

**2019 ANNUAL GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT**

**ALABAMA POWER COMPANY
PLANT GORGAS
GYPSUM POND**

January 31, 2020

Prepared for

Alabama Power Company
Birmingham, Alabama

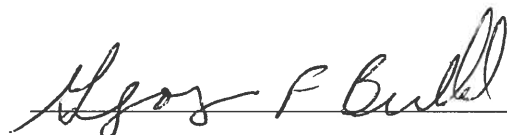
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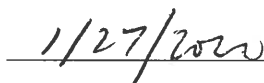


CERTIFICATION STATEMENT

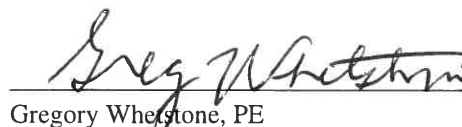
This *Annual Groundwater Monitoring and Corrective Action Report, Alabama Power Company - Plant Gorgas Gypsum Pond* has been prepared in accordance with the United States Environmental Protection Agency's coal combustion residual rule (40 CFR Part 257, Subpart D) and ADEM Admin. Code Ch. 335-13-15 under 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.



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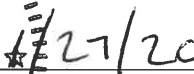


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EXECUTIVE SUMMARY

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart D) and the State of Alabama's ADEM Admin. Code Ch. 335-13-15, this 2019 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document 2019 semi-annual assessment groundwater monitoring activities at the Plant Gorgas Gypsum Pond and to satisfy the requirements of § 257.90(e) and ADEM Admin. Code r. 335-13-15-.06(1)(f). Semi-annual assessment monitoring and associated reporting for the Plant Gorgas Gypsum Pond 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). The following summarizes results obtained from 2019 groundwater monitoring activities at the site:

- 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 Appendix IV parameters above groundwater protection standards (GWPS) have been identified during the 2019 semiannual monitoring events. Consequently, an assessment of corrective measures (ACM) was initiated on January 13, 2019 and completed on June 12, 2019 according to the requirements of § 257.96 and ADEM Admin. Code r. 335-13-15-.06(7). The ACM was subsequently submitted to the Agency and posted to the site's CCR compliance web site.
- The CCR Unit concluded the monitoring period in assessment monitoring and is evaluating potential groundwater remedies identified in the ACM. The following monitoring-related activities are planned for the CCR Unit:
 - Installation, sampling, and analyses of additional (Phase II) delineation wells,
 - Collect additional data to further evaluate remedies selected as feasible for the remediation of lithium as described in the ACM; and
 - Conduct the first semi-annual assessment monitoring event in the April or May of 2020 and submit a semi-annual groundwater monitoring report summarizing findings by July 31, 2020.

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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	American Society for Testing and Materials
BGS	below ground surface
CCR	Coal Combustion Residual
CFR	Code of Federal Regulations
COC	chain of custody
DO	dissolved oxygen
EPA	United States Environmental Protection Agency
ft	feet
GW	groundwater
GWPS	Groundwater Protection Standard(s)
m	meter
mg/L	milligram per liter
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
PPM	Parts per million
PQL	practical quantitation limit
PVC	polymerizing vinyl chloride
QA/QC	quality assurance/quality control
RL	reporting limit
RPD	relative percent difference
SM	Standard Method(s)
SSI	statistically significant increase
SSL	statistically significant level
TOC	top of casing
TDS	total dissolved solids
USGS	United States Geological Survey
UTL’s	Upper Tolerance Limits

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart D) and the State of Alabama's ADEM Admin. Code Ch. 335-13-15, this 2019 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document 2019 semi-annual assessment groundwater monitoring activities at the Plant Gorgas Gypsum Pond (Gypsum Pond) and to satisfy the requirements of § 257.90(e) and ADEM Admin. Code r. 335-13-15-.06(1)(f). Semi-annual assessment monitoring and associated reporting for the Gypsum Pond 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).

2.0 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 fifteen miles south of Jasper, at 460 Gorgas Road, Parrish, AL 35580. Plant Gorgas lies in 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. Section/Township/Range data are based on visual inspection of USGS topographic quadrangle maps (USGS, 1975; USGS, 1983) and GIS project boundary files provided by SCS.

The Gypsum Pond is located west-northwest of the main plant and to the north of Black Warrior River. **Figure 1, Site Location Map**, depicts the location of the Plant and Gypsum Pond with respect to the surrounding area.

2.1 SITE GEOLOGY AND HYDROGEOLOGY

2.1.1 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. Generally, the land surface slopes from north to south and towards the Mulberry Fork of the 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 Black Warrior River. Mulberry Fork flows from east to west as it bends around the southern border of the plant property.

2.1.2 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 Upper 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 3 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 Gypsum Pond 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 twenty feet (un-mined areas) to as much as 155 feet below ground surface (BGS). Beneath the Gypsum Pond, subsurface geology is likely characterized by thin remnants of mine backfill and un-mined portions of the Pratt Coal Group consisting predominantly of mudstone and sandstone. **Figure 4, Geologic Cross-Section A-A'**, illustrates 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 system. 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 comprised primarily of Pennsylvanian-aged sandstones, shales, conglomerates, and coal. Groundwater flow primarily occurs via 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).

2.1.3 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 parts per million (ppm)) in the Pottsville coal strata is three times that of the average of other coal basins (Bragg et al., 1997). Of the US coal analyses for arsenic, there 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 which includes trace metal concentration data. 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 Data System (NRCDS). The samples provided 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 Coal Quality Database.

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.

2.1.4 Uppermost Aquifer

The principal aquifer system from a local and regional perspective is the Pottsville aquifer system. The Pottsville aquifer system is also the uppermost aquifer beneath the Site. In the Pottsville aquifer system, 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) since large permeability contrasts exist within the strata (Stricklin, 1989). Depth to groundwater varies significantly across the Site and is wholly dependent upon encountering a fractured interval or zone of fissile, iron-claystone.

Monitoring wells installed at the mine overburden/top of rock interface monitor 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 (clay minerals, sulfides, etc). 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).

2.1.5 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 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.

2.2 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 Gypsum Pond 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.

2.2.1 Monitoring Wells

Groundwater bearing zones do not readily-occur at the site. In total, 17 well or exploratory boring locations were attempted around the perimeter of the Gypsum Pond to depths between 50 and 307 feet BGS. Geophysical, hydrogeophysical, and purging were employed at locations to further assess hydrogeological conditions and identify water bearing zones. The groundwater monitoring network is comprised of 7 monitoring wells. Monitoring well locations are presented on **Figure 5, Monitoring Well Location Map. Table 1, Groundwater Monitoring Well Network Details**, summarizes the monitoring well construction details and design purpose for the Plant Gorgas Gypsum Pond.

2.2.1.1 Upgradient Wells

Attempts at installing upgradient well locations west, north, and east of the Gypsum Pond were unsuccessful because water-bearing zones were not encountered; therefore, 4 locations upgradient of the nearby Plant Gorgas landfills were selected to provide background groundwater quality data based on the fact that the wells are proximal to the site, have not been affected by a CCR unit release, and are installed in similar geology. Each of these sites are located within the same coal group sequence of the Pottsville and contain backfilled mine material overburden. Monitoring well locations MW-1, MW-2, MW-3, and MW-4 serve as upgradient locations for the Gypsum Pond.

2.2.1.2 Downgradient Wells

The absence of water-bearing zones at the site during site investigation influenced the number and location of downgradient monitoring wells. Monitoring well locations GS-GSA-MW-3, GS-GSA-MW-4, and GS-GSA-MW-8 are utilized as downgradient locations for the Gypsum Pond. The 3-downgradient monitoring well locations were installed in the valley south of the Gypsum Pond and at lower elevations. These locations capture groundwater draining through the valley occupied by the Gypsum Pond. Given that the valley is narrow from west to east (approximately 800 to 1200 feet across) these wells intercept preferential draining for the site and are sufficient to monitor groundwater downgradient of the Gypsum Pond.

2.2.1.3 Delineation Wells

Pursuant to § 257.95(g)(1), ADEM Admin. Code r. 335-13-15-.06(6)(g)2., and AO 18-096-GW, additional wells were installed to characterize the horizontal and vertical extent of groundwater protection standard (GWPS) exceedances identified during assessment monitoring. Three horizontal delineation wells, GS-GSA-MW-9H through GS-GSA-MW-11H, were installed in February of 2019. Delineation monitoring

wells GS-GSA-MW-9H and GS-GSA-MW-11H were sampled in March of 2019 to assess lateral extent of groundwater impacts in the direction(s) of groundwater flow away from the facility. Delineation monitoring well GC-AP-MW-10H did not produce sufficient water to allow for development or sampling. In future sampling events GC-AP-MW-10H will be utilized for water level data only. Two vertical delineation wells, GS-GSA-MW-3V and GS-GSA-MW-4V were installed in February 2019 and sampled in March of 2019 to assess the vertical extent of groundwater impacts.

Two additional horizontal delineation (GS-GSA-MW-12H and GS-GSA-MW-13H) wells and one vertical delineation well (GS-GSA-MW-8V) were proposed in a plan submitted to the Department in August 2019. These wells have been installed but sampling and analytical data is not yet available for monitoring wells GS-GSA-MW-8V and GS-GSA-MW-13H. A report summarizing finding will be submitted to the Department by March 31, 2020.

Delineation wells are identified on **Figure 5**. All delineation wells are sampled semi-annually as part of the semi-annual assessment groundwater monitoring program.

2.2.1.4 Piezometers

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

2.2.1.5 Monitoring Variance

The groundwater monitoring program at the Site is operating under a Variance granted by the Department 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; and
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.

2.2.2 Groundwater Monitoring History

Background groundwater samples were collected over the period of August 2016 to June 2017. Semi-annual groundwater monitoring was initiated at the Gypsum Pond in August 2017.

2.2.2.1 Available Monitoring Data

In accordance with § 257.94(b) and ADEM Admin. Code r. 335-13-15-.06(5)(b), eight (8) independent samples were collected from each background and downgradient well and analyzed for the constituents listed in Appendix III and IV prior to October 17, 2017. Background sampling was performed over the period of August 2016 to June 2017. Groundwater sampling for the first detection monitoring event after the background period was performed in August 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. Semi-annual assessment sampling has continued with sampling events in June and October 2018 and April-May and October of 2019.

Tables summarizing analytical data from all previous groundwater monitoring events are included within **Appendix A, Groundwater Analytical Data.**

2.2.2.2 Historical Groundwater Flow

Historical potentiometric data from the site show that groundwater flow generally is a subdued representation of topography. Groundwater flows from higher topographic elevations north and east of the Gypsum Pond to lower topographic elevations to the south. 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. Thus, groundwater flow paths across the Site may be tortuous.

Groundwater elevations fluctuate in response to rainfall. Seasonal variations of 2 to 20 feet are typical at the site. These fluctuations are consistent in monitoring wells across the site indicating a response to rainfall events.

2.2.3 Groundwater Sampling and Analysis

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. The Gypsum Pond entered an

assessment monitoring program pursuant to 40 CFR § 257.95(a) and ADEM Admin. Code r. 335-13-15-.06(6)(a) in January 2018. Statistical evaluations of 2018 assessment monitoring data identified SSLs of Appendix IV constituents above the GWPS and the Site performed an Assessment of Corrective Measures. Pursuant to § 257.95(g)(1), ADEM Admin. Code r. 335-13-15-.06(6)(g)2., and AO 18-096-GW delineation wells were installed to characterize the horizontal and vertical extent of GWPS exceedances identified during assessment monitoring. These wells along with the compliance monitoring well network are sampled semi-annually.

2.2.3.1 Sampling Event Summary

Semi-annual Assessment Monitoring sampling events occurred in April-May 2019 and October 2019. Delineation wells installed at the Site were sampled semi-annually for the first time in March 2019 in order expedite delineation reporting and then moved back into the regular semi-annual sampling schedule during the second semi-annual sampling event in October 2019.

Groundwater samples were analyzed for the full list of Appendix III and Appendix IV parameters during each Assessment Monitoring event. Analytical data from the groundwater monitoring events is included as **Appendix A, Groundwater Analytical Data**, in accordance with the requirements of § 257.90(e)(3) and ADEM Admin. Code r. 335-13-15-.06(1)(f)3.

2.2.3.2 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 whereby samples are collected when field water quality parameters (pH, turbidity, conductivity, and dissolved oxygen) were measured to determine stabilization. Groundwater samples were collected when the following stabilization criteria were 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 a SmarTroll 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 B, Laboratory and Field Records**.

2.2.3.3 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 4°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.

2.2.3.4 Chain of Custody

A chain-of-custody (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 B**.

2.2.3.5 Laboratory Analysis

Laboratory analyses were performed by the APC Environmental Laboratory (APCEL) in Calera, Alabama or Eurofins TestAmerica of Pensacola, Florida and St. Louis, Missouri. Both APCEL and Eurofins TestAmerica are accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintain a NELAP certification for all parameters analyzed. **Table 2, Monitoring Parameters and Reporting Limits**, lists assessment monitoring constituents analyzed at the Site. Groundwater data and COC records for the monitoring events are presented in **Appendix B**.

3.0 GROUNDWATER DATA EVALUATION

3.1 GROUNDWATER ELEVATION DATA EVALUATION

During the April 2019 sampling event, depths to water in the down gradient monitor wells ranged from 74.11 and 101.30 feet below top of casing (ft BTOC) and groundwater elevations ranged from 330.27 to 353.00 feet above mean seal level (ft MSL). During the October 2019 sampling event, depths to water ranged from 7.93 to 110.26 ft BTOC and groundwater elevations ranged from 255.09 to 349.08 ft MSL. **Figure 6, Potentiometric Surface Contour Map (April 10, 2019)** and **Figure 7, Potentiometric Surface Contour Map (October 14, 2019)** depict groundwater elevations and inferred groundwater flow direction from higher elevation to lower. As shown on **Figures 6 and 7**, groundwater flows from north to south across the Site. All available groundwater elevation data recorded since 2016 have been tabulated and included in **Table 3, Groundwater Elevations Summary**.

3.2 HORIZONTAL GROUNDWATER FLOW VELOCITY CALCULATION

Because the geology at the Gypsum Pond 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 5.11×10^{-3} centimeters per second (cm/sec) and 2.47×10^{-4} cm/sec. The average hydraulic conductivity value used in the calculations is 2.83×10^{-3} cm/sec or 8.01 ft/day. An estimated effective porosity of 0.15 is used in the flow rate calculations. The hydraulic gradient was calculated and shown on **Table 4, Horizontal Groundwater Flow Velocity Calculations**.

An estimate of the horizontal groundwater 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

Table 4 presents the estimated horizontal flow velocity calculated using groundwater elevation data from the sampling events in 2019. 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.

4.0 EVALUATION OF GROUNDWATER QUALITY DATA

4.1 DATA VALIDATION – QUALITY ASSURANCE/QUALITY CONTROL

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. Equipment blanks and duplicate samples were also collected during each sampling event.

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 relative percent differences 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 5, Relative Percent Difference Calculations**, provides the relative percent differences for sample and sample duplicates during 2019 sampling events. All RPD's were below 20% for the most recent sampling event.

Antimony was detected at trace concentrations in an equipment (EB-01) and field blank (FB-01) during the first semi-annual monitoring event. Because the blanks were detected at trace concentrations, the MDL can be increased to the blank result and associated antimony results less than five times the blank result qualified with a (+) U* to indicate a validated non-detect.

Boron was detected at a trace concentration in an equipment (EB-01) during the first second-annual monitoring event. Because the blank was detected at a trace concentration, the MDL can be increased to the blank result and associated boron results less than five times the blank result qualified with a (+) U* to indicate a validated non-detect.

4.2 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).

4.2.1 Appendix III Evaluation

Intrawell prediction limits, combined with a 1-of-2 verification strategy were constructed for pH, sulfate, and TDS to determine whether there has been a SSI over background groundwater quality. Interwell prediction limits, combined with a 1-of-2 verification strategy were constructed for boron, calcium, chloride, and fluoride. 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 are formally tested using Tukey's box plot method when applicable, and when identified, are flagged in the computer database with "o" and deselected prior to construction of statistical limits.

The following adjustments are also applicable to the statistical analysis at the site:

- No statistical analyses are required on wells and analytes containing 100% non-detects (EPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% nondetects 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.

4.2.2 Appendix IV Evaluation

When in assessment monitoring, Appendix IV constituents are sampled semi-annually, and concentrations are compared to the 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 upon 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/L;
 - (ii) Lead 0.015 mg/L;
 - (iii) Lithium 0.040 mg/L; and
 - (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. Appendix IV constituents will be updated every two years beginning with the most recent event (Fall 2019). The next update to GWPS will occur no earlier than the Fall of 2021. Data from upgradient wells collected in between updates may still be used to support ASDs if merited.

4.3 STATISTICAL EXCEEDANCES

Analytical data from the 2019 semi-annual monitoring events in April-May and October were statistically analyzed in accordance with the Professional Engineer (PE)-certified Statistical Analysis Plan (October 2017) and updated in September 2019 data screening evaluation performed by Groundwater Stats Consulting. Appendix III statistical analysis was performed to determine if constituents have returned to background levels. Appendix IV assessment monitoring parameters were evaluated to determine if concentrations statistically exceeded the established groundwater protection standard.

4.3.1 Appendix III Constituents

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

4.3.2 Appendix IV Constituents

Table 6, 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 C**.

The following subsections describe statistical exceedances during 2019 monitoring events. Statistical evaluations of the 2019 assessment monitoring data did not introduce new or additional SSLs beyond those previously identified and reported in the 2018 Groundwater Monitoring and Corrective Action Report.

4.3.2.1 Semi-Annual Groundwater Monitoring Events

Statistical analysis of Appendix IV data identified the following SSL over GWPS at the listed well for the first 2019 the semi-annual groundwater monitoring event (this SSL was not observed during the second 2019 monitoring event; however, the site is proceeding with remedy selection described in the ACM):

- GS-GSA-MW-3: Lithium

As a result of the background update and slight increase in the background limit for lithium, statistical analysis of Appendix IV data did not identify any Appendix IV SSLs during the second semi-annual monitoring event. **Table 7, First Semi-Annual Monitoring Event Analytical Summary**, provides a summary of all constituents for the first semi-annual sampling event. **Table 8, Second Semi-Annual**

Monitoring Event Analytical Summary, provides a summary of all constituents for the second semi-annual sampling event.

