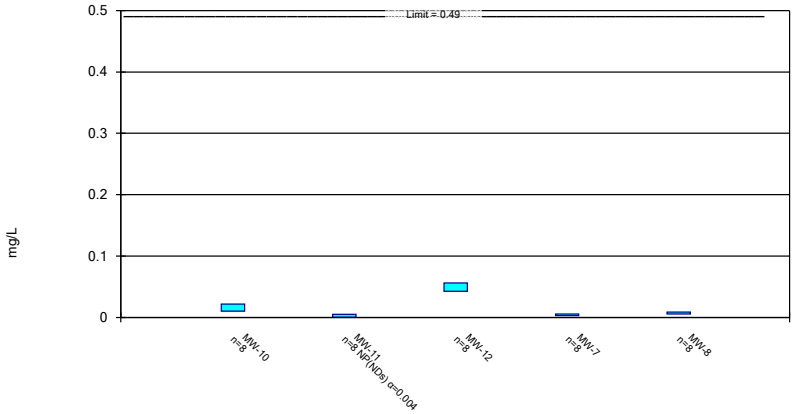


Constituent: Chromium Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

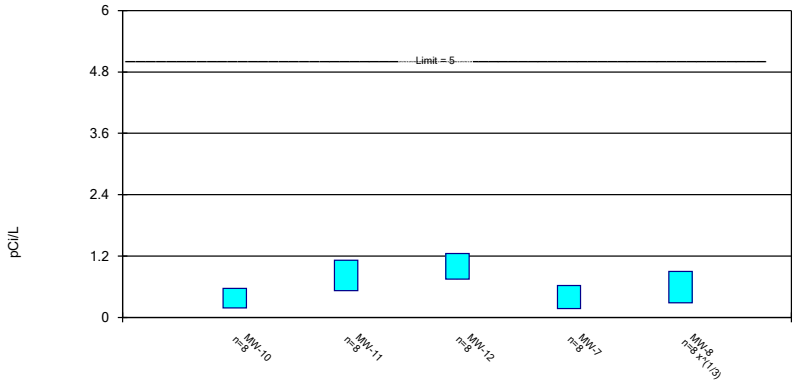


Constituent: Cobalt Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Sanitas™ v.9.6.32 Groundwater Stats Consulting. UG

Parametric Confidence Interval

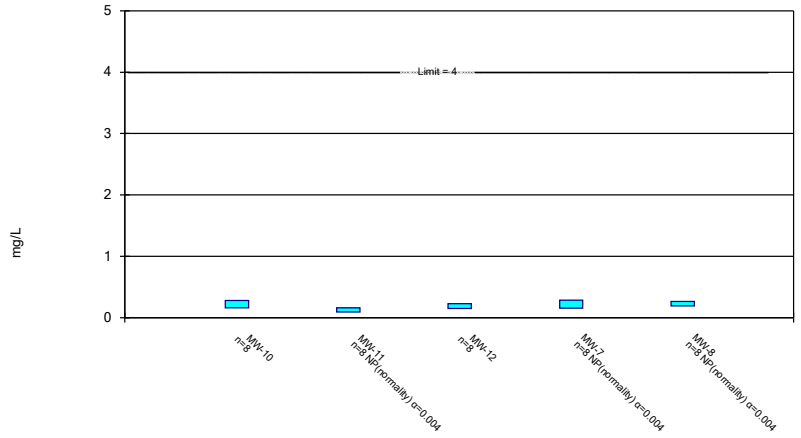
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric and Non-Parametric (NP) Confidence Interval

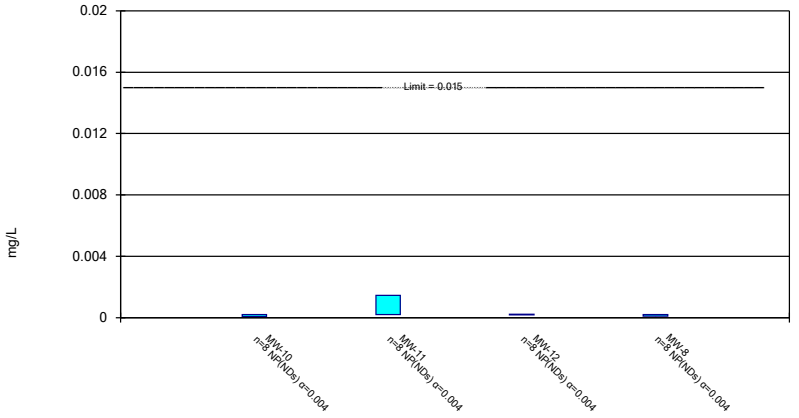
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Non-Parametric Confidence Interval