Limited groundwater analytical data is available for delineation wells installed at the site in 2019; therefore, groundwater quality is simply compared to the GWPS. A review of analytical data derived from delineation wells did not identify any Appendix IV GWPS exceedances in the delineation wells during the second semi-annual sampling event. Details regarding the installation and sampling of these wells, and future proposed actions were submitted to the Department in a Groundwater Investigation Report on May 13, 2019.

To address SSLs at the site an ACM was prepared to evaluate potential groundwater corrective measures for the occurrence of lithium in groundwater at the site in accordance with § 257.96, ADEM Admin. Code r. 335-13-15-.06(7), and ADEM Administrative Order AO 18-0967-GW. The ACM was submitted to the Department and placed in the operating record on June 12, 2019.

5.0 MONITORING PROGRAM STATUS

The site is currently in assessment monitoring and 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 SSLs of Appendix IV parameters were identified at the Gypsum Pond during sampling events conducted in 2018. Alternate Source Demonstrations (ASDs) were not completed for all Appendix IV constituents exceeding the GWPS; therefore, in accordance with § 257.95(g)(3)(i) and ADEM Admin. Code r. 335-13-15-.06(6)(g)4.(i), APC implemented an assessment of corrective measures (ACM) as required by § 257.96, ADEM Admin. Code r. 335-13-15-.06(7), and ADEM Administrative Order AO 18-096-GW.

6.0 SUMMARY AND CONCLUSIONS

Semi-annual assessment monitoring events took place in April-May and October 2019. Statistical evaluations of the 2019 assessment monitoring data identified SSLs of Appendix IV constituents above the GWPS. The site remains in assessment monitoring while groundwater corrective remedies are being evaluated. Additional monitoring wells were installed to assess the horizontal and vertical extent of groundwater impacts at the site. The results of this investigation were submitted to ADEM in May 2019. These additional monitoring wells will continue to be sampled and analyzed as part of the ongoing assessment monitoring program.

An ACM was completed on June 12, 2019 to address SSLs of Appendix IV above groundwater protection standards.

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

- Installation, sampling, and analyses of additional (Phase II) delineation wells;
- Collect additional data to further evaluate remedies selected as feasible for the remediation of lithium, as described in the ACM; and
- Conduct the first semi-annual assessment monitoring event in the first quarter of 2020 and submit a semi-annual groundwater report summarizing findings by July 31, 2020.

7.0 REFERENCES

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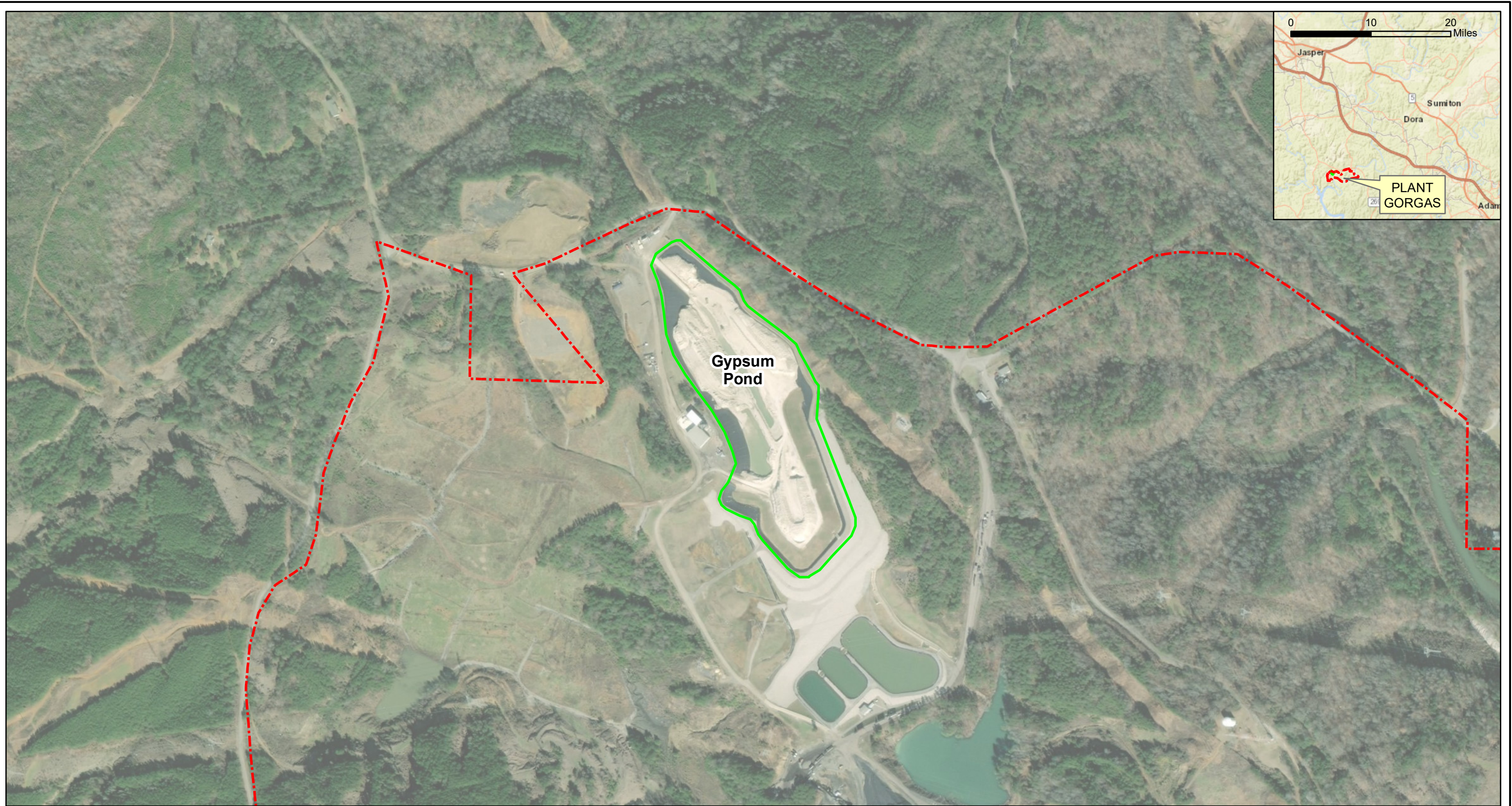
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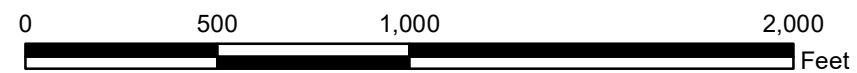
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Figures



Legend

- Gypsum Pond Boundary
- Property Boundary (Approximate)



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DRAWN BY	KAR
CHECKED BY	GBD

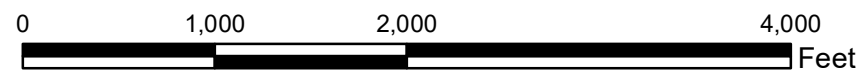
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**SITE LOCATION MAP
 PLANT GORGAS GYPSUM POND**

FIGURE NO
FIGURE 1



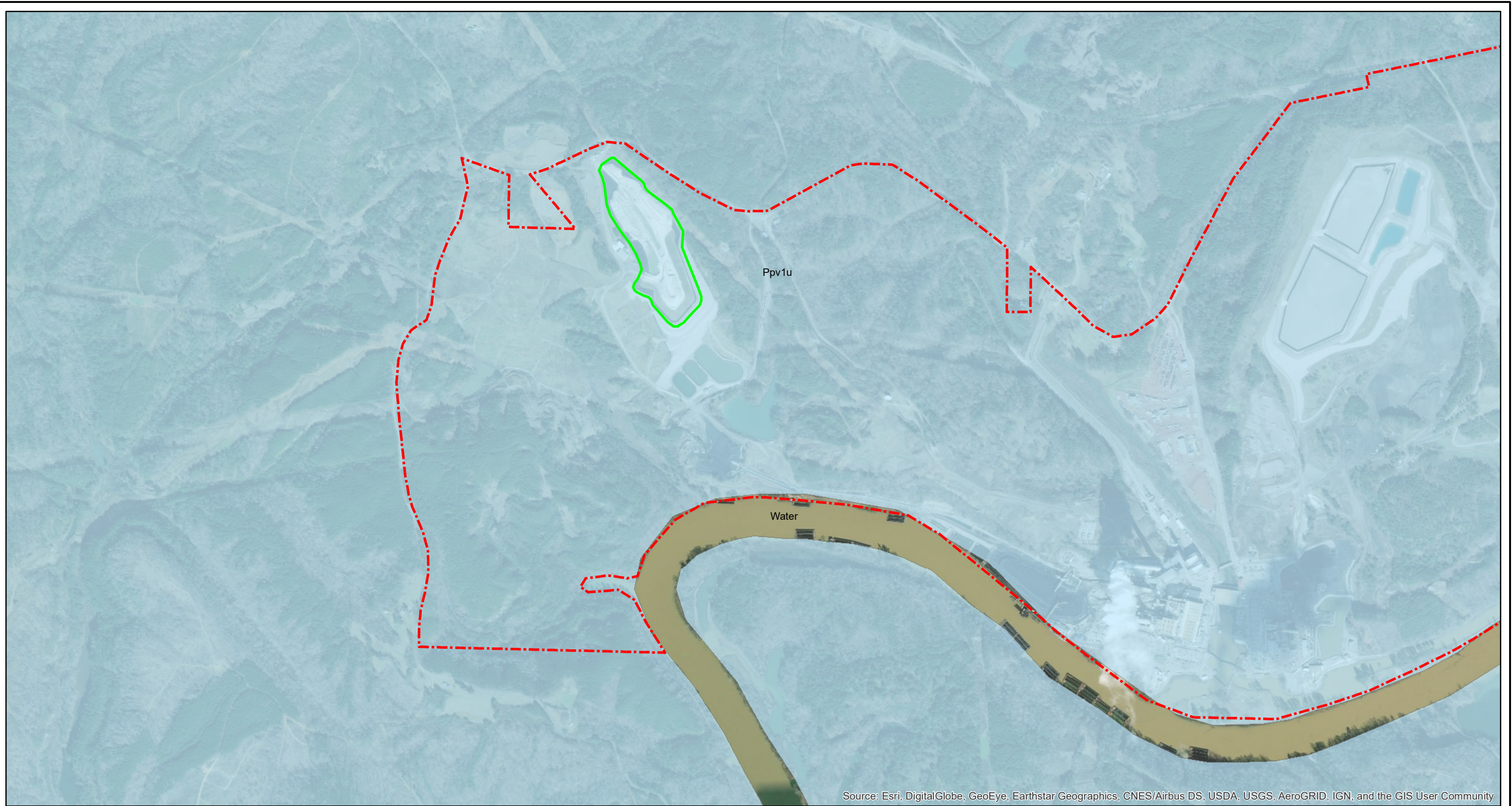


- Legend**
- Gypsum Storage Area Boundary
 - Property Boundary (Approximate)



SCALE	1:12,000
DATE	1/9/2020
DRAWN BY	KAR
CHECKED BY	GBD

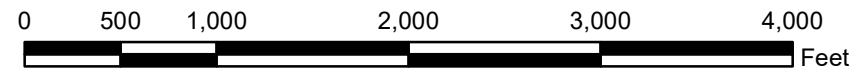
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SITE TOPOGRAPHIC MAP PLANT GORGAS GYPSUM POND	
FIGURE NO	FIGURE 2
Southern Company	



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Gypsum Pond Boundary
- Property Boundary (Approximate)
- Geologic Units**
- Pottsville Formation (upper part), Appalachian Plateaus

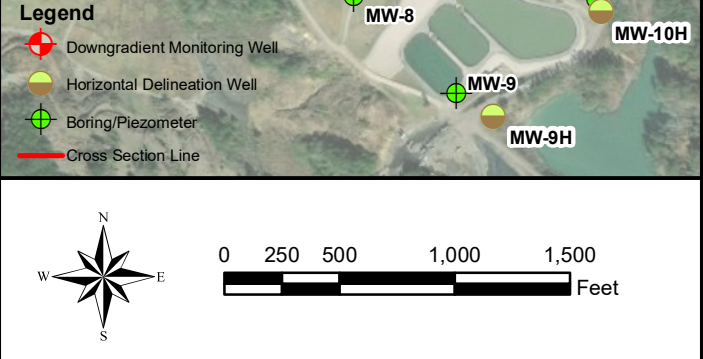
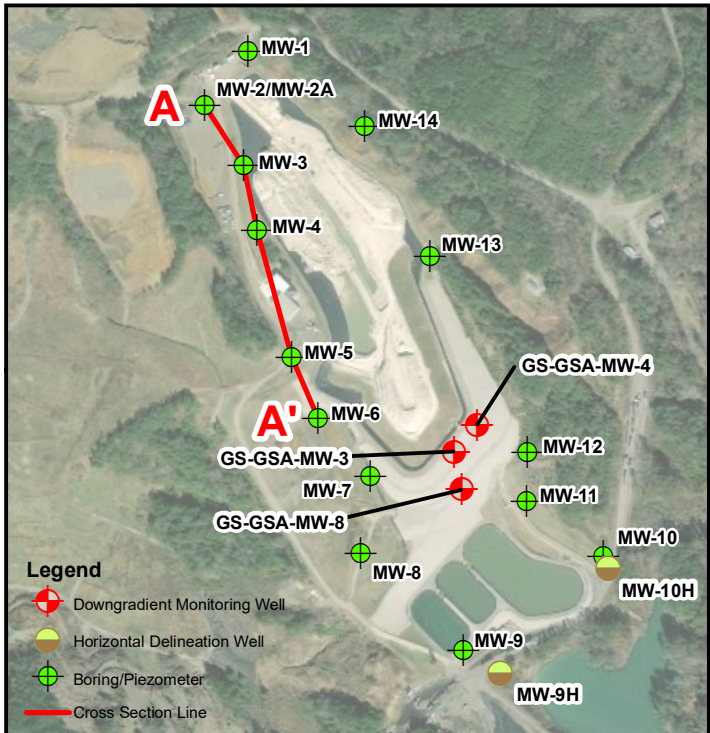
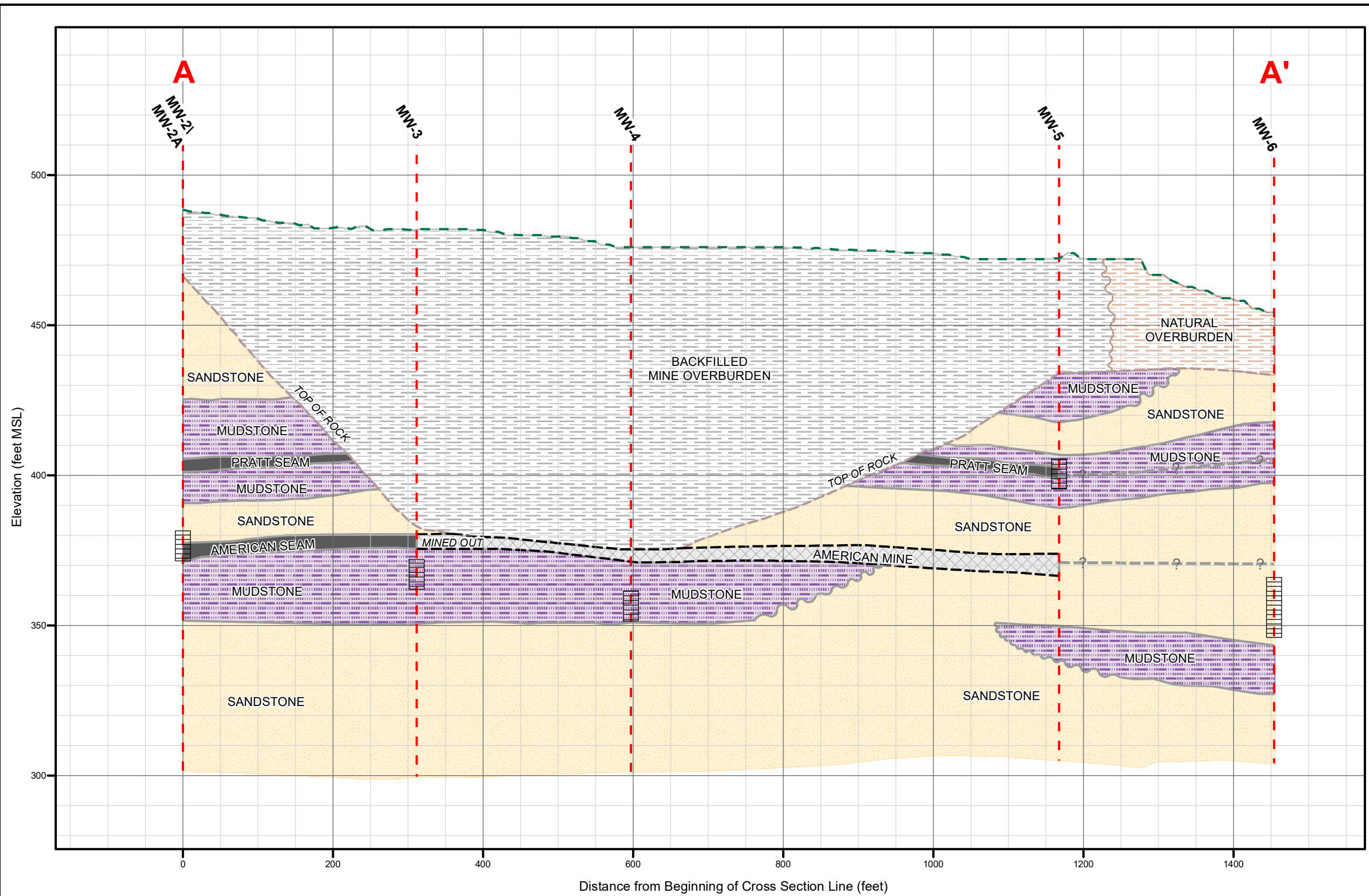


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**SITE GEOLOGIC MAP
 PLANT GORGAS GYPSUM POND**

FIGURE NO
FIGURE 3



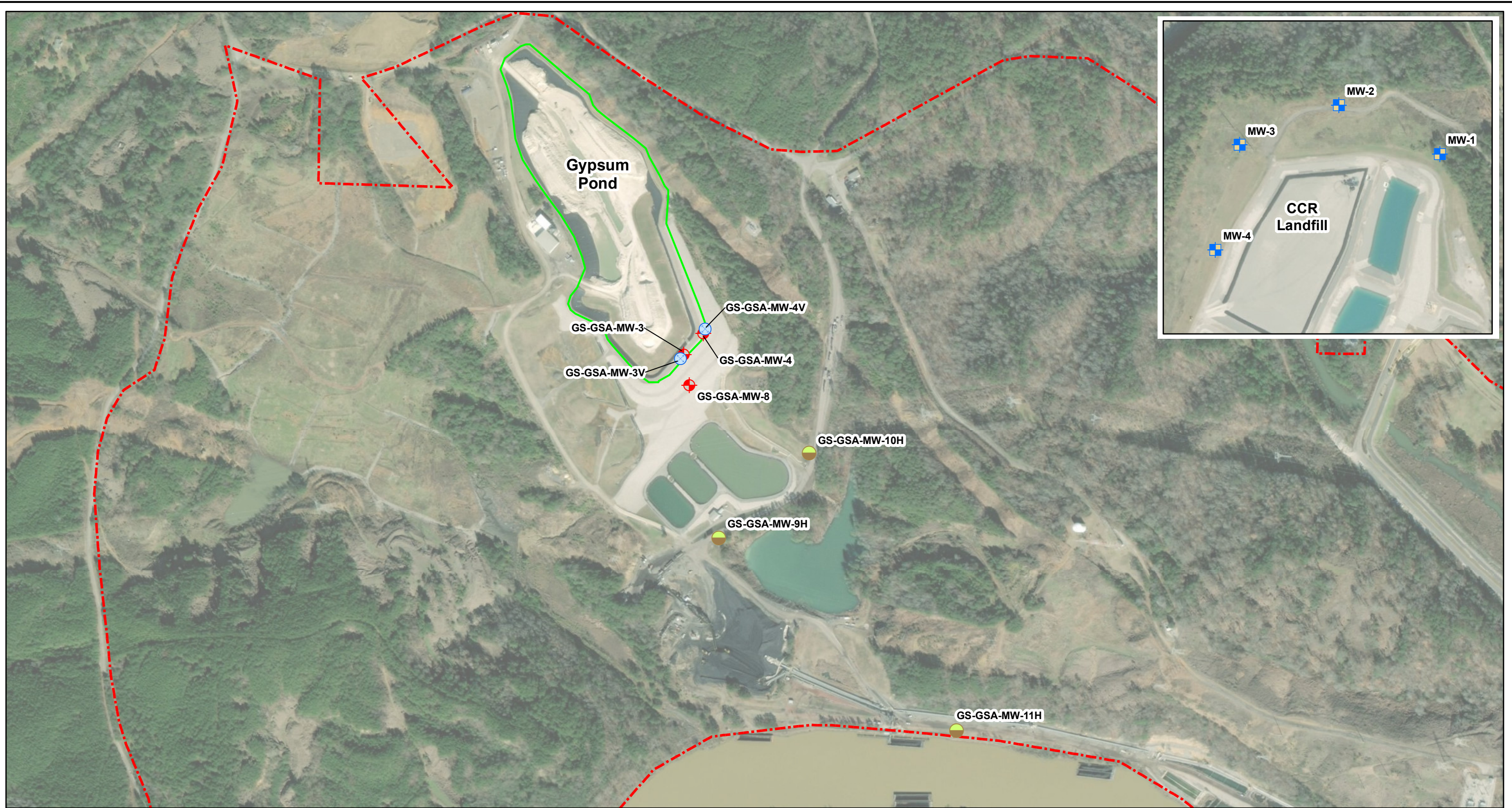








Legend		Geologic Units	
	Screen Interval		Top of Rock
	Ground Surface Elevation		Strata Boundary
	Monitoring Well Location		Inferred Strata
			Mine
			Backfilled Mine Overburden
			Natural Overburden
			Mudstone
			Sandstone
			Mine
			Coal

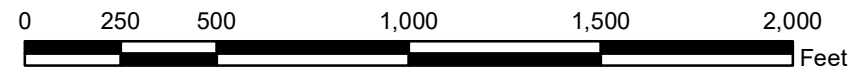
Notes: 1. Stratigraphic layers were correlated using a combination of boring data and gamma logs.

SCALE	1:1,800
DATE	1/15/2020
DRAWN BY	KAR
CHECKED BY	GBD


DRAWING TITLE	
GEOLOGIC CROSS SECTION A - A' PLANT GORGAS GYPSUM POND	
FIGURE NO	FIGURE 5
Southern Company	



- Legend**
-  Upgradient Monitoring Well
 -  Horizontal Delineation Well
 -  Vertical Delineation Well
 -  Downgradient Monitoring Well
 -  Gypsum Pond Boundary
 -  Property Boundary (Approximate)



SCALE	1:6,000
DATE	1/15/2020
DRAWN BY	KAR
CHECKED BY	GBD

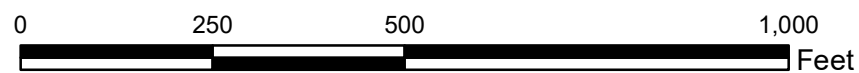
DRAWING TITLE	
MONITORING WELL LOCATION MAP PLANT GORGAS GYPSUM POND	
FIGURE NO	FIGURE 5
	



Legend

- ◆ Downgradient Monitoring Well
- Potentiometric Surface Contour (ft NAVD88)
- Approximate Groundwater Flow Direction
- Gypsum Pond Boundary

GS-GSA-MW-3 Well ID
341.33 Groundwater Elevation



NOTE: ft NAVD88 indicates feet above North American Vertical Datum of 1988.

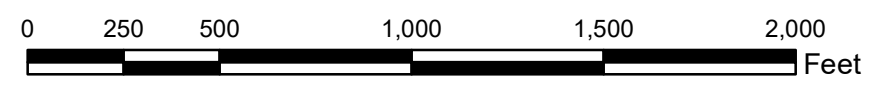
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DATE	1/9/2020
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POTENTIOMETRIC SURFACE CONTOUR MAP APRIL 10, 2019 PLANT GORGAS GYPSUM POND	
FIGURE NO	FIGURE 6
Southern Company	



Legend	
	Horizontal Delineation Well
	Vertical Delineation Well
	Downgradient Monitoring Well
	Potentiometric Surface Contour (ft NAVD88)
	Approximate Groundwater Flow Direction
	Gypsum Pond Boundary

GS-GSA-MW-3 Well ID
332.37 Groundwater Elevation



NOTES:
 1. ft NAVD88 indicates feet above North American Vertical Datum of 1988.
 2. NM indicates not measured.
 3. Vertical delineation wells were not factored into potentiometric surface contouring.

SCALE	1:6,000
DATE	1/16/2020
DRAWN BY	KWR
CHECKED BY	GBD

DRAWING TITLE	
POTENTIOMETRIC SURFACE CONTOUR MAP	
OCTOBER 14, 2019	
PLANT GORGAS GYPSUM POND	
FIGURE NO	FIGURE 7

Tables

**Table 1.
Groundwater Monitoring Well Network Details**

Well Name	Purpose	Installation Completion Date	Northing	Easting	Ground Elevation	Top of Casing Elevation	Well Depth (ft.) Below Top of Casing	Top of Screen Elevation (ft MSL)	Bottom of Screen Elevation (ft MSL)	Screen Length
MW-1	Upgradient	1/15/2014	1330794.064	594082.361	499.19	502.25	107.56	405.09	395.09	10
MW-2	Upgradient	10/23/2014	1331053.309	593548.802	498.54	502.12	94.58	417.94	407.94	10
MW-3	Upgradient	10/23/2014	1330842.402	593025.397	522.23	525.9	119.07	417.23	407.23	10
MW-4	Upgradient	2/19/2012	1330289.727	592896.414	516.67	518.63	128.66	400.37	390.37	10
GS-GSA-MW-3	Downgradient	12/8/2015	1329120.128	2054772.316	439.75	442.63	129.68	323.35	313.35	10
GS-GSA-MW-4	Downgradient	12/9/2015	1329235.421	2054872.732	439.44	442.10	107.86	344.64	334.64	10
GS-GSA-MW-8	Downgradient	12/20/2015	1328959.796	2054804.925	401.33	404.38	128.45	286.33	276.33	10
GS-GSA-MW-3V	Vertical Delineation	2/25/2019	1329100.49	2054755.12	439.60	442.68	191.58	261.60	251.60	10
GS-GSA-MW-4V	Vertical Delineation	2/25/2019	1329256.83	2054882.74	439.29	442.18	154.39	308.29	288.29	20
GS-GSA-MW-9H	Horizontal Delineation	2/3/2019	1328157.96	2054972.56	333.04	335.83	60.29	286.04	276.04	10
GS-GSA-MW-10H	Horizontal Delineation	2/4/2019	1328612.73	2055441.67	336.56	339.52	29.46	320.56	310.56	10
GS-GSA-MW-11H	Horizontal Delineation	2/6/2019	1327162.44	2056243.5	260.13	263.02	49.39	224.13	214.13	10

Notes:

1. Northing and easting are in feet relative to the State Plane Alabama West North America Datum of 1983.
2. Elevations are in feet relative to the North American vertical Datum of 1988.
3. *Piezometers are utilized for water level readings only.
3. Top of screen and bottom of screen depths are calculated relative Top of Casing elevation .
5. MSL - Mean Sea Level

Table 2.
Monitoring Parameters and Reporting Limits

Parameter	Analytical Method	Reporting Limit (mg/L)
Appendix III Parameters		
Boron	EPA 200.7/200.8	0.05
Calcium	EPA 200.7/200.8	0.25
Chloride	EPA 300.0	2
Fluoride	EPA 300.0	0.1
pH	None	None
Sulfate	EPA 300.0	5
Total Dissolved Solids (TDS)	SM 2540C	5
Appendix IV Parameters		
Antimony	EPA 200.7/200.8	0.0025
Arsenic	EPA 200.7/200.8	0.00125
Barium	EPA 200.7/200.8	0.0025
Beryllium	EPA 200.7/200.8	0.0025
Cadmium	EPA 200.7/200.8	0.0025
Chromium	EPA 200.7/200.8	0.0025
Cobalt	EPA 200.7/200.8	0.0025
Fluoride	EPA 300.0	0.1
Lead	EPA 200.7/200.8	0.00125
Lithium	EPA 200.7/200.8	0.0025
Mercury	EPA 7470A	0.0002
Molybdenum	EPA 200.7/200.8	0.015
Selenium	EPA 200.7/200.8	0.00125
Thallium	EPA 200.7/200.8	0.0005
Radium 226 & 228 combined	EPA 9315/9320	1 pCi/L

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter

**Table 3
Groundwater Elevations Summary**

Well Name	Top of Casing Elevation																	
		8/24/2016	10/3/2016	10/26/2016	11/21/2016	1/17/2017	3/20/2017	4/17/2017	5/30/2017	8/23/2017	2/13/2018	6/11/2018	10/17/2018	3/4/2019	3/13/2019	4/10/2019	10/14/2019	
MW-1	502.38	410.56	410.44	410.32	410.23	410.20	410.80	411.07	410.93	411.19	411.02	411.41	410.78	--	412.24	412.08	410.85	
MW-2	502.17	416.47	416.26	416.13	416.03	416.67	417.29	417.39	416.99	417.07	419.34	417.08	416.44	--	417.75	421.20	416.67	
MW-3	525.90	415.08	414.82	414.64	414.43	415.27	416.07	417.21	415.63	415.73	418.49	415.77	414.92	--	418.31	417.41	415.14	
MW-4	517.89	399.83	399.35	399.09	398.79	399.77	401.28	401.59	400.94	401.03	401.93	401.27	399.56	--	401.94	402.12	399.59	
GS-GSA-MW-3	442.63	332.11	331.71	331.53	331.33	331.02	333.43	334.12	334.72	336.19	332.79	336.36	332.37	--	341.46	341.33	332.37	
GS-GSA-MW-4	442.10	350.00	349.10	348.71	348.26	349.61	351.50	352.75	351.17	351.02	353.06	351.52	349.56	--	353.06	353.00	349.08	
GS-GSA-MW-8	404.38	318.89	317.35	316.33	315.43	315.89	320.12	322.22	321.64	323.71	320.01	324.40	319.03	--	334.46	330.27	319.20	
GS-GSA-MW-3V	442.68	--	--	--	--	--	--	--	--	--	--	--	--	--	327.13	326.34	--	313.29
GS-GSA-MW-4V	442.18	--	--	--	--	--	--	--	--	--	--	--	--	--	333.31	332.35	--	322.28
GS-GSA-MW-9H	335.83	--	--	--	--	--	--	--	--	--	--	--	--	--	294.33	293.64	--	286.47
GS-GSA-MW-10H	339.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	321.80	--	--
GS-GSA-MW-11H	263.02	--	--	--	--	--	--	--	--	--	--	--	--	--	257.01	256.30	--	255.09

Notes:

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

Table 4
Horizontal Groundwater Flow Velocity Calculations

SA01 2019								
Date	MW-3 h ₁ (ft)	MW-8 h ₂ (ft)	Distance Δl (ft)	Hydraulic Gradient Δh/Δl (ft/ft)	Hydraulic Conductivity K (ft/day)	Effective Porosity n	Calculated Groundwater Flow Velocity (ft/d)	Calculated Groundwater Flow Velocity (ft/yr)
4/10/2019	341.33	330.27	165.30	0.067	8.01	0.15	3.57	1304.12

SA02 2019								
Date	MW-3 h ₁ (ft)	MW-11H h ₂ (ft)	Distance Δl (ft)	Hydraulic Gradient Δh/Δl (ft/ft)	Hydraulic Conductivity K (ft/day)	Effective Porosity n	Calculated Groundwater Flow Velocity (ft/d)	Calculated Groundwater Flow Velocity (ft/yr)
10/14/2019	332.37	255.09	2414.40	0.032	8.01	0.15	1.71	623.87

Notes:

ft=feet

ft/d = feet/day

ft/ft = feet per foot

ft/yr = feet per year

**Table 5.
Relative Percent Difference Calculations**

2019 1st Semi-Annual Monitoring Event				
Parameter	Units	Monitoring Point Identification		Relative Percent Difference (RPD %)
		MW-1	MW-1 Dup	
Calcium	mg/L	243	270	10.5
Chloride	mg/L	2.36	2.35	0.4
Fluoride	mg/L	0.102	0.105	2.9
Sulfate	mg/L	1700	1760	3.5
TDS	mg/L	2630	2600	1.1
Barium	mg/L	0.0105	0.0102	2.9
Cadmium	mg/L	0.00224	0.00219	2.3
Cobalt	mg/L	0.0445	0.0453	1.8
Lithium	mg/L	0.0285	0.0294	3.1

2019 2nd Semi-Annual Monitoring Event				
Parameter	Units	Monitoring Point Identification		Relative Percent Difference (RPD %)
		GS-GSA-MW-9H	GS-GSA-MW-9H DUP	
Boron	mg/L	10.7	10.4	2.8
Calcium	mg/L	363	357	1.7
Chloride	mg/L	145	145	0.0
Fluoride	mg/L	0.101	0.104	2.9
Sulfate	mg/L	2020	1910	5.6
TDS	mg/L	3080	3120	1.3
Barium	mg/L	0.0163	0.0168	3.0
Cobalt	mg/L	0.168	0.167	0.6
Lithium	mg/L	0.184	0.187	1.6
Parameter	Units	Monitoring Point Identification		Relative Percent Difference (RPD %)
		GS-GSA-MW-11H	GS-GSA-MW-11H Dup	
Calcium	mg/L	143	129	10.3
Chloride	mg/L	4.45	4.27	4.1
Sulfate	mg/L	750	745	0.7
TDS	mg/L	1150	1160	0.9
Barium	mg/L	0.0192	0.0196	2.1
Cobalt	mg/L	0.00598	0.00595	0.5

Table 6.
Summary of Background Levels and Groundwater Protection Standards

Analyte	Units	Background	Federal GWPS	State GWPS
Antimony	mg/L	0.003	0.006	0.006
Arsenic	mg/L	0.005	0.01	0.01
Barium	mg/L	0.0165; 0.01531	2	2
Beryllium	mg/L	0.0121	0.004	0.004
Cadmium	mg/L	0.00459; 0.00598	0.005	0.005
Chromium	mg/L	0.0105	0.1	0.1
Cobalt	mg/L	0.49; 1.07	0.006	1.07
Combined Radium-226/228	pCi/L	1.059; 1.151	5	5
Fluoride	mg/L	0.5469; 0.5302	4	4
Lead	mg/L	0.005	0.015	0.015
Lithium	mg/L	0.384; 0.419	0.04	0.419
Mercury	mg/L	0.0005	0.002	0.002
Molybdenum	mg/L	0.01	0.1	0.1
Selenium	mg/L	0.0158	0.05	0.05
Thallium	mg/L	0.001	0.002	0.002

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. The background limits were used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and ADEM Rule 335-13-15-.06(h)()
4. Where two numbers are present, they denote the different background levels for each of the two semiannual monitoring events in the order that they were determined.

**Table 7.
First Semi-Annual Monitoring Event Analytical Summary**

		APPENDIX III						
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L
MW-1	4/10/2019	0.0304(J)	243	2.36	0.102	5.11	1700	2630
MW-1	5/14/2019	Non-Detect	167	2.28	0.119	5.19	1560	2340
MW-2	4/10/2019	Non-Detect	200	1.76	0.262	6.1	889	1250
MW-2	5/14/2019	Non-Detect	168	2.98	0.170	6.07	948	1480
MW-3	4/10/2019	Non-Detect	348	2.25	0.273	5.54	2460	3680
MW-3	5/14/2019	Non-Detect	254	2.28	0.281	5.71	2460	3580
MW-4	4/10/2019	0.0438(J)	356	1.88	0.384	6.14	2090	3280
MW-4	5/14/2019	Non-Detect	254	1.82	0.335	6.23	2240	3130
GS-GSA-MW-3	4/10/2019	3.35	659	249	0.738	5.83	2980	5090
GS-GSA-MW-4	4/10/2019	3.74	129	74.3	Non-Detect	3.83	616	1000
GS-GSA-MW-8	4/10/2019	0.944	533	174	0.156	6.71	2150	3580

Notes:

1. J value indicates the result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL).

Values are displayed as less than the PQL with a J.

2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.

3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.

4. (+) U* indicates validation flag applied to samples where equipment blank or field blank limit exceedances potentially biased samples

5. TDS - Total Dissolved Solids

6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.