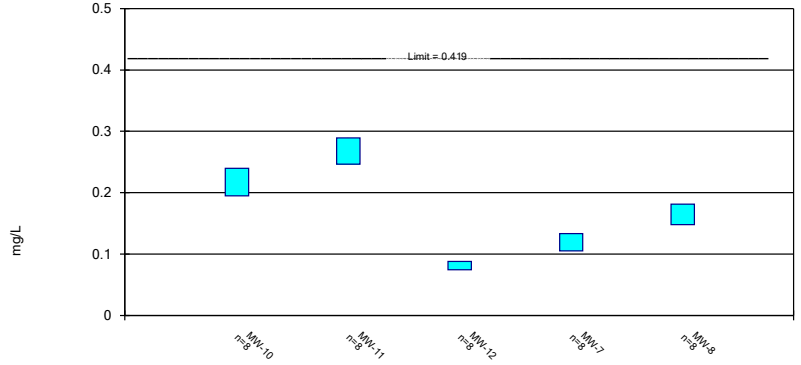
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Parametric Confidence Interval

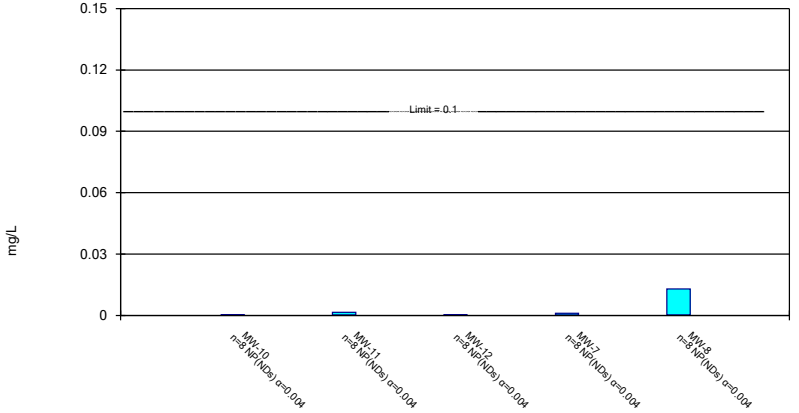
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



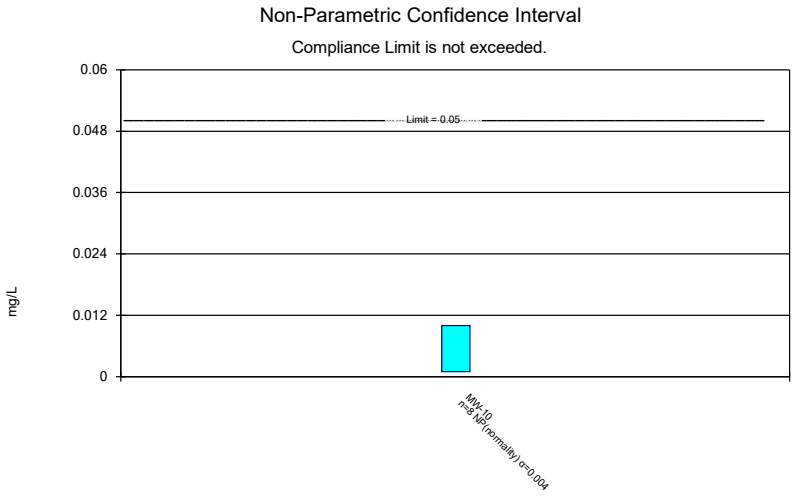
Constituent: Lithium Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 12/6/2021 10:49 AM View: Appendix IV
Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Selenium Analysis Run 12/6/2021 10:49 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-12
5/24/2018	<0.00102	<0.00102
11/19/2018	<0.00102	<0.00102
5/15/2019	0.000996 (J)	0.000977 (J)
10/9/2019	<0.00102	<0.00102
4/6/2020		<0.00102
4/8/2020	<0.00102	
7/13/2020		<0.00102
7/14/2020	<0.00102	
2/23/2021	<0.00102	
2/24/2021		<0.00102
7/20/2021	<0.00102	<0.00102
Mean	0.001017	0.001015
Std. Dev.	8.485E-06	1.52E-05
Upper Lim.	0.00102	0.00102
Lower Lim.	0.000996	0.000977