7. Two data points exist for upgradient wells MW-1 through MW-4. These wells are sampled twice because they are also sampled as upgradient wells for the Plant Gorgas Gypsum Pond monitoring event(s).

**Table 7.
First Semi-Annual Monitoring Event Analytical Summary**

		APPENDIX IV						
WELL	SAMPLE DATE	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt
GWPS		0.006	0.01	2	0.0103	0.005	0.1	0.49
UNITS		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-1	4/10/2019	0.00143(J), (+) U*	Non-Detect	0.0105	Non-Detect	0.00224	Non-Detect	0.0445
MW-1	5/14/2019	0.00137(J), (+) U*	Non-Detect	0.00913(J)	Non-Detect	0.00238	Non-Detect	0.0485
MW-2	4/10/2019	0.000993(J), (+) U*	Non-Detect	0.0111	Non-Detect	Non-Detect	Non-Detect	0.0152
MW-2	5/14/2019	0.000989(J), (+) U*	Non-Detect	0.0109	Non-Detect	Non-Detect	Non-Detect	0.0222
MW-3	4/10/2019	0.000978(J), (+) U*	Non-Detect	0.0101	Non-Detect	0.00337	Non-Detect	0.0144
MW-3	5/14/2019	Non-Detect	Non-Detect	0.00922(J)	Non-Detect	0.0013	Non-Detect	0.00536
MW-4	4/10/2019	0.00097(J), (+) U*	Non-Detect	0.0107	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	5/14/2019	Non-Detect	Non-Detect	0.00949(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	4/10/2019	0.00111(J), (+) U*	0.00121(J)	0.0153	0.00257(J)	Non-Detect	Non-Detect	0.151
GS-GSA-MW-4	4/10/2019	0.000976(J), (+) U*	0.00176(J)	0.0136	0.00469	0.00176	Non-Detect	0.241
GS-GSA-MW-8	4/10/2019	0.00102(J), (+) U*	Non-Detect	0.02	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Notes:

1. J value indicates the result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. (+) U* indicates validation flag applied to samples where equipment blank or field blank limit exceedances potentially biased samples
5. TDS - Total Dissolved Solids
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. Two data points exist for upgradient wells MW-1 through MW-4. These wells are sampled twice because they are also sampled as upgradient wells for the Plant Gorgas Gypsum Pond monitoring event(s).

**Table 7.
First Semi-Annual Monitoring Event Analytical Summary**

		APPENDIX IV							
WELL	SAMPLE DATE	Combined Radium 226 + 228	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		5	4	0.015	0.384	0.002	0.1	0.05	0.002
UNITS		pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-1	4/10/2019	0.342(U)	0.102	Non-Detect	0.0285	Non-Detect	Non-Detect	0.00471(J)	Non-Detect
MW-1	5/14/2019	0.509	0.119	Non-Detect	0.026(J)	Non-Detect	Non-Detect	0.00316(J)	Non-Detect
MW-2	4/10/2019	0.329(U)	0.262	Non-Detect	0.0574	Non-Detect	Non-Detect	0.00322(J)	Non-Detect
MW-2	5/14/2019	0.579	0.170	Non-Detect	0.0445	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-3	4/10/2019	0.198(U)	0.273	Non-Detect	0.0905	Non-Detect	Non-Detect	0.0113	Non-Detect
MW-3	5/14/2019	0.176(U)	0.281	Non-Detect	0.0828	Non-Detect	Non-Detect	0.0119	Non-Detect
MW-4	4/10/2019	0.515	0.384	Non-Detect	0.0504	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	5/14/2019	0.352(U)	0.335	Non-Detect	0.0485	Non-Detect	Non-Detect	0.00201(J)	Non-Detect
GS-GSA-MW-3	4/10/2019	0.265(U)	0.738	Non-Detect	0.425	Non-Detect	Non-Detect	0.00234(J)	Non-Detect
GS-GSA-MW-4	4/10/2019	0.622	Non-Detect	Non-Detect	0.282	Non-Detect	Non-Detect	0.00322(J)	Non-Detect
GS-GSA-MW-8	4/10/2019	0.128(U)	0.156	Non-Detect	0.195	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Notes:

1. J value indicates the result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. (+) U* indicates validation flag applied to samples where equipment blank or field blank limit exceedances potentially biased samples
5. TDS - Total Dissolved Solids
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. Two data points exist for upgradient wells MW-1 through MW-4. These wells are sampled twice because they are also sampled as upgradient wells for the Plant Gorgas Gypsum Pond monitoring event(s).

Table 8.
Second Semi-Annual Monitoring Event Analytical Summary

APPENDIX III								
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L
MW-1	10/8/2019	Non-Detect	157	2.31	0.0924(J)	5.12	1540	2330
MW-1	10/16/2019	0.0385(J), (+) U*	157	2.42	0.0756(J)	5.16	1680	3650
MW-2	10/8/2019	0.0371(J)	190	4.26	0.164	5.96	1230	1840
MW-2	10/16/2019	0.0419(J), (+) U*	194	4.04	0.114	5.98	1170	1830
MW-3	10/8/2019	0.0537(J), (+) U*	371	1.36	0.225	4.98	2950	4720
MW-3	10/16/2019	0.05(J), (+) U*	346	1.4	0.106	4.51	2820	4210
MW-4	10/10/2019	0.0487(J), (+) U*	302	1.93	0.304	6.15	2690	4000
MW-4	10/16/2019	0.0505(J), (+) U*	356	1.92	0.302	6.19	3050	4060
GS-GSA-MW-3	10/14/2019	2.48	552	228	0.619	6.04	3110	5110
GS-GSA-MW-4	10/14/2019	3.37	93.5	59.1	Non-Detect	3.91	641	967
GS-GSA-MW-8	10/14/2019	2.11	524	207	0.118	6.88	2090	3730

Notes:

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2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. (+) U* indicates validation flag applied to samples where equipment blank or field blank limit exceedances potentially biased samples
5. TDS - Total Dissolved Solids
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
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**Table 8.
Second Semi-Annual Monitoring Event Analytical Summary**

		APPENDIX IV						
WELL	SAMPLE DATE	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt
GWPS		0.006	0.01	2	0.0103	0.005	0.1	1.07
UNITS		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-1	10/8/2019	Non-Detect	Non-Detect	0.0109	Non-Detect	0.00218	Non-Detect	0.0778
MW-1	10/16/2019	Non-Detect	Non-Detect	0.0106	Non-Detect	0.00225	Non-Detect	0.08
MW-2	10/8/2019	Non-Detect	Non-Detect	0.0151	Non-Detect	Non-Detect	Non-Detect	0.0674
MW-2	10/16/2019	Non-Detect	Non-Detect	0.0146	Non-Detect	Non-Detect	Non-Detect	0.073
MW-3	10/8/2019	Non-Detect	0.0048(J)	0.0154	0.0084	0.00598	Non-Detect	1.07
MW-3	10/16/2019	Non-Detect	0.00389(J)	0.0128	0.0103	0.00448	Non-Detect	0.848
MW-4	10/10/2019	Non-Detect	Non-Detect	0.0116	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	10/16/2019	Non-Detect	Non-Detect	0.0125	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	10/14/2019	Non-Detect	Non-Detect	0.0122	0.00162(J)	Non-Detect	Non-Detect	0.102
GS-GSA-MW-4	10/14/2019	Non-Detect	0.0012(J)	0.0147	0.00403	0.0015	Non-Detect	0.213
GS-GSA-MW-8	10/14/2019	Non-Detect	Non-Detect	0.0215	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Notes:

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2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. (+) U* indicates validation flag applied to samples where equipment blank or field blank limit exceedances potentially biased samples
5. TDS - Total Dissolved Solids
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. Two data points exist for upgradient wells MW-1 through MW-4. These wells are sampled twice because they are also sampled as upgradient wells for the Plant Gorgas Gypsum Pond monitoring event(s).

**Table 8.
Second Semi-Annual Monitoring Event Analytical Summary**

		APPENDIX IV							
WELL	SAMPLE DATE	Combined Radium 226 + 228	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		5	4	0.015	0.419	0.002	0.1	0.05	0.002
UNITS		pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-1	10/8/2019	1.47	0.0924(J)	Non-Detect	0.0268	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-1	10/16/2019	0.204(U)	0.0756(J)	Non-Detect	0.0263	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	10/8/2019	0.493(U)	0.164	Non-Detect	0.0677	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	10/16/2019	0.046(U)	0.114	Non-Detect	0.0661	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-3	10/8/2019	0.833(U)	0.225	Non-Detect	0.419	Non-Detect	Non-Detect	0.00256(J)	Non-Detect
MW-3	10/16/2019	0.0279(U)	0.106	0.00108(J)	0.337	Non-Detect	Non-Detect	0.00286(J)	Non-Detect
MW-4	10/10/2019	1.02(U)	0.304	Non-Detect	0.054	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	10/16/2019	0.356(U)	0.302	Non-Detect	0.052	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	10/14/2019	0.297(U)	0.619	Non-Detect	0.459	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-4	10/14/2019	0.317(U)	Non-Detect	Non-Detect	0.262	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	10/14/2019	0.225(U)	0.118	Non-Detect	0.209	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Notes:

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2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. (+) U* indicates validation flag applied to samples where equipment blank or field blank limit exceedances potentially biased samples
5. TDS - Total Dissolved Solids
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. Two data points exist for upgradient wells MW-1 through MW-4. These wells are sampled twice because they are also sampled as upgradient wells for the Plant Gorgas Gypsum Pond monitoring event(s).

Appendix A

Monitoring Network Status Summary

Well ID	Purpose	Summary of Sampling Events														
		August 24 - 26, 2016	October 3 - 7, 2016	October 26 - 27, 2016	November 21 - 23, 2016	January 17 - 19, 2017	March 20 - 24, 2017	April 17 - 20, 2017	May 30 - June 1, 2017	August 23 - 25, 2017	February 12 - 15, 2018	June 11 - 14, 2018	October 15 - 19, 2018	March 4 - 7, 2019	April 8 - 12, 2019	October 14 - 18, 2019
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Detection	Assessment	2018 Semi-Annual 01	2018 Semi-Annual 02	2019 Semi-Annual 01		2019 Semi-Annual 02
MW-1	Upgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	BKG07	BKG08	DET01	S01	ASM01	ASM02	--	ASM03	ASM04
MW-2	Upgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	BKG07	BKG08	DET01	S01	ASM01	ASM02	--	ASM03	ASM04
MW-3	Upgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	BKG07	BKG08	DET01	S01	ASM01	ASM02	--	ASM03	ASM04
MW-4	Upgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	BKG07	BKG08	DET01	S01	ASM01	ASM02	--	ASM03	ASM04
GS-GSA-MW-3	Downgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	BKG07	BKG08	DET01	S01	ASM01	ASM02	--	ASM03	ASM04
GS-GSA-MW-4	Downgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	BKG07	BKG08	DET01	S01	ASM01	ASM02	--	ASM03	ASM04
GS-GSA-MW-8	Downgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	BKG07	BKG08	DET01	S01	ASM01	ASM02	--	ASM03	ASM04
GS-GSA-MW-3V	Vertical Delineation	--	--	--	--	--	--	--	--	--	--	--	--	ASM03	--	ASM04
GS-GSA-MW-4V	Vertical Delineation	--	--	--	--	--	--	--	--	--	--	--	--	ASM03	--	ASM04
GS-GSA-MW-9H	Horizontal Delineation	--	--	--	--	--	--	--	--	--	--	--	--	ASM03	--	ASM04
GS-GSA-MW-11H	Horizontal Delineation	--	--	--	--	--	--	--	--	--	--	--	--	ASM03	--	ASM04

Abbreviations:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. N/A indicates the constituent was not analyzed during the sampling event.
4. J value indicates the result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL).
Values are displayed as less than the PQL with a J.
5. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
6. GWPS is the Groundwater Protection Standard.
7. Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
8. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.

Analytical Data Summary

Plant Gorgas Gypsum Pond

Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Rad Radium 22	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R	0.006	0.01	2	0.0103	0.005	0.1	1.07	5	4	0.015	0.419	0.002	0.1	0.05	0.002
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-1	4/26/2016	0.0231(J)	147	1.94	0.146(J)	5.2	1490	2080	Non-Detect	Non-Detect	0.00941(J)	Non-Detect	0.00196	Non-Detect	0.0343	n/a	0.146(J)	Non-Detect	0.0264(J)	Non-Detect	Non-Detect	0.00261(J)	Non-Detect
MW-1	6/20/2016	0.0227(J)	152	2.09	0.148(J)	5.18	1420	2060	Non-Detect	Non-Detect	0.00951(J)	Non-Detect	0.0021	Non-Detect	0.0413	n/a	0.148(J)	Non-Detect	0.0246(J)	Non-Detect	Non-Detect	0.00242(J)	Non-Detect
MW-1	8/8/2016	0.0278(J)	150	2.18	0.137(J)	5.12	1460	2070	Non-Detect	Non-Detect	0.00991(J)	Non-Detect	0.00206	Non-Detect	0.0513	n/a	0.137(J)	Non-Detect	0.0229(J)	Non-Detect	Non-Detect	0.00253(J)	Non-Detect
MW-1	8/24/2016	0.0247(J)	142	2.22	0.133(J)	n/a	1450	2040	Non-Detect	Non-Detect	0.00949(J)	Non-Detect	0.00182	Non-Detect	0.0471	0.566(U)	0.133(J)	Non-Detect	0.0236(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-1	10/3/2016	0.0307(J)	139	2.34	0.103(J)	5.21	1460	2110	Non-Detect	Non-Detect	0.0105	Non-Detect	0.00188	Non-Detect	0.0525	0.537(U)	0.103(J)	Non-Detect	0.0229(J)	Non-Detect	Non-Detect	0.00211(J)	Non-Detect
MW-1	10/26/2016	0.0241(J)	133	2.34	0.05(J)	5.2	1330	2000	Non-Detect	Non-Detect	0.00931(J)	Non-Detect	0.00175	Non-Detect	0.0527	0.636	0.05(J)	Non-Detect	0.0227(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-1	11/21/2016	0.0202(J)	144	2.5	0.047(J)	5.19	1420	2070	Non-Detect	Non-Detect	0.00879(J)	Non-Detect	0.00197	Non-Detect	0.0569	0.807	0.047(J)	Non-Detect	0.0236(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-1	11/21/2016	n/a	n/a	n/a	n/a	5.19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW-1	1/17/2017	0.0201(J)	131	2.68	0.09(J)	5.17	1350	1930	Non-Detect	Non-Detect	0.00929(J)	Non-Detect	0.002	Non-Detect	0.0768	0.308(U)	0.09(J)	Non-Detect	0.0228(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-1	3/22/2017	0.0224(J)	141	3.7	0.12	5.2	1500	2060	Non-Detect	Non-Detect	0.00938(J)	Non-Detect	0.0019	Non-Detect	0.0535	0.344(U)	0.12	Non-Detect	0.0238(J)	Non-Detect	Non-Detect	0.0022(J)	Non-Detect
MW-1	4/18/2017	Non-Detect	149	2.4	0.12	5.2	1300	2140	Non-Detect	Non-Detect	0.00964(J)	Non-Detect	0.00159	Non-Detect	0.0442	0.934	0.12	Non-Detect	0.0242(J)	Non-Detect	Non-Detect	0.0027(J)	Non-Detect
MW-1	5/30/2017	Non-Detect	140	2.6	0.13	5.14	1400	2240	Non-Detect	Non-Detect	0.00982(J)	Non-Detect	0.00214	Non-Detect	0.0465	0.149(U)	0.13	Non-Detect	0.0229(J)	Non-Detect	Non-Detect	0.00316(J)	Non-Detect
MW-1	8/23/2017	0.0253(J)	152	2.7	0.16	5.12	1500	2160	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.16	n/a	n/a	n/a	n/a	n/a	n/a
MW-1	2/13/2018	n/a	n/a	n/a	0.14	5.18	n/a	n/a	Non-Detect	Non-Detect	0.00937(J)	Non-Detect	0.0018	Non-Detect	0.062	0.774	0.14	Non-Detect	0.0233(J)	Non-Detect	Non-Detect	0.00211(J)	Non-Detect
MW-1	5/22/2018	0.0224(J)	166	2.3	0.16	5.2	2100	2380	Non-Detect	Non-Detect	0.0102	Non-Detect	0.00201	Non-Detect	0.0443	-0.091(U)	0.16	Non-Detect	0.0263(J)	Non-Detect	Non-Detect	0.00372(J)	Non-Detect
MW-1	6/12/2018	0.0214(J)	203	2.3	0.16	5.15	1500	2400	Non-Detect	Non-Detect	0.0104	Non-Detect	0.00217	Non-Detect	0.0512	1.18	0.16	Non-Detect	0.0251(J)	Non-Detect	Non-Detect	0.00409(J)	Non-Detect
MW-1	10/17/2018	0.0216(J)	171	1.7(J)	0.18	5.12	1400	2220	Non-Detect	Non-Detect	0.00952(J)	Non-Detect	0.00228	Non-Detect	0.0751	0.553(U)	0.18	Non-Detect	0.025(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-1	11/19/2018	0.0237(J)	154	1.7(J)	0.15	5.09	1300	2360	Non-Detect	Non-Detect	0.00915(J)	Non-Detect	0.00156	Non-Detect	0.0825	0.862	0.15	Non-Detect	0.0241	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-1	4/10/2019	0.0304(J)	243	2.36	0.102	5.11	1700	2630	0.00143(J)	Non-Detect	0.0105	Non-Detect	0.00224	Non-Detect	0.0445	0.342(U)	0.102	Non-Detect	0.0285	Non-Detect	Non-Detect	0.00471(J)	Non-Detect
MW-1	5/14/2019	Non-Detect	167	2.28	0.119	5.19	1560	2340	0.00137(J)	Non-Detect	0.00913(J)	Non-Detect	0.00238	Non-Detect	0.0485	0.509	0.119	Non-Detect	0.026(J)	Non-Detect	Non-Detect	0.00316(J)	Non-Detect
MW-1	10/8/2019	Non-Detect	157	2.31	0.0924(J)	5.12	1540	2330	Non-Detect	Non-Detect	0.0109	Non-Detect	0.00218	Non-Detect	0.0778	1.47	0.0924(J)	Non-Detect	0.0268	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-1	10/16/2019	0.0385(J)	157	2.42	0.0756(J)	5.16	1680	3650	Non-Detect	Non-Detect	0.0106	Non-Detect	0.00225	Non-Detect	0.08	0.204(U)	0.0756(J)	Non-Detect	0.0263	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Analytical Data Summary

Plant Gorgas Gypsum Pond

Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Rad Radium 22	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R	0.006	0.01	2	0.0103	0.005	0.1	1.07	5	4	0.015	0.419	0.002	0.1	0.05	0.002
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-2	4/25/2016	0.0241(J)	123	1.9	0.149(J)	5.94	745	1260	Non-Detect	Non-Detect	0.0134	Non-Detect	Non-Detect	Non-Detect	0.0487	n/a	0.149(J)	Non-Detect	0.0353(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	6/20/2016	0.0284(J)	168	3.43	0.148(J)	5.96	964	1620	Non-Detect	Non-Detect	0.0165	Non-Detect	Non-Detect	Non-Detect	0.0767	n/a	0.148(J)	Non-Detect	0.0583	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	8/8/2016	0.034(J)	180	3.31	0.134(J)	5.88	1100	1740	Non-Detect	Non-Detect	0.0162	Non-Detect	Non-Detect	Non-Detect	0.103	n/a	0.134(J)	Non-Detect	0.0627	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	8/24/2016	0.0316(J)	180	3.23	0.129(J)	n/a	1130	1720	Non-Detect	Non-Detect	0.0139	Non-Detect	Non-Detect	Non-Detect	0.093	0.65	0.129(J)	Non-Detect	0.0651	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	10/3/2016	0.0367(J)	184	3.21	0.086(J)	5.91	1140	1800	Non-Detect	Non-Detect	0.0164	Non-Detect	Non-Detect	Non-Detect	0.0964	0.845	0.086(J)	Non-Detect	0.0622	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	10/26/2016	0.0331(J)	171	3.35	0.027(J)	5.84	1060	1800	Non-Detect	Non-Detect	0.0138	Non-Detect	Non-Detect	Non-Detect	0.0904	0.994	0.027(J)	Non-Detect	0.0293(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	11/21/2016	0.035(J)	179	3.34	0.027(J)	5.82	1100	1740	Non-Detect	0.00111(J)	0.0144	Non-Detect	Non-Detect	Non-Detect	0.0857	0.537(U)	0.027(J)	Non-Detect	0.0667	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	1/17/2017	0.0259(J)	188	3.58	0.066(J)	5.87	1160	1960	Non-Detect	Non-Detect	0.0135	Non-Detect	0.000311(J)	Non-Detect	0.0745	-0.0159(U)	0.066(J)	Non-Detect	0.0636	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	3/22/2017	0.0243(J)	155	3.4	0.13	6.01	900	1510	Non-Detect	Non-Detect	0.0132	Non-Detect	Non-Detect	Non-Detect	0.0328	0.279(U)	0.13	Non-Detect	0.0464(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	4/18/2017	0.0206(J)	156	2.6	0.16	6.02	870	1580	Non-Detect	Non-Detect	0.012	Non-Detect	Non-Detect	Non-Detect	0.0242	0.32(U)	0.16	Non-Detect	0.0446(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	5/31/2017	0.0234(J)	151	4.4	0.13	5.85	1100	1730	Non-Detect	Non-Detect	0.0126	Non-Detect	0.000212(J)	Non-Detect	0.0441	0.178(U)	0.13	Non-Detect	0.0496(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	8/23/2017	0.0267(J)	155	4.4	0.16	5.89	920	1550	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.16	n/a	n/a	n/a	n/a	n/a	n/a
MW-2	2/13/2018	n/a	n/a	n/a	0.22	6.21	n/a	n/a	Non-Detect	Non-Detect	0.0127	Non-Detect	Non-Detect	Non-Detect	0.0179	0.804	0.22	Non-Detect	0.0615	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	5/22/2018	0.0251(J)	172	3.2	0.17	6.04	1200	1500	Non-Detect	Non-Detect	0.0131	Non-Detect	Non-Detect	Non-Detect	0.028	0.0077(U)	0.17	Non-Detect	0.0465(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	6/12/2018	0.0275(J)	179	3.7	0.16	5.95	860	1550	Non-Detect	Non-Detect	0.0138	Non-Detect	Non-Detect	Non-Detect	0.0366	-0.315(U)	0.16	Non-Detect	0.0472(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	10/17/2018	0.0321(J)	200	4.6	0.16	5.9	970	1740	Non-Detect	Non-Detect	0.0137	Non-Detect	Non-Detect	Non-Detect	0.0745	0.574(U)	0.16	Non-Detect	0.0633	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	11/19/2018	0.0324(J)	221	3	0.18	6.03	1000	1990	Non-Detect	Non-Detect	0.0115	Non-Detect	Non-Detect	Non-Detect	0.0225	0.654	0.18	Non-Detect	0.0584	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	4/10/2019	Non-Detect	200	1.76	0.262	6.1	889	1250	0.000993(J)	Non-Detect	0.0111	Non-Detect	Non-Detect	Non-Detect	0.0152	0.329(U)	0.262	Non-Detect	0.0574	Non-Detect	Non-Detect	0.00322(J)	Non-Detect
MW-2	5/14/2019	Non-Detect	168	2.98	0.170	6.07	948	1480	0.000989(J)	Non-Detect	0.0109	Non-Detect	Non-Detect	Non-Detect	0.0222	0.579	0.170	Non-Detect	0.0445	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	10/8/2019	0.0371(J)	190	4.26	0.164	5.96	1230	1840	Non-Detect	Non-Detect	0.0151	Non-Detect	Non-Detect	Non-Detect	0.0674	0.493(U)	0.164	Non-Detect	0.0677	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	10/16/2019	0.0419(J)	194	4.04	0.114	5.98	1170	1830	Non-Detect	Non-Detect	0.0146	Non-Detect	Non-Detect	Non-Detect	0.073	0.046(U)	0.114	Non-Detect	0.0661	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Analytical Data Summary

Plant Gorgas Gypsum Pond

Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Rad Radium 22	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R	0.006	0.01	2	0.0103	0.005	0.1	1.07	5	4	0.015	0.419	0.002	0.1	0.05	0.002
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-3	4/25/2016	0.028(J)	224	1.32	0.243(J)	5.56	1890	2720	Non-Detect	Non-Detect	0.00803(J)	0.00122(J)	0.0121	0.00373(J)	0.232	n/a	0.243(J)	Non-Detect	0.0964	Non-Detect	Non-Detect	Non-Detect	0.000205(J)
MW-3	6/22/2016	0.0433(J)	266	1.46	0.269(J)	5.57	2100	3250	Non-Detect	Non-Detect	0.0101	0.00144(J)	0.00163	0.00606(J)	0.332	n/a	0.269(J)	Non-Detect	0.156	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-3	8/9/2016	0.0429(J)	260	1.35	0.363	5.67	2050	3050	Non-Detect	Non-Detect	0.00889(J)	0.00331	0.00122	Non-Detect	0.311	n/a	0.363	Non-Detect	0.122	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-3	8/24/2016	0.0431(J)	274	1.47	0.346	5.63	2190	3080	Non-Detect	Non-Detect	0.00962(J)	0.00308	Non-Detect	Non-Detect	0.271	0.131(U)	0.346	Non-Detect	0.138	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-3	10/4/2016	0.04(J)	243	1.59	0.266(J)	5.69	1950	2900	Non-Detect	Non-Detect	0.00984(J)	0.00129(J)	0.000689(J)	Non-Detect	0.148	0.514(U)	0.266(J)	Non-Detect	0.0966	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-3	10/26/2016	0.0375(J)	254	1.27	0.266(J)	5.56	1980	2940	Non-Detect	Non-Detect	0.00878(J)	0.0071	0.00136	Non-Detect	0.236	0.755	0.266(J)	Non-Detect	0.134	Non-Detect	Non-Detect	Non-Detect	0.000209(J)
MW-3	11/21/2016	0.0406(J)	263	1.38	0.244(J)	5.42	2060	3090	Non-Detect	Non-Detect	0.00833(J)	0.00689	0.00171	Non-Detect	0.241	0.7	0.244(J)	Non-Detect	0.167	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-3	1/18/2017	0.0548(J)	431	1.34	0.385	5.11	2620	4020	Non-Detect	Non-Detect	0.00966(J)	0.0169	0.003	Non-Detect	0.347	0.606	0.385	Non-Detect	0.237	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-3	3/22/2017	0.0344(J)	318	2	0.41	4.52	3200	4180	Non-Detect	0.00122(J)	0.00991(J)	0.00686	0.00473	0.00945(J)	0.271	0.927	0.41	Non-Detect	0.203	Non-Detect	Non-Detect	0.0141	Non-Detect
MW-3	4/18/2017	Non-Detect	296	2.2	0.29	5.84	2500	4440	Non-Detect	Non-Detect	0.00976(J)	Non-Detect	0.00117	0.0105	0.00324(J)	0.334(U)	0.29	Non-Detect	0.0764	Non-Detect	Non-Detect	0.0158	Non-Detect
MW-3	5/31/2017	0.0454(J)	306	1.5(J)	0.37	4.56	2800	3970	Non-Detect	Non-Detect	0.00866(J)	0.00547	0.00296	Non-Detect	0.225	0.8	0.37	Non-Detect	0.218	Non-Detect	Non-Detect	0.00632(J)	Non-Detect
MW-3	8/23/2017	0.0425(J)	298	1.8(J)	0.55	4.77	2600	4050	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.55	n/a	n/a	n/a	n/a	n/a	n/a
MW-3	2/13/2018	n/a	n/a	n/a	0.27	5.67	n/a	n/a	Non-Detect	Non-Detect	0.00821(J)	Non-Detect	0.00232	Non-Detect	0.00661(J)	0.649	0.27	Non-Detect	0.0964	Non-Detect	Non-Detect	0.0209	Non-Detect
MW-3	5/24/2018	0.0339(J)	297	1.6(J)	0.6	5.19	2700	3680	Non-Detect	Non-Detect	0.00977(J)	0.00164(J)	0.00459	Non-Detect	0.158	0.448(U)	0.6	Non-Detect	0.145	Non-Detect	Non-Detect	0.00918(J)	Non-Detect
MW-3	6/12/2018	0.0371(J)	318	1.4(J)	0.53	4.79	2500	3820	Non-Detect	0.00103(J)	0.00997(J)	0.00306	0.00351	Non-Detect	0.291	0.234(U)	0.53	Non-Detect	0.194	Non-Detect	Non-Detect	0.00836(J)	Non-Detect
MW-3	10/17/2018	0.0596(J)	392	Non-Detect	0.63	4.75	2700	4730	Non-Detect	0.00133(J)	0.0126	0.0121	0.00393	Non-Detect	0.49	0.852	0.63	0.00102(J)	0.384	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-3	11/19/2018	0.0514(J)	387	Non-Detect	0.31	3.77	3000	4710	Non-Detect	0.0012(J)	0.0109	0.0185	0.00309	Non-Detect	0.386	0.521	0.31	0.00692	0.323	Non-Detect	Non-Detect	0.00439(J)	0.000226(J)
MW-3	4/10/2019	Non-Detect	348	2.25	0.273	5.54	2460	3680	0.000978(J)	Non-Detect	0.0101	Non-Detect	0.00337	Non-Detect	0.0144	0.198(U)	0.273	Non-Detect	0.0905	Non-Detect	Non-Detect	0.0113	Non-Detect
MW-3	5/14/2019	Non-Detect	254	2.28	0.281	5.71	2460	3580	Non-Detect	Non-Detect	0.00922(J)	Non-Detect	0.0013	Non-Detect	0.00536	0.176(U)	0.281	Non-Detect	0.0828	Non-Detect	Non-Detect	0.0119	Non-Detect
MW-3	10/8/2019	0.0537(J)	371	1.36	0.225	4.98	2950	4720	Non-Detect	0.0048(J)	0.0154	0.0084	0.00598	Non-Detect	1.07	0.833(U)	0.225	Non-Detect	0.419	Non-Detect	Non-Detect	0.00256(J)	Non-Detect
MW-3	10/16/2019	0.05(J)	346	1.4	0.106	4.51	2820	4210	Non-Detect	0.00389(J)	0.0128	0.0103	0.00448	Non-Detect	0.848	0.0279(U)	0.106	0.00108(J)	0.337	Non-Detect	Non-Detect	0.00286(J)	Non-Detect

Analytical Data Summary

Plant Gorgas Gypsum Pond

Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Rad Radium 22	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R	0.006	0.01	2	0.0103	0.005	0.1	1.07	5	4	0.015	0.419	0.002	0.1	0.05	0.002
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-4	4/25/2016	0.0414(J)	261	1.53	0.372	6.22	2260	3300	Non-Detect	Non-Detect	0.0114	Non-Detect	Non-Detect	Non-Detect	Non-Detect	n/a	0.372	Non-Detect	0.0528	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	6/20/2016	0.0434(J)	295	1.85	0.361	6.21	2500	3870	Non-Detect	Non-Detect	0.0103	Non-Detect	Non-Detect	Non-Detect	Non-Detect	n/a	0.361	Non-Detect	0.0554	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	8/9/2016	0.0453(J)	318	1.95	0.326	6.11	2750	4140	Non-Detect	Non-Detect	0.0119	Non-Detect	Non-Detect	Non-Detect	Non-Detect	n/a	0.326	Non-Detect	0.0452(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	8/24/2016	0.0451(J)	319	2.07	0.329	6.11	2770	4190	Non-Detect	Non-Detect	0.0118	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.266(U)	0.329	Non-Detect	0.0488(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	10/3/2016	0.0511(J)	293	2.02	0.287(J)	6.13	3060	4190	Non-Detect	Non-Detect	0.0119	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.59(U)	0.287(J)	Non-Detect	0.0476(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	10/26/2016	0.0507(J)	311	2.07	0.194(J)	6.12	2650	4400	Non-Detect	Non-Detect	0.0104	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.164(U)	0.194(J)	Non-Detect	0.049(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	11/21/2016	0.0458(J)	320	2.39	0.192(J)	6.09	2720	4230	Non-Detect	Non-Detect	0.0106	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.296(U)	0.192(J)	Non-Detect	0.0477(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	1/18/2017	0.0445(J)	417	1.9	0.223(J)	6.09	2650	4120	Non-Detect	Non-Detect	0.0101	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.0267(U)	0.223(J)	Non-Detect	0.045(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	3/22/2017	0.0432(J)	292	1.5(J)	0.32	6.15	2700	3980	Non-Detect	Non-Detect	0.0103	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.132(U)	0.32	Non-Detect	0.0493(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	4/18/2017	0.0409(J)	302	1.6(J)	0.32	6.19	2400	3880	Non-Detect	Non-Detect	0.0107	Non-Detect	Non-Detect	Non-Detect	Non-Detect	-0.0439(U)	0.32	Non-Detect	0.0494(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	5/31/2017	0.0392(J)	284	2.1	0.31	6.13	2700	4210	Non-Detect	Non-Detect	0.0104	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.3(U)	0.31	Non-Detect	0.0501	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	8/23/2017	0.042(J)	297	2.3	0.38	6.12	2700	3990	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.38	n/a	n/a	n/a	n/a	n/a	n/a
MW-4	2/13/2018	n/a	n/a	n/a	0.38	6.22	n/a	n/a	Non-Detect	Non-Detect	0.0111	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.69	0.38	Non-Detect	0.0446(J)	Non-Detect	Non-Detect	0.00403(J)	Non-Detect
MW-4	5/23/2018	0.0433(J)	296	2	0.38	6.21	2400	3740	Non-Detect	Non-Detect	0.0107	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.186(U)	0.38	Non-Detect	0.0513	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	6/12/2018	0.0478(J)	355	1.7(J)	0.39	6.16	2600	4080	Non-Detect	Non-Detect	0.0108	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.153(U)	0.39	Non-Detect	0.0511	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	10/17/2018	0.0468(J)	342	1.5(J)	0.39	6.12	2600	4250	Non-Detect	Non-Detect	0.0119	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.313(U)	0.39	Non-Detect	0.0532	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	11/19/2018	0.0526(J)	289	Non-Detect	0.36	6.16	2400	3920	Non-Detect	Non-Detect	0.0107	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.794	0.36	Non-Detect	0.0467	Non-Detect	Non-Detect	0.00436(J)	Non-Detect
MW-4	4/10/2019	0.0438(J)	356	1.88	0.384	6.14	2090	3280	0.00097(J)	Non-Detect	0.0107	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.515	0.384	Non-Detect	0.0504	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	5/14/2019	Non-Detect	254	1.82	0.335	6.23	2240	3130	Non-Detect	Non-Detect	0.00949(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.352(U)	0.335	Non-Detect	0.0485	Non-Detect	Non-Detect	0.00201(J)	Non-Detect
MW-4	10/10/2019	0.0487(J)	302	1.93	0.304	6.15	2690	4000	Non-Detect	Non-Detect	0.0116	Non-Detect	Non-Detect	Non-Detect	Non-Detect	1.02(U)	0.304	Non-Detect	0.054	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-4	10/16/2019	0.0505(J)	356	1.92	0.302	6.19	3050	4060	Non-Detect	Non-Detect	0.0125	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.356(U)	0.302	Non-Detect	0.052	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Analytical Data Summary