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-11	MW-12	MW-7	MW-8
5/22/2018		0.00168 (J)			
5/23/2018				0.00155 (J)	0.00157 (J)
5/24/2018	<0.005		0.0478		
11/19/2018	<0.005		0.0405		
11/20/2018		<0.005		0.00133 (J)	0.00173 (J)
5/15/2019	0.00162 (J)	<0.005	0.0511	0.00138 (J)	0.00136 (J)
10/8/2019				0.00145 (J)	
10/9/2019	<0.005		0.0507		0.00142 (J)
10/10/2019		<0.005			
4/6/2020		<0.005	0.0597		
4/8/2020	0.0013 (J)			0.00136 (J)	0.00102 (J)
7/13/2020		<0.005	0.0613		
7/14/2020	0.00164 (J)			0.00147 (J)	
7/15/2020					0.00212 (J)
2/23/2021	0.0016			0.00141	0.00117
2/24/2021		0.000834	0.0516		
7/20/2021	0.00102		0.0668	0.00164	0.00111
7/21/2021		0.0009			
Mean	0.002772	0.003552	0.05369	0.001449	0.001438
Std. Dev.	0.001856	0.002015	0.008406	0.0001038	0.0003642
Upper Lim.	0.005	0.005	0.0626	0.001559	0.001824
Lower Lim.	0.00102	0.000834	0.04478	0.001339	0.001051

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-11	MW-12	MW-7	MW-8
5/22/2018		0.0148			
5/23/2018				0.0135	0.0137
5/24/2018	0.0198		0.0122		
11/19/2018	0.0187		0.0108		
11/20/2018		0.0127		0.0116	0.0123
5/15/2019	0.0189	0.0132	0.0113	0.0114	0.0122
10/8/2019				0.0145	
10/9/2019	0.0204		0.0126		0.0137
10/10/2019		0.0154			
4/6/2020		0.0147	0.0128		
4/8/2020	0.0201			0.0127	0.0137
7/13/2020		0.0149	0.0124		
7/14/2020	0.0245			0.0148	
7/15/2020					0.0143
2/23/2021	0.0201			0.014	0.014
2/24/2021		0.015	0.0123		
7/20/2021	0.0208		0.012	0.0142	0.0141
7/21/2021		0.0159			
Mean	0.02041	0.01458	0.01205	0.01334	0.0135
Std. Dev.	0.001799	0.001082	0.0006761	0.001303	0.0008018
Upper Lim.	0.0245	0.01572	0.01277	0.01472	0.0143
Lower Lim.	0.0187	0.01343	0.01133	0.01196	0.0122

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10
5/24/2018	0.001 (J)
11/19/2018	0.00203 (J)
5/15/2019	0.00177 (J)
10/9/2019	0.00072 (J)
4/8/2020	0.00114 (J)
7/14/2020	0.00135 (J)
2/23/2021	0.00128
7/20/2021	0.00095 (J)
Mean	0.00128
Std. Dev.	0.0004356
Upper Lim.	0.001742
Lower Lim.	0.0008183

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10
5/24/2018	<0.001
11/19/2018	<0.001
5/15/2019	<0.001
10/9/2019	<0.001
4/8/2020	<0.001
7/14/2020	<0.001
2/23/2021	0.000148 (J)
7/20/2021	8E-05 (J)
Mean	0.0007785
Std. Dev.	0.0004105
Upper Lim.	0.001
Lower Lim.	8E-05