Plant Gorgas Gypsum Pond

Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	rad Radium 22	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R	0.006	0.01	2	0.0103	0.005	0.1	1.07	5	4	0.015	0.419	0.002	0.1	0.05	0.002
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GS-GSA-MW-3	8/24/2016	0.799	539	204	0.264(J)	6.28	2910	5020	Non-Detect	Non-Detect	0.0155	Non-Detect	Non-Detect	Non-Detect	0.0303	0.389(U)	0.264(J)	Non-Detect	0.362	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	10/3/2016	0.889	519.7	220	0.276(J)	6.28	2980	4880	Non-Detect	Non-Detect	0.0156	Non-Detect	Non-Detect	Non-Detect	0.041	0.683	0.276(J)	Non-Detect	0.371	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	10/26/2016	1.23	916	249	0.182(J)	6.19	2790	5020	Non-Detect	Non-Detect	0.0122	0.000922(J)	Non-Detect	Non-Detect	0.0505	0.242(U)	0.182(J)	Non-Detect	0.416	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	11/21/2016	1.72	552	256	0.238(J)	6.2	2880	5090	Non-Detect	Non-Detect	0.0128	0.00133(J)	Non-Detect	Non-Detect	0.0617	0.764	0.238(J)	Non-Detect	0.401	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	1/17/2017	2.63	572	301	0.34	6.13	2950	4330	Non-Detect	Non-Detect	0.0125	0.0017(J)	Non-Detect	Non-Detect	0.0793	0.191(U)	0.34	Non-Detect	0.497	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	3/20/2017	3.11	817	320	0.39	6.17	2800	2690	Non-Detect	Non-Detect	0.0124	0.00191(J)	Non-Detect	Non-Detect	0.0726	-0.0158(U)	0.39	Non-Detect	0.533	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	4/17/2017	4.51	476	340	0.57	5.6	2400	4780	Non-Detect	0.00405(J)	0.0149	0.00655	Non-Detect	Non-Detect	0.294	0.307(U)	0.57	Non-Detect	0.47	Non-Detect	Non-Detect	0.00521(J)	Non-Detect
GS-GSA-MW-3	5/30/2017	2.9	515	310	0.38	6.07	2900	5170	Non-Detect	Non-Detect	0.0121	0.00204(J)	Non-Detect	Non-Detect	0.0832	0.724	0.38	Non-Detect	0.479	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	8/24/2017	2.83	598	290	0.54	5.99	2900	5140	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.54	n/a	n/a	n/a	n/a	n/a	n/a
GS-GSA-MW-3	2/13/2018	n/a	n/a	n/a	0.57	5.88	n/a	n/a	Non-Detect	Non-Detect	0.0118	0.00387	Non-Detect	Non-Detect	0.124	0.633	0.57	Non-Detect	0.508	Non-Detect	Non-Detect	0.00267(J)	Non-Detect
GS-GSA-MW-3	6/11/2018	3.09	558	260	0.63	5.91	2900	4960	Non-Detect	Non-Detect	0.0127	0.00244(J)	Non-Detect	Non-Detect	0.138	0.773	0.63	Non-Detect	0.425	Non-Detect	Non-Detect	0.00236(J)	Non-Detect
GS-GSA-MW-3	10/17/2018	2.59	533	270	0.78	5.88	2800	4910	Non-Detect	Non-Detect	0.013	0.00345	Non-Detect	Non-Detect	0.138	0.668	0.78	Non-Detect	0.494	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-3	4/10/2019	3.35	659	249	0.738	5.83	2980	5090	0.00111(J)	0.00121(J)	0.0153	0.00257(J)	Non-Detect	Non-Detect	0.151	0.265(U)	0.738	Non-Detect	0.425	Non-Detect	Non-Detect	0.00234(J)	Non-Detect
GS-GSA-MW-3	10/14/2019	2.48	552	228	0.619	6.04	3110	5110	Non-Detect	Non-Detect	0.0122	0.00162(J)	Non-Detect	Non-Detect	0.102	0.297(U)	0.619	Non-Detect	0.459	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Analytical Data Summary

Plant Gorgas Gypsum Pond

Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	rad Radium 22	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R	0.006	0.01	2	0.0103	0.005	0.1	1.07	5	4	0.015	0.419	0.002	0.1	0.05	0.002
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GS-GSA-MW-4	8/24/2016	4.88	102	112	0.793	3.83	567	992	Non-Detect	Non-Detect	0.0135	0.00576	0.00148	Non-Detect	0.151	0.741	0.793	Non-Detect	0.291	Non-Detect	Non-Detect	0.00234(J)	Non-Detect
GS-GSA-MW-4	10/3/2016	4.75	98.4	115	0.769	3.82	596	988	Non-Detect	Non-Detect	0.0127	0.00469	0.00147	Non-Detect	0.143	0.648	0.769	Non-Detect	0.287	Non-Detect	Non-Detect	0.00739(J)	Non-Detect
GS-GSA-MW-4	10/26/2016	4.96	88.7	115	0.578	3.81	585	1030	Non-Detect	Non-Detect	0.0118	0.00459	0.00157	Non-Detect	0.154	0.632	0.578	Non-Detect	0.298	Non-Detect	Non-Detect	0.00266(J)	Non-Detect
GS-GSA-MW-4	11/21/2016	4.82	104	117	0.562	3.81	593	1020	Non-Detect	Non-Detect	0.012	0.00502	0.00154	Non-Detect	0.155	1.57	0.562	Non-Detect	0.294	Non-Detect	Non-Detect	0.00212(J)	Non-Detect
GS-GSA-MW-4	1/17/2017	3.97	102	99.3	0.571	3.78	637	988	Non-Detect	Non-Detect	0.0119	0.00488	0.00131	Non-Detect	0.16	0.493	0.571	Non-Detect	0.27	Non-Detect	Non-Detect	0.00263(J)	Non-Detect
GS-GSA-MW-4	3/21/2017	3.39	94.7	79	0.54	3.76	530	990	Non-Detect	Non-Detect	0.0116	0.00521	0.00134	Non-Detect	0.158	0.604(U)	0.54	Non-Detect	0.258	Non-Detect	Non-Detect	0.00588(J)	Non-Detect
GS-GSA-MW-4	4/17/2017	3.46	97.9	85	0.54	3.76	530	884	Non-Detect	Non-Detect	0.0112	0.0058	0.00122	Non-Detect	0.159	0.252(U)	0.54	Non-Detect	0.274	Non-Detect	Non-Detect	0.00579(J)	Non-Detect
GS-GSA-MW-4	5/30/2017	3.79	93.9	99	0.49	3.76	530	1060	Non-Detect	Non-Detect	0.0117	0.00517	0.00167	Non-Detect	0.159	0.925	0.49	Non-Detect	0.285	Non-Detect	Non-Detect	0.00471(J)	Non-Detect
GS-GSA-MW-4	8/24/2017	4.19	105	110	0.7	3.7	530	1060	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.7	n/a	n/a	n/a	n/a	n/a	n/a
GS-GSA-MW-4	2/13/2018	n/a	n/a	n/a	0.63	3.73	n/a	n/a	Non-Detect	Non-Detect	0.0121	0.00544	0.00145	Non-Detect	0.19	0.382	0.63	Non-Detect	0.274	Non-Detect	Non-Detect	0.00498(J)	Non-Detect
GS-GSA-MW-4	6/11/2018	3.96	105	81	0.39	3.8	540	944	Non-Detect	Non-Detect	0.0139	0.00463	0.00171	Non-Detect	0.166	0.796	0.39	Non-Detect	0.266	Non-Detect	Non-Detect	0.00388(J)	Non-Detect
GS-GSA-MW-4	10/17/2018	3.98	117	85	0.44	3.81	520	928	Non-Detect	Non-Detect	0.0125	0.00369	0.00188	Non-Detect	0.154	0.922	0.44	Non-Detect	0.266	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-4	4/10/2019	3.74	129	74.3	Non-Detect	3.83	616	1000	0.000976(J)	0.00176(J)	0.0136	0.00469	0.00176	Non-Detect	0.241	0.622	Non-Detect	Non-Detect	0.282	Non-Detect	Non-Detect	0.00322(J)	Non-Detect
GS-GSA-MW-4	10/14/2019	3.37	93.5	59.1	Non-Detect	3.91	641	967	Non-Detect	0.0012(J)	0.0147	0.00403	0.0015	Non-Detect	0.213	0.317(U)	Non-Detect	Non-Detect	0.262	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Analytical Data Summary

Plant Gorgas Gypsum Pond

Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Rad Radium 22	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R	0.006	0.01	2	0.0103	0.005	0.1	1.07	5	4	0.015	0.419	0.002	0.1	0.05	0.002
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GS-GSA-MW-8	8/24/2016	0.0898(J)	263	4.03	0.165(J)	6.78	1250	2280	Non-Detect	0.00119(J)	0.0536	Non-Detect	Non-Detect	Non-Detect	0.0201	0.558(U)	0.165(J)	Non-Detect	0.0683	Non-Detect	0.0031(J)	Non-Detect	Non-Detect
GS-GSA-MW-8	10/3/2016	0.0821(J)	253	3.87	0.114(J)	6.71	1270	2370	Non-Detect	0.00114(J)	0.0681	Non-Detect	Non-Detect	Non-Detect	0.0167	0.565	0.114(J)	Non-Detect	0.0661	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	10/26/2016	0.0889(J)	235	4.08	0.056(J)	6.65	1240	2350	Non-Detect	0.00111(J)	0.0562	Non-Detect	Non-Detect	Non-Detect	0.0253	0.555(U)	0.056(J)	Non-Detect	0.0681	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	11/21/2016	0.0788(J)	246	4.39	0.059(J)	6.7	1210	2530	Non-Detect	Non-Detect	0.0604	Non-Detect	Non-Detect	Non-Detect	0.0233	0.987	0.059(J)	Non-Detect	0.0682	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	1/17/2017	0.0607(J)	231	7.22	0.07(J)	6.25	1150	2380	Non-Detect	0.00103(J)	0.0402	Non-Detect	Non-Detect	Non-Detect	0.0708	0.476(U)	0.07(J)	Non-Detect	0.0516	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	3/20/2017	0.114	298	5.7	0.18	7.04	1400	2630	Non-Detect	Non-Detect	0.0305	Non-Detect	Non-Detect	Non-Detect	0.00277(J)	0.633(U)	0.18	Non-Detect	0.135	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	4/18/2017	0.108	317	4.7	0.17	6.99	1300	2700	Non-Detect	Non-Detect	0.0276	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.248(U)	0.17	Non-Detect	0.139	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	5/30/2017	0.105	316	15	0.16	6.98	1500	2980	Non-Detect	Non-Detect	0.0272	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.412(U)	0.16	Non-Detect	0.141	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	8/24/2017	0.12	391	93	0.18	6.89	1800	3390	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.18	n/a	n/a	n/a	n/a	n/a	n/a
GS-GSA-MW-8	2/13/2018	n/a	n/a	n/a	0.15	6.85	n/a	n/a	Non-Detect	Non-Detect	0.0249	Non-Detect	Non-Detect	Non-Detect	0.00492(J)	1.08	0.15	Non-Detect	0.163	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	6/12/2018	0.181	442	140	0.15	6.83	1800	3510	Non-Detect	Non-Detect	0.0234	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.446(U)	0.15	Non-Detect	0.166	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	10/17/2018	0.616	514	180	0.16	6.81	1600	3550	Non-Detect	Non-Detect	0.0236	Non-Detect	Non-Detect	Non-Detect	Non-Detect	1.05	0.16	Non-Detect	0.188	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	4/10/2019	0.944	533	174	0.156	6.71	2150	3580	0.00102(J)	Non-Detect	0.02	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.128(U)	0.156	Non-Detect	0.195	Non-Detect	Non-Detect	Non-Detect	Non-Detect
GS-GSA-MW-8	10/14/2019	2.11	524	207	0.118	6.88	2090	3730	Non-Detect	Non-Detect	0.0215	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.225(U)	0.118	Non-Detect	0.209	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Appendix B

1st
Delineation
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



Gorgas Gypsum Pond

Delineation 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) 664-6032 or 6171
FAX (205) 257-1654

Analytical Report



Sample Group : WMWGORG_1208
Project/Site : Gorgas Gypsum
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) 807-2676

The following data has been reviewed and approved by:

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: 2019.04.08 07:41:00 -0500'

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: 2019.04.08 11:27:14 -0500'



Total Metals ICP

Gorgas Gypsum

WMWGORG_1208

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ05840	641323	WMWGORG_1208
AZ05841	641323	WMWGORG_1208
AZ05842	641323	WMWGORG_1208
AZ05843	641323	WMWGORG_1208
AZ05844	641323	WMWGORG_1208
AZ05845	641323	WMWGORG_1208
AZ05846	641323	WMWGORG_1208

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.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- The high standard readbacks associated with EPA 200.7 were within acceptance criteria.
- 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. All samples were analyzed at a x2.03 dilution to compensate for potential matrix effects. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AZ05840	Calcium & Magnesium	x10.15
AZ05841	Calcium & Magnesium	x10.15
AZ05843	Calcium, Magnesium, & Iron	x10.15
AZ05844	Calcium, Magnesium, Iron, & Sodium	x10.15
AZ05845	Magnesium, Iron, Sodium, & Boron	x10.15
AZ05845	Calcium	x101.5

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



Dissolved Metals ICP

Gorgas Gypsum

WMWGORG_1208

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ05840	641079	WMWGORG_1208
AZ05841	641079	WMWGORG_1208
AZ05842	641079	WMWGORG_1208
AZ05843	641079	WMWGORG_1208
AZ05844	641079	WMWGORG_1208
AZ05845	641079	WMWGORG_1208
AZ05846	641079	WMWGORG_1208

4. All of the above samples were analyzed by EPA 200.7 and prepared by EPA 1638 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.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- The high standard readbacks associated with EPA 200.7 were within acceptance criteria.
- 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 at a x2.03 dilution to compensate for potential matrix effects. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AZ05843	Iron	x101.15
AZ05844	Iron	x10.15
AZ05845	Iron	x10.15

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



Total Metals ICPMS

Gorgas Gypsum

WMWGORG_1208

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ05840	640998	WMWGORG_1208
AZ05841	640998	WMWGORG_1208
AZ05842	640998	WMWGORG_1208
AZ05843	640998	WMWGORG_1208
AZ05844	640998	WMWGORG_1208
AZ05845	640998	WMWGORG_1208
AZ05846	640998	WMWGORG_1208

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. All samples were analyzed at a x5.075 dilution to compensate for potential matrix effects. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AZ05844	Mn	x10.15
AZ05845	Mn	x92.365

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

Case Narrative



Dissolved Metals ICPMS

Gorgas Gypsum

WMWGORG_1208

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ05840	640880	WMWGORG_1208
AZ05841	640880	WMWGORG_1208
AZ05842	640880	WMWGORG_1208
AZ05843	640880	WMWGORG_1208
AZ05844	640880	WMWGORG_1208
AZ05845	640880	WMWGORG_1208
AZ05846	640880	WMWGORG_1208

4. All of the above samples were analyzed by EPA 200.8 and prepared by EPA 1638 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.
- 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. All samples were analyzed at a x5.075 dilution to compensate for potential matrix effects. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AZ05844	Mn	x10.15
AZ05845	Mn	x92.365

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



Mercury

Gorgas Gypsum

WMWGORG_1208

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ05840	641597	WMWGORG_1208
AZ05841	641597	WMWGORG_1208
AZ05842	641597	WMWGORG_1208
AZ05843	641597	WMWGORG_1208
AZ05844	641597	WMWGORG_1208
AZ05845	641597	WMWGORG_1208
AZ05846	641597	WMWGORG_1208

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.



TDS

Gorgas Gypsum

WMWGORG_1208

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ05840	641072	WMWGORG_1208
AZ05841	641072	WMWGORG_1208
AZ05842	641072	WMWGORG_1208
AZ05843	641072	WMWGORG_1208
AZ05844	641072	WMWGORG_1208
AZ05845	641072	WMWGORG_1208
AZ05846	641072	WMWGORG_1208

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:
 - AZ05842
 - AZ05846



Alkalinity

Gorgas Gypsum

WMWGORG_1208

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ05840	640761 & 640762	WMWGORG_1208
AZ05841	640761 & 640762	WMWGORG_1208
AZ05843	640761 & 640762	WMWGORG_1208
AZ05844	640761 & 640762	WMWGORG_1208
AZ05845	640761 & 640762	WMWGORG_1208

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.



Anions

Gorgas Gypsum

WMWGORG_1208

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ05840	640818, 640767, & 640768	WMWGORG_1208
AZ05841	640818, 640767, & 640768	WMWGORG_1208
AZ05842	640818, 640767, & 640768	WMWGORG_1208
AZ05843	640818, 640767, & 640768	WMWGORG_1208
AZ05844	640818, 640767, & 640768	WMWGORG_1208
AZ05845	640818, 640767, & 640768	WMWGORG_1208
AZ05846	640818, 640767, & 640768	WMWGORG_1208

4. All of the above samples were analyzed and prepared by SM4500 Cl E, SM4500 F C, 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 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.
- 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:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AZ05840	Sulfate	x50
AZ05841	Sulfate	x50
AZ05843	Chloride	x10
AZ05843	Sulfate	x50
AZ05844	Chloride	x20
AZ05844	Sulfate	X50
AZ05845	Chloride	x20
AZ05845	Sulfate	x50

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
 (205) 664-6032 or 6171
 FAX (205) 257-1654

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-11H

Laboratory ID Number: AZ05840

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01		0.0239	mg/L
* Beryllium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.02	0.1	J	0.0235	mg/L
* Calcium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		177	mg/L
* Cadmium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0008	0.003	J	0.00149	mg/L
* Molybdenum, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Cobalt, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.005		0.00660	mg/L
* Chromium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Iron, Dissolved	GAS	3/13/2019	EPA 200.7		2.03	0.01	0.05	K	2.14	mg/L
* Iron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.05		2.39	mg/L
* Mercury, Total by CVAA	ABB	3/20/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.02	U	Not Detected	mg/L
* Magnesium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		160	mg/L
* Manganese, Dissolved	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	K	2.01	mg/L
* Manganese, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005		1.94	mg/L
* Potassium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.215	2.5	J	1.51	mg/L
* Sodium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.1	0.5		41.5	mg/L
* Selenium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L

General Characteristics

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-11H

Laboratory ID Number: AZ05840

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
pH for Alkalinity	EMG	3/8/2019	SM 4500H+ B	1			4.00	6.62	SU
Alkalinity, Total as CaCO3	EMG	3/8/2019	SM 2320 B	1			0.1	102	mg/L
Carbonate Alkalinity, as CaCO3	EMG	3/8/2019	SM 4500CO2 D	1				0.04	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	3/8/2019	SM 4500CO2 D	1				102	mg/L
* Solids, Dissolved	CRB	3/13/2019	SM 2540C	1			50	1150	mg/L
Filter Completion Date	CRB	3/8/2019	SM 2540C	1				03/08/2019	Date
* Chloride	JCC	3/11/2019	SM4500CI E	1		0.50	1	3.81	mg/L
* Fluoride	JCC	3/8/2019	SM4500F C	1		0.05	0.1	0.101	mg/L
* Sulfate	JCC	3/8/2019	SM4500SO4 E	50		25.00	50	785	mg/L