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-12
5/24/2018	<0.001015	<0.001015
11/19/2018	<0.001015	<0.001015
5/15/2019	<0.001015	<0.001015
10/9/2019	<0.001015	<0.001015
4/6/2020		<0.001015
4/8/2020	<0.001015	
7/13/2020		<0.001015
7/14/2020	<0.001015	
2/23/2021	<0.001015	
2/24/2021		<0.001015
7/20/2021	0.00021 (J)	0.00028 (J)
Mean	0.0009144	0.0009231
Std. Dev.	0.0002846	0.0002599
Upper Lim.	0.001015	0.001015
Lower Lim.	0.00021	0.00028

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-11	MW-12	MW-7	MW-8
5/22/2018		<0.005			
5/23/2018				<0.005	0.00466 (J)
5/24/2018	0.00905 (J)		0.0399		
11/19/2018	0.0147		0.0485		
11/20/2018		<0.005		0.00306 (J)	0.00551
5/15/2019	0.0226	<0.005	0.0603	0.00234 (J)	0.00643
10/8/2019				0.00408 (J)	
10/9/2019	0.00969		0.0512		0.00864
10/10/2019		<0.005			
4/6/2020		<0.005	0.0537		
4/8/2020	0.0176			0.00394 (J)	0.00762
7/13/2020		<0.005	0.0515		
7/14/2020	0.0232			0.00653	
7/15/2020					0.00821
2/23/2021	0.0167			0.00294	0.00796
2/24/2021		0.00026	0.0442		
7/20/2021	0.0131		0.046	0.00561	0.00714
7/21/2021		0.00025			
Mean	0.01583	0.003814	0.04941	0.004187	0.007021
Std. Dev.	0.005297	0.002197	0.006263	0.001438	0.001389
Upper Lim.	0.02144	0.005	0.05605	0.005712	0.008493
Lower Lim.	0.01022	0.00025	0.04277	0.002663	0.005549

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-11	MW-12	MW-7	MW-8
5/22/2018		0.276 (U)			
5/23/2018				0.0192 (U)	0.377 (U)
5/24/2018	0.472		0.756		
11/19/2018	0.167 (U)		0.648		
11/20/2018		1.04		0.494	0.28 (U)
5/15/2019	0.421 (U)	1.18	1	0.61	0.697
10/8/2019				0.345 (U)	
10/9/2019	0.742 (U)		1.18		0.416 (U)
10/10/2019		0.902			
4/6/2020		0.678	1.22		
4/8/2020	0.205 (U)			0.237 (U)	1.38 (U)
7/13/2020		0.665	0.787		
7/14/2020	0.314 (U)			0.434	
7/15/2020					0.398 (U)
2/23/2021	0.329 (U)			0.696 (U)	0.685 (U)
2/24/2021		0.869 (U)	1.24		
7/20/2021	0.344 (U)		1.15 (U)	0.356 (U)	0.42 (U)
7/21/2021		0.951 (U)			
Mean	0.3743	0.8201	0.9976	0.3989	0.5816
Std. Dev.	0.1794	0.2789	0.2359	0.2132	0.3549
Upper Lim.	0.5644	1.116	1.248	0.6249	0.8997
Lower Lim.	0.1841	0.5245	0.7475	0.1729	0.2834

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-11	MW-12	MW-7	MW-8
5/22/2018		0.1			
5/23/2018				0.18	0.21
5/24/2018	0.13		0.15		
11/19/2018	0.26		0.16		
11/20/2018		0.1		0.19	0.21
5/15/2019	0.276	0.1	0.185	0.169	0.192
10/8/2019				0.183	
10/9/2019	0.142		0.215		0.189
10/10/2019		0.0915 (J)			
4/6/2020		0.118	0.254		
4/8/2020	0.243			0.153	0.192
7/13/2020		0.108	0.161		
7/14/2020	0.224			0.193	
7/15/2020					0.196
2/23/2021	0.202			0.2	0.208
2/24/2021		0.107	0.172		
7/20/2021	0.268		0.219	0.286	0.262
7/21/2021		0.16			
Mean	0.2181	0.1106	0.1895	0.1943	0.2074
Std. Dev.	0.05614	0.02144	0.03635	0.03989	0.02372
Upper Lim.	0.2776	0.16	0.228	0.286	0.262
Lower Lim.	0.1586	0.0915	0.151	0.153	0.189