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-11H

Laboratory ID Number: AZ05840

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ05846	Iron, Dissolved	mg/L	-0.000448	0.022	0.2	0.197	0.194	0.198	0.17 to 0.23	98.4	70 to 130	1.51	20
AZ05846	Cadmium, Total	mg/L	0.00000138	0.00066	0.10	0.0951	0.0980	0.0962	0.085 to 0.115	95.1	70 to 130	3.08	20
AZ05846	Mercury, Total by CVAA	mg/L	0.00000615	0.0005	0.004	0.00377	0.00379	0.00384	0.0034 to 0.0046	94.1	70 to 130	0.588	20
AZ05846	Arsenic, Total	mg/L	0.00000209	0.0022	0.10	0.0995	0.100	0.100	0.085 to 0.115	99.5	70 to 130	0.723	20
AZ05846	Antimony, Total	mg/L	0.000222	0.00176	0.10	0.0992	0.101	0.0993	0.085 to 0.115	99.2	70 to 130	1.81	20
AZ05846	Barium, Total	mg/L	-0.00000243	0.0044	0.10	0.0915	0.0932	0.0938	0.085 to 0.115	91.5	70 to 130	1.80	20
AZ05846	Boron, Total	mg/L	-0.00343	0.044	1.00	1.03	1.03	1.01	0.85 to 1.15	99.6	70 to 130	0.866	20
AZ05846	Molybdenum, Total	mg/L	0.00000073	0.0044	0.10	0.0994	0.103	0.0995	0.085 to 0.115	99.4	70 to 130	3.57	20
AZ05846	Lead, Total	mg/L	-0.00000274	0.0022	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.926	20
AZ05846	Cobalt, Total	mg/L	-0.00000725	0.0044	0.10	0.0918	0.0956	0.0989	0.085 to 0.115	91.8	70 to 130	4.08	20
AZ05846	Chromium, Total	mg/L	-0.0000744	0.0044	0.10	0.0875	0.0917	0.0948	0.085 to 0.115	87.5	70 to 130	4.65	20
AZ05846	Manganese, Dissolved	mg/L	0.00000944	0.0022	0.10	0.101	0.0996		0.085 to 0.115	101	70 to 130	0.968	20
AZ05846	Potassium, Total	mg/L	0.00753	0.473	10.0	9.63	10.1	10.0	8.5 to 11.5	96.3	70 to 130	4.60	20
AZ05846	Lithium, Total	mg/L	-0.000157	0.022	0.20	0.203	0.201	0.199	0.17 to 0.23	102	70 to 130	0.875	20
AZ05846	Manganese, Total	mg/L	0.00000415	0.0022	0.10	0.0940	0.0965	0.0986	0.085 to 0.115	94.0	70 to 130	2.64	20
AZ05846	Sodium, Total	mg/L	-0.00267	0.22	5.00	5.19	5.13	5.11	4.25 to 5.75	104	70 to 130	1.16	20
AZ05846	Thallium, Total	mg/L	-0.00000150	0.00044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.858	20
AZ05846	Beryllium, Total	mg/L	0.0000150	0.00132	0.10	0.0988	0.100	0.100	0.085 to 0.115	98.8	70 to 130	1.61	20
AZ05846	Calcium, Total	mg/L	0.00668	0.22	5.00	5.18	5.18	5.20	4.25 to 5.75	104	70 to 130	0.0032820	20
AZ05846	Iron, Total	mg/L	-0.00224	0.022	0.2	0.203	0.203	0.203	0.17 to 0.23	102	70 to 130	0.184	20
AZ05846	Magnesium, Total	mg/L	0.00295	0.22	5.00	5.30	5.26	5.23	4.25 to 5.75	106	70 to 130	0.691	20
AZ05846	Selenium, Total	mg/L	0.0000971	0.0044	0.10	0.0979	0.0981	0.101	0.085 to 0.115	97.9	70 to 130	0.253	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-11H

Laboratory ID Number: AZ05840

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample		LCS Limit	Rec		Prec Limit	
							Duplicate	LCS		Rec	Limit		
AZ05846	Sulfate	mg/L	-0.532	0.50	20.0	19.9	-0.169	19.9	18 to 22	99.5	80 to 120	0.00	20
AZ05845	pH for Alkalinity	SU						7.00	6.95 to 7.05				
AZ05845	Solids, Dissolved	mg/L	0.0000	25			3140	44.0	40 to 60			1.41	5
AZ05846	Chloride	mg/L	0.0445	0.50	10.0	10.4	0.201	9.96	9 to 11	104	80 to 120	0.00	20
AZ05845	Alkalinity, Total as CaCO3	mg/L					62.5	50.0	45.0 to 55.0			0.733	10
AZ05846	Fluoride	mg/L	-0.0221	0.05	2.50	2.61	-0.0131	2.59	2.25 to 2.75	104	80 to 120	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

CC:

Reported: 4/5/2019
 Version: 2.0

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

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-11H DUP

Laboratory ID Number: AZ05841

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01		0.0247	mg/L
* Beryllium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.02	0.1	U	Not Detected	mg/L
* Calcium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		160	mg/L
* Cadmium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0008	0.003	J	0.00109	mg/L
* Molybdenum, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Cobalt, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.005		0.00664	mg/L
* Chromium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Iron, Dissolved	GAS	3/13/2019	EPA 200.7		2.03	0.01	0.05	K	2.09	mg/L
* Iron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.05		2.36	mg/L
* Mercury, Total by CVAA	ABB	3/20/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.02	U	Not Detected	mg/L
* Magnesium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		138	mg/L
* Manganese, Dissolved	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	K	2.01	mg/L
* Manganese, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005		1.93	mg/L
* Potassium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.215	2.5	J	1.51	mg/L
* Sodium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.1	0.5		41.6	mg/L
* Selenium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L

General Characteristics

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-11H DUP

Laboratory ID Number: AZ05841

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
pH for Alkalinity	EMG	3/8/2019	SM 4500H+ B		1		4.00	6.62	SU
Alkalinity, Total as CaCO3	EMG	3/8/2019	SM 2320 B		1		0.1	101	mg/L
Carbonate Alkalinity, as CaCO3	EMG	3/8/2019	SM 4500CO2 D		1			0.04	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	3/8/2019	SM 4500CO2 D		1			101	mg/L
* Solids, Dissolved	CRB	3/13/2019	SM 2540C		1		50	1120	mg/L
Filter Completion Date	CRB	3/8/2019	SM 2540C		1			03/08/2019	Date
* Chloride	JCC	3/11/2019	SM4500CI E		1	0.50	1	3.84	mg/L
* Fluoride	JCC	3/8/2019	SM4500F C		1	0.05	0.1	J 0.0973	mg/L
* Sulfate	JCC	3/8/2019	SM4500SO4 E		50	25.00	50	779	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-11H DUP

Laboratory ID Number: AZ05841

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ05846	Iron, Dissolved	mg/L	-0.000448	0.022	0.2	0.197	0.194	0.198	0.17 to 0.23	98.4	70 to 130	1.51	20
AZ05846	Barium, Total	mg/L	-0.0000243	0.0044	0.10	0.0915	0.0932	0.0938	0.085 to 0.115	91.5	70 to 130	1.80	20
AZ05846	Boron, Total	mg/L	-0.00343	0.044	1.00	1.03	1.03	1.01	0.85 to 1.15	99.6	70 to 130	0.866	20
AZ05846	Cobalt, Total	mg/L	-0.00000725	0.0044	0.10	0.0918	0.0956	0.0989	0.085 to 0.115	91.8	70 to 130	4.08	20
AZ05846	Chromium, Total	mg/L	-0.0000744	0.0044	0.10	0.0875	0.0917	0.0948	0.085 to 0.115	87.5	70 to 130	4.65	20
AZ05846	Mangenes, Dissolved	mg/L	0.00000944	0.0022	0.10	0.101	0.0996		0.085 to 0.115	101	70 to 130	0.968	20
AZ05846	Molybdenum, Total	mg/L	0.00000073	0.0044	0.10	0.0994	0.103	0.0995	0.085 to 0.115	99.4	70 to 130	3.57	20
AZ05846	Lead, Total	mg/L	-0.00000274	0.0022	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.926	20
AZ05846	Cadmium, Total	mg/L	0.00000138	0.00066	0.10	0.0951	0.0980	0.0962	0.085 to 0.115	95.1	70 to 130	3.08	20
AZ05846	Mercury, Total by CVAA	mg/L	0.00000615	0.0005	0.004	0.00377	0.00379	0.00384	0.0034 to 0.0046	94.1	70 to 130	0.588	20
AZ05846	Arsenic, Total	mg/L	0.00000209	0.0022	0.10	0.0995	0.100	0.100	0.085 to 0.115	99.5	70 to 130	0.723	20
AZ05846	Antimony, Total	mg/L	0.000222	0.00176	0.10	0.0992	0.101	0.0993	0.085 to 0.115	99.2	70 to 130	1.81	20
AZ05846	Beryllium, Total	mg/L	0.0000150	0.00132	0.10	0.0988	0.100	0.100	0.085 to 0.115	98.8	70 to 130	1.61	20
AZ05846	Calcium, Total	mg/L	0.00668	0.22	5.00	5.18	5.18	5.20	4.25 to 5.75	104	70 to 130	0.0032820	
AZ05846	Iron, Total	mg/L	-0.00224	0.022	0.2	0.203	0.203	0.203	0.17 to 0.23	102	70 to 130	0.184	20
AZ05846	Magnesium, Total	mg/L	0.00295	0.22	5.00	5.30	5.26	5.23	4.25 to 5.75	106	70 to 130	0.691	20
AZ05846	Selenium, Total	mg/L	0.0000971	0.0044	0.10	0.0979	0.0981	0.101	0.085 to 0.115	97.9	70 to 130	0.253	20
AZ05846	Potassium, Total	mg/L	0.00753	0.473	10.0	9.63	10.1	10.0	8.5 to 11.5	96.3	70 to 130	4.60	20
AZ05846	Lithium, Total	mg/L	-0.000157	0.022	0.20	0.203	0.201	0.199	0.17 to 0.23	102	70 to 130	0.875	20
AZ05846	Mangenes, Total	mg/L	0.00000415	0.0022	0.10	0.0940	0.0965	0.0986	0.085 to 0.115	94.0	70 to 130	2.64	20
AZ05846	Sodium, Total	mg/L	-0.00267	0.22	5.00	5.19	5.13	5.11	4.25 to 5.75	104	70 to 130	1.16	20
AZ05846	Thallium, Total	mg/L	-0.00000150	0.00044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.858	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-11H DUP

Laboratory ID Number: AZ05841

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ05846	Sulfate	mg/L	-0.532	0.50	20.0	19.9	-0.169	19.9	18 to 22	99.5	80 to 120	0.00	20
AZ05845	Solids, Dissolved	mg/L	0.0000	25			3140	44.0	40 to 60			1.41	5
AZ05846	Chloride	mg/L	0.0445	0.50	10.0	10.4	0.201	9.96	9 to 11	104	80 to 120	0.00	20
AZ05845	Alkalinity, Total as CaCO3	mg/L					62.5	50.0	45.0 to 55.0			0.733	10
AZ05846	Fluoride	mg/L	-0.0221	0.05	2.50	2.61	-0.0131	2.59	2.25 to 2.75	104	80 to 120	0.00	20
AZ05845	pH for Alkalinity	SU						7.00	6.95 to 7.05				

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CC:

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

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGE
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum Equipment Blank

Laboratory ID Number: AZ05842

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Beryllium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.02	0.1	U	Not Detected	mg/L
* Calcium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.1	0.5	U	Not Detected	mg/L
* Cadmium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0008	0.003	J	0.000888	mg/L
* Molybdenum, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Cobalt, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Iron, Dissolved	GAS	3/13/2019	EPA 200.7		2.03	0.01	0.05	U	Not Detected	mg/L
* Iron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.05	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/20/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.02	U	Not Detected	mg/L
* Magnesium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.1	0.5	U	Not Detected	mg/L
* Manganese, Dissolved	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Manganese, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Potassium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.215	2.5	U	Not Detected	mg/L
* Sodium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.1	0.5	U	Not Detected	mg/L
* Selenium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L

General Characteristics

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGEB
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum Equipment Blank

Laboratory ID Number: AZ05842

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
* Solids, Dissolved	CRB	3/13/2019	SM 2540C		1		25	U Not Detected	mg/L
Filter Completion Date	CRB	3/8/2019	SM 2540C		1			03/08/2019	Date
* Chloride	JCC	3/11/2019	SM4500Cl E		1	0.50	1	U Not Detected	mg/L
* Fluoride	JCC	3/8/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	3/8/2019	SM4500SO4 E		1	0.50	1	U Not Detected	mg/L

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGE
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum Equipment Blank

Laboratory ID Number: AZ05842

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ05846	Iron, Dissolved	mg/L	-0.000448	0.022	0.2	0.197	0.194	0.198	0.17 to 0.23	98.4	70 to 130	1.51	20
AZ05846	Barium, Total	mg/L	-0.0000243	0.0044	0.10	0.0915	0.0932	0.0938	0.085 to 0.115	91.5	70 to 130	1.80	20
AZ05846	Boron, Total	mg/L	-0.00343	0.044	1.00	1.03	1.03	1.01	0.85 to 1.15	99.6	70 to 130	0.866	20
AZ05846	Potassium, Total	mg/L	0.00753	0.473	10.0	9.63	10.1	10.0	8.5 to 11.5	96.3	70 to 130	4.60	20
AZ05846	Lithium, Total	mg/L	-0.000157	0.022	0.20	0.203	0.201	0.199	0.17 to 0.23	102	70 to 130	0.875	20
AZ05846	Mangenes, Total	mg/L	0.00000415	0.0022	0.10	0.0940	0.0965	0.0986	0.085 to 0.115	94.0	70 to 130	2.64	20
AZ05846	Sodium, Total	mg/L	-0.00267	0.22	5.00	5.19	5.13	5.11	4.25 to 5.75	104	70 to 130	1.16	20
AZ05846	Thallium, Total	mg/L	-0.00000150	0.00044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.858	20
AZ05846	Arsenic, Total	mg/L	0.00000209	0.0022	0.10	0.0995	0.100	0.100	0.085 to 0.115	99.5	70 to 130	0.723	20
AZ05846	Antimony, Total	mg/L	0.000222	0.00176	0.10	0.0992	0.101	0.0993	0.085 to 0.115	99.2	70 to 130	1.81	20
AZ05846	Molybdenum, Total	mg/L	0.00000073	0.0044	0.10	0.0994	0.103	0.0995	0.085 to 0.115	99.4	70 to 130	3.57	20
AZ05846	Lead, Total	mg/L	-0.00000274	0.0022	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.926	20
AZ05846	Beryllium, Total	mg/L	0.0000150	0.00132	0.10	0.0988	0.100	0.100	0.085 to 0.115	98.8	70 to 130	1.61	20
AZ05846	Calcium, Total	mg/L	0.00668	0.22	5.00	5.18	5.18	5.20	4.25 to 5.75	104	70 to 130	0.0032820	20
AZ05846	Iron, Total	mg/L	-0.00224	0.022	0.2	0.203	0.203	0.203	0.17 to 0.23	102	70 to 130	0.184	20
AZ05846	Magnesium, Total	mg/L	0.00295	0.22	5.00	5.30	5.26	5.23	4.25 to 5.75	106	70 to 130	0.691	20
AZ05846	Selenium, Total	mg/L	0.0000971	0.0044	0.10	0.0979	0.0981	0.101	0.085 to 0.115	97.9	70 to 130	0.253	20
AZ05846	Cadmium, Total	mg/L	0.00000138	0.00066	0.10	0.0951	0.0980	0.0962	0.085 to 0.115	95.1	70 to 130	3.08	20
AZ05846	Mercury, Total by CVAA	mg/L	0.00000615	0.0005	0.004	0.00377	0.00379	0.00384	0.0034 to 0.0046	94.1	70 to 130	0.588	20
AZ05846	Cobalt, Total	mg/L	-0.00000725	0.0044	0.10	0.0918	0.0956	0.0989	0.085 to 0.115	91.8	70 to 130	4.08	20
AZ05846	Chromium, Total	mg/L	-0.0000744	0.0044	0.10	0.0875	0.0917	0.0948	0.085 to 0.115	87.5	70 to 130	4.65	20
AZ05846	Mangenes, Dissolved	mg/L	0.00000944	0.0022	0.10	0.101	0.0996		0.085 to 0.115	101	70 to 130	0.968	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGEB
 Sample Date: 04-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum Equipment Blank

Laboratory ID Number: AZ05842

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ05846	Sulfate	mg/L	-0.532	0.50	20.0	19.9	-0.169	19.9	18 to 22	99.5	80 to 120	0.00	20
AZ05846	Fluoride	mg/L	-0.0221	0.05	2.50	2.61	-0.0131	2.59	2.25 to 2.75	104	80 to 120	0.00	20
AZ05845	Solids, Dissolved	mg/L	0.0000	25			3140	44.0	40 to 60			1.41	5
AZ05846	Chloride	mg/L	0.0445	0.50	10.0	10.4	0.201	9.96	9 to 11	104	80 to 120	0.00	20

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CC:

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

Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-4V

Laboratory ID Number: AZ05843

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01		0.0136	mg/L
* Beryllium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0006	0.003	J	0.00155	mg/L
* Boron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.02	0.1		7.15	mg/L
* Calcium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		249	mg/L
* Cadmium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Molybdenum, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Cobalt, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.005		0.0836	mg/L
* Chromium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Iron, Dissolved	GAS	3/13/2019	EPA 200.7		101.5	1.015	5.075	K	32.4	mg/L
* Iron, Total	GAS	3/18/2019	EPA 200.7		10.15	0.1015	0.5075		38.9	mg/L
* Mercury, Total by CVAA	ABB	3/20/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.02		0.369	mg/L
* Magnesium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		143	mg/L
* Manganese, Dissolved	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	K	3.62	mg/L
* Manganese, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005		3.68	mg/L
* Potassium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.215	2.5		4.64	mg/L
* Sodium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.1	0.5		41.6	mg/L
* Selenium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L

General Characteristics

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-4V

Laboratory ID Number: AZ05843

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
pH for Alkalinity	EMG	3/8/2019	SM 4500H+ B		1		4.00	6.61	SU
Alkalinity, Total as CaCO3	EMG	3/8/2019	SM 2320 B		1		0.1	76.5	mg/L
Carbonate Alkalinity, as CaCO3	EMG	3/8/2019	SM 4500CO2 D		1			0.03	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	3/8/2019	SM 4500CO2 D		1			76.5	mg/L
* Solids, Dissolved	CRB	3/13/2019	SM 2540C		1		100	1410	mg/L
Filter Completion Date	CRB	3/8/2019	SM 2540C		1			03/08/2019	Date
* Chloride	JCC	3/11/2019	SM4500CI E		10	5.00	10	191	mg/L
* Fluoride	JCC	3/8/2019	SM4500F C		1	0.05	0.1	0.477	mg/L
* Sulfate	JCC	3/8/2019	SM4500SO4 E		50	25.00	50	871	mg/L