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-11	MW-12	MW-8
5/22/2018		<0.0002		
5/23/2018				<0.0002
5/24/2018	<0.0002		<0.0002	
11/19/2018	<0.0002		<0.0002	
11/20/2018		<0.0002		<0.0002
5/15/2019	<0.0002	<0.0002	<0.0002	<0.0002
10/9/2019	<0.0002		<0.0002	<0.0002
10/10/2019		0.00145 (J)		
4/6/2020		<0.0002	<0.0002	
4/8/2020	<0.0002			<0.0002
7/13/2020		<0.0002	<0.0002	
7/14/2020	<0.0002			
7/15/2020				<0.0002
2/23/2021	<0.0002			<0.0002
2/24/2021		<0.0002	0.000178 (J)	
7/20/2021	8E-05 (J)		0.00023	9E-05 (J)
7/21/2021		<0.0002		
Mean	0.000185	0.0003562	0.000201	0.0001862
Std. Dev.	4.243E-05	0.0004419	1.402E-05	3.889E-05
Upper Lim.	0.0002	0.00145	0.00023	0.0002
Lower Lim.	8E-05	0.0002	0.000178	9E-05

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-11	MW-12	MW-7	MW-8
5/22/2018		0.24			
5/23/2018				0.129	0.194
5/24/2018	0.192		0.0819		
11/19/2018	0.211		0.0816		
11/20/2018		0.248		0.12	0.181
5/15/2019	0.23	0.251	0.0736	0.127	0.16
10/8/2019				0.131	
10/9/2019	0.202		0.0838		0.163
10/10/2019		0.275			
4/6/2020		0.282	0.0786		
4/8/2020	0.23			0.117	0.149
7/13/2020		0.277	0.0784		
7/14/2020	0.255			0.103	
7/15/2020					0.152
2/23/2021	0.223			0.131	0.166
2/24/2021		0.3	0.0949		
7/20/2021	0.196		0.0769	0.096	0.151
7/21/2021		0.271			
Mean	0.2174	0.268	0.08121	0.1193	0.1645
Std. Dev.	0.02119	0.02011	0.006391	0.01332	0.01579
Upper Lim.	0.2398	0.2893	0.08799	0.1334	0.1812
Lower Lim.	0.1949	0.2467	0.07444	0.1051	0.1478

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-11	MW-12	MW-7	MW-8
5/22/2018		<0.000203			
5/23/2018				<0.000203	<0.000203
5/24/2018	<0.000203		<0.000203		
11/19/2018	<0.000203		<0.000203		
11/20/2018		<0.000203		<0.000203	<0.000203
5/15/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
10/8/2019				<0.000203	
10/9/2019	<0.000203		<0.000203		<0.000203
10/10/2019		<0.000203			
4/6/2020		<0.000203	<0.000203		
4/8/2020	<0.000203			<0.000203	<0.000203
7/13/2020		<0.000203	<0.000203		
7/14/2020	<0.000203			<0.000203	
7/15/2020					<0.000203
2/23/2021	<0.000203			0.00107	0.0129
2/24/2021		0.00148	8.8E-05 (J)		
7/20/2021	8E-05 (J)		0.00017 (J)	0.00086	0.00033
7/21/2021		0.0013			
Mean	0.0001876	0.0004998	0.0001845	0.0003935	0.001806
Std. Dev.	4.349E-05	0.0005516	4.067E-05	0.0003572	0.004483
Upper Lim.	0.000203	0.00148	0.000203	0.00107	0.0129
Lower Lim.	8E-05	0.000203	8.8E-05	0.000203	0.000203

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 12/6/2021 10:51 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10
5/24/2018	<0.01
11/19/2018	<0.01
5/15/2019	0.00289 (J)
10/9/2019	<0.01
4/8/2020	<0.01
7/14/2020	0.00273 (J)
2/23/2021	0.00217
7/20/2021	0.00098 (J)
Mean	0.006096
Std. Dev.	0.004212
Upper Lim.	0.01
Lower Lim.	0.00098