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Expiration: June 30, 2019

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 Calera, AL 35040
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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-4V

Laboratory ID Number: AZ05843

Sample	Analysis	Units	MB	MB			LCS			Rec		Prec	
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit	Prec	Limit
AZ05846	Barium, Total	mg/L	-0.00000243	0.0044	0.10	0.0915	0.0932	0.0938	0.085 to 0.115	91.5	70 to 130	1.80	20
AZ05846	Boron, Total	mg/L	-0.00343	0.044	1.00	1.03	1.03	1.01	0.85 to 1.15	99.6	70 to 130	0.866	20
AZ05846	Arsenic, Total	mg/L	0.00000209	0.0022	0.10	0.0995	0.100	0.100	0.085 to 0.115	99.5	70 to 130	0.723	20
AZ05846	Antimony, Total	mg/L	0.000222	0.00176	0.10	0.0992	0.101	0.0993	0.085 to 0.115	99.2	70 to 130	1.81	20
AZ05846	Cobalt, Total	mg/L	-0.00000725	0.0044	0.10	0.0918	0.0956	0.0989	0.085 to 0.115	91.8	70 to 130	4.08	20
AZ05846	Chromium, Total	mg/L	-0.0000744	0.0044	0.10	0.0875	0.0917	0.0948	0.085 to 0.115	87.5	70 to 130	4.65	20
AZ05846	Manganese, Dissolved	mg/L	0.00000944	0.0022	0.10	0.101	0.0996		0.085 to 0.115	101	70 to 130	0.968	20
AZ05846	Cadmium, Total	mg/L	0.00000138	0.00066	0.10	0.0951	0.0980	0.0962	0.085 to 0.115	95.1	70 to 130	3.08	20
AZ05846	Mercury, Total by CVAA	mg/L	0.00000615	0.0005	0.004	0.00377	0.00379	0.00384	0.0034 to 0.0046	94.1	70 to 130	0.588	20
AZ05846	Molybdenum, Total	mg/L	0.00000073	0.0044	0.10	0.0994	0.103	0.0995	0.085 to 0.115	99.4	70 to 130	3.57	20
AZ05846	Lead, Total	mg/L	-0.00000274	0.0022	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.926	20
AZ05846	Beryllium, Total	mg/L	0.0000150	0.00132	0.10	0.0988	0.100	0.100	0.085 to 0.115	98.8	70 to 130	1.61	20
AZ05846	Calcium, Total	mg/L	0.00668	0.22	5.00	5.18	5.18	5.20	4.25 to 5.75	104	70 to 130	0.0032820	
AZ05846	Iron, Total	mg/L	-0.00224	0.022	0.2	0.203	0.203	0.203	0.17 to 0.23	102	70 to 130	0.184	20
AZ05846	Magnesium, Total	mg/L	0.00295	0.22	5.00	5.30	5.26	5.23	4.25 to 5.75	106	70 to 130	0.691	20
AZ05846	Selenium, Total	mg/L	0.0000971	0.0044	0.10	0.0979	0.0981	0.101	0.085 to 0.115	97.9	70 to 130	0.253	20
AZ05846	Potassium, Total	mg/L	0.00753	0.473	10.0	9.63	10.1	10.0	8.5 to 11.5	96.3	70 to 130	4.60	20
AZ05846	Lithium, Total	mg/L	-0.000157	0.022	0.20	0.203	0.201	0.199	0.17 to 0.23	102	70 to 130	0.875	20
AZ05846	Manganese, Total	mg/L	0.00000415	0.0022	0.10	0.0940	0.0965	0.0986	0.085 to 0.115	94.0	70 to 130	2.64	20
AZ05846	Sodium, Total	mg/L	-0.00267	0.22	5.00	5.19	5.13	5.11	4.25 to 5.75	104	70 to 130	1.16	20
AZ05846	Thallium, Total	mg/L	-0.00000150	0.00044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.858	20
AZ05846	Iron, Dissolved	mg/L	-0.000448	0.022	0.2	0.197	0.194	0.198	0.17 to 0.23	98.4	70 to 130	1.51	20

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Laboratory certification ID: E571114

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Expiration: June 30, 2019

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-4V

Laboratory ID Number: AZ05843

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ05846	Sulfate	mg/L	-0.532	0.50	20.0	19.9	-0.169	19.9	18 to 22	99.5	80 to 120	0.00	20
AZ05845	pH for Alkalinity	SU						7.00	6.95 to 7.05				
AZ05845	Alkalinity, Total as CaCO3	mg/L					62.5	50.0	45.0 to 55.0			0.733	10
AZ05846	Fluoride	mg/L	-0.0221	0.05	2.50	2.61	-0.0131	2.59	2.25 to 2.75	104	80 to 120	0.00	20
AZ05845	Solids, Dissolved	mg/L	0.0000	25			3140	44.0	40 to 60			1.41	5
AZ05846	Chloride	mg/L	0.0445	0.50	10.0	10.4	0.201	9.96	9 to 11	104	80 to 120	0.00	20

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Expiration: June 30, 2019

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CC:

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 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6032 or 6171
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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-3V

Laboratory ID Number: AZ05844

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01		0.0956	mg/L
* Beryllium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.02	0.1		0.895	mg/L
* Calcium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		329	mg/L
* Cadmium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0008	0.003	J	0.00179	mg/L
* Molybdenum, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	J	0.00347	mg/L
* Lead, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Cobalt, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.005		0.00590	mg/L
* Chromium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Iron, Dissolved	GAS	3/13/2019	EPA 200.7		10.15	0.1015	0.5075	K	13.0	mg/L
* Iron, Total	GAS	3/18/2019	EPA 200.7		10.15	0.1015	0.5075		15.4	mg/L
* Mercury, Total by CVAA	ABB	3/20/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.02		0.309	mg/L
* Magnesium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		166	mg/L
* Manganese, Dissolved	DLJ	3/12/2019	EPA 200.8		10.15	0.01015	0.05075	K	7.18	mg/L
* Manganese, Total	DLJ	3/12/2019	EPA 200.8		10.15	0.01015	0.05075		7.27	mg/L
* Potassium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.215	2.5		8.98	mg/L
* Sodium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		356	mg/L
* Selenium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L

General Characteristics

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-3V

Laboratory ID Number: AZ05844

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
pH for Alkalinity	EMG	3/8/2019	SM 4500H+ B	1			4.00	7.10	SU
Alkalinity, Total as CaCO3	EMG	3/8/2019	SM 2320 B	1			0.1	344	mg/L
Carbonate Alkalinity, as CaCO3	EMG	3/8/2019	SM 4500CO2 D	1				0.41	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	3/8/2019	SM 4500CO2 D	1				344	mg/L
* Solids, Dissolved	CRB	3/13/2019	SM 2540C	1			125	2170	mg/L
Filter Completion Date	CRB	3/8/2019	SM 2540C	1				03/08/2019	Date
* Chloride	JCC	3/11/2019	SM4500CI E	20		10.00	20	194	mg/L
* Fluoride	JCC	3/8/2019	SM4500F C	1		0.05	0.1	0.249	mg/L
* Sulfate	JCC	3/8/2019	SM4500SO4 E	50		25.00	50	1170	mg/L

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Laboratory certification ID: E571114

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-3V

Laboratory ID Number: AZ05844

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec Limit
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ05846	Iron, Dissolved	mg/L	-0.000448	0.022	0.2	0.197	0.194	0.198	0.17 to 0.23	98.4	70 to 130	1.51	20
AZ05846	Cadmium, Total	mg/L	0.00000138	0.00066	0.10	0.0951	0.0980	0.0962	0.085 to 0.115	95.1	70 to 130	3.08	20
AZ05846	Mercury, Total by CVAA	mg/L	0.00000615	0.0005	0.004	0.00377	0.00379	0.00384	0.0034 to 0.0046	94.1	70 to 130	0.588	20
AZ05846	Barium, Total	mg/L	-0.00000243	0.0044	0.10	0.0915	0.0932	0.0938	0.085 to 0.115	91.5	70 to 130	1.80	20
AZ05846	Boron, Total	mg/L	-0.00343	0.044	1.00	1.03	1.03	1.01	0.85 to 1.15	99.6	70 to 130	0.866	20
AZ05846	Arsenic, Total	mg/L	0.00000209	0.0022	0.10	0.0995	0.100	0.100	0.085 to 0.115	99.5	70 to 130	0.723	20
AZ05846	Antimony, Total	mg/L	0.000222	0.00176	0.10	0.0992	0.101	0.0993	0.085 to 0.115	99.2	70 to 130	1.81	20
AZ05846	Cobalt, Total	mg/L	-0.00000725	0.0044	0.10	0.0918	0.0956	0.0989	0.085 to 0.115	91.8	70 to 130	4.08	20
AZ05846	Chromium, Total	mg/L	-0.0000744	0.0044	0.10	0.0875	0.0917	0.0948	0.085 to 0.115	87.5	70 to 130	4.65	20
AZ05846	Mangenes, Dissolved	mg/L	0.00000944	0.0022	0.10	0.101	0.0996		0.085 to 0.115	101	70 to 130	0.968	20
AZ05846	Beryllium, Total	mg/L	0.0000150	0.00132	0.10	0.0988	0.100	0.100	0.085 to 0.115	98.8	70 to 130	1.61	20
AZ05846	Calcium, Total	mg/L	0.00668	0.22	5.00	5.18	5.18	5.20	4.25 to 5.75	104	70 to 130	0.0032820	
AZ05846	Iron, Total	mg/L	-0.00224	0.022	0.2	0.203	0.203	0.203	0.17 to 0.23	102	70 to 130	0.184	20
AZ05846	Magnesium, Total	mg/L	0.00295	0.22	5.00	5.30	5.26	5.23	4.25 to 5.75	106	70 to 130	0.691	20
AZ05846	Selenium, Total	mg/L	0.0000971	0.0044	0.10	0.0979	0.0981	0.101	0.085 to 0.115	97.9	70 to 130	0.253	20
AZ05846	Potassium, Total	mg/L	0.00753	0.473	10.0	9.63	10.1	10.0	8.5 to 11.5	96.3	70 to 130	4.60	20
AZ05846	Lithium, Total	mg/L	-0.000157	0.022	0.20	0.203	0.201	0.199	0.17 to 0.23	102	70 to 130	0.875	20
AZ05846	Mangenes, Total	mg/L	0.00000415	0.0022	0.10	0.0940	0.0965	0.0986	0.085 to 0.115	94.0	70 to 130	2.64	20
AZ05846	Sodium, Total	mg/L	-0.00267	0.22	5.00	5.19	5.13	5.11	4.25 to 5.75	104	70 to 130	1.16	20
AZ05846	Thallium, Total	mg/L	-0.00000150	0.00044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.858	20
AZ05846	Molybdenum, Total	mg/L	0.00000073	0.0044	0.10	0.0994	0.103	0.0995	0.085 to 0.115	99.4	70 to 130	3.57	20
AZ05846	Lead, Total	mg/L	-0.00000274	0.0022	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.926	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-3V

Laboratory ID Number: AZ05844

Sample	Analysis	Units	MB	Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ05845	pH for Alkalinity	SU						7.00	6.95 to 7.05				
AZ05845	Alkalinity, Total as CaCO3	mg/L					62.5	50.0	45.0 to 55.0			0.733	10
AZ05846	Fluoride	mg/L	-0.0221	0.05	2.50	2.61	-0.0131	2.59	2.25 to 2.75	104	80 to 120	0.00	20
AZ05846	Sulfate	mg/L	-0.532	0.50	20.0	19.9	-0.169	19.9	18 to 22	99.5	80 to 120	0.00	20
AZ05845	Solids, Dissolved	mg/L	0.0000	25			3140	44.0	40 to 60			1.41	5
AZ05846	Chloride	mg/L	0.0445	0.50	10.0	10.4	0.201	9.96	9 to 11	104	80 to 120	0.00	20

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CC:

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



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-9V

Laboratory ID Number: AZ05845

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01		0.0312	mg/L
* Beryllium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	3/18/2019	EPA 200.7		10.15	0.203	1.015		12.8	mg/L
* Calcium, Total	GAS	3/21/2019	EPA 200.7		101.5	10.15	50.75		578	mg/L
* Cadmium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0003	0.001	J	0.000336	mg/L
* Antimony, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0008	0.003	J	0.000852	mg/L
* Molybdenum, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Cobalt, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.005		0.140	mg/L
* Chromium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Iron, Dissolved	GAS	3/13/2019	EPA 200.7		10.15	0.1015	0.5075	K	23.3	mg/L
* Iron, Total	GAS	3/18/2019	EPA 200.7		10.15	0.1015	0.5075		22.0	mg/L
* Mercury, Total by CVAA	ABB	3/20/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.02		0.169	mg/L
* Magnesium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		290	mg/L
* Manganese, Dissolved	DLJ	3/12/2019	EPA 200.8		92.365	0.092365	0.461825	K	18.8	mg/L
* Manganese, Total	DLJ	3/12/2019	EPA 200.8		92.365	0.092365	0.461825		18.4	mg/L
* Potassium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.215	2.5		9.44	mg/L
* Sodium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		176	mg/L
* Selenium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0002	0.001	J	0.000210	mg/L

General Characteristics

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Certificate Of Analysis Alabama Power



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-9V

Laboratory ID Number: AZ05845

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
pH for Alkalinity	EMG	3/8/2019	SM 4500H+ B	1			4.00	6.37	SU
Alkalinity, Total as CaCO3	EMG	3/8/2019	SM 2320 B	1			0.1	63.0	mg/L
Carbonate Alkalinity, as CaCO3	EMG	3/8/2019	SM 4500CO2 D	1				0.01	mg/L
Bicarbonate Alkalinity, as CaCO3	EMG	3/8/2019	SM 4500CO2 D	1				63.0	mg/L
* Solids, Dissolved	CRB	3/13/2019	SM 2540C	1			125	3240	mg/L
Filter Completion Date	CRB	3/8/2019	SM 2540C	1				03/08/2019	Date
* Chloride	JCC	3/11/2019	SM4500CI E	20		10.00	20	313	mg/L
* Fluoride	JCC	3/8/2019	SM4500F C	1		0.05	0.1	0.239	mg/L
* Sulfate	JCC	3/8/2019	SM4500SO4 E	50		25.00	50	2010	mg/L

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-9V

Laboratory ID Number: AZ05845

Sample	Analysis	Units	MB	MB			LCS			Rec		Prec	Limit
				Limit	Spike	MS	MSD	LCS	Limit	Rec	Limit		
AZ05846	Iron, Dissolved	mg/L	-0.000448	0.022	0.2	0.197	0.194	0.198	0.17 to 0.23	98.4	70 to 130	1.51	20
AZ05846	Cadmium, Total	mg/L	0.00000138	0.00066	0.10	0.0951	0.0980	0.0962	0.085 to 0.115	95.1	70 to 130	3.08	20
AZ05846	Mercury, Total by CVAA	mg/L	0.00000615	0.0005	0.004	0.00377	0.00379	0.00384	0.0034 to 0.0046	94.1	70 to 130	0.588	20
AZ05846	Barium, Total	mg/L	-0.00000243	0.0044	0.10	0.0915	0.0932	0.0938	0.085 to 0.115	91.5	70 to 130	1.80	20
AZ05846	Boron, Total	mg/L	-0.00343	0.044	1.00	1.03	1.03	1.01	0.85 to 1.15	99.6	70 to 130	0.866	20
AZ05846	Cobalt, Total	mg/L	-0.00000725	0.0044	0.10	0.0918	0.0956	0.0989	0.085 to 0.115	91.8	70 to 130	4.08	20
AZ05846	Chromium, Total	mg/L	-0.0000744	0.0044	0.10	0.0875	0.0917	0.0948	0.085 to 0.115	87.5	70 to 130	4.65	20
AZ05846	Mangenes, Dissolved	mg/L	0.00000944	0.0022	0.10	0.101	0.0996		0.085 to 0.115	101	70 to 130	0.968	20
AZ05846	Arsenic, Total	mg/L	0.00000209	0.0022	0.10	0.0995	0.100	0.100	0.085 to 0.115	99.5	70 to 130	0.723	20
AZ05846	Antimony, Total	mg/L	0.000222	0.00176	0.10	0.0992	0.101	0.0993	0.085 to 0.115	99.2	70 to 130	1.81	20
AZ05846	Potassium, Total	mg/L	0.00753	0.473	10.0	9.63	10.1	10.0	8.5 to 11.5	96.3	70 to 130	4.60	20
AZ05846	Lithium, Total	mg/L	-0.000157	0.022	0.20	0.203	0.201	0.199	0.17 to 0.23	102	70 to 130	0.875	20
AZ05846	Mangenes, Total	mg/L	0.00000415	0.0022	0.10	0.0940	0.0965	0.0986	0.085 to 0.115	94.0	70 to 130	2.64	20
AZ05846	Sodium, Total	mg/L	-0.00267	0.22	5.00	5.19	5.13	5.11	4.25 to 5.75	104	70 to 130	1.16	20
AZ05846	Thallium, Total	mg/L	-0.00000150	0.00044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.858	20
AZ05846	Beryllium, Total	mg/L	0.0000150	0.00132	0.10	0.0988	0.100	0.100	0.085 to 0.115	98.8	70 to 130	1.61	20
AZ05846	Calcium, Total	mg/L	0.00668	0.22	5.00	5.18	5.18	5.20	4.25 to 5.75	104	70 to 130	0.0032820	20
AZ05846	Iron, Total	mg/L	-0.00224	0.022	0.2	0.203	0.203	0.203	0.17 to 0.23	102	70 to 130	0.184	20
AZ05846	Magnesium, Total	mg/L	0.00295	0.22	5.00	5.30	5.26	5.23	4.25 to 5.75	106	70 to 130	0.691	20
AZ05846	Selenium, Total	mg/L	0.0000971	0.0044	0.10	0.0979	0.0981	0.101	0.085 to 0.115	97.9	70 to 130	0.253	20
AZ05846	Molybdenum, Total	mg/L	0.00000073	0.0044	0.10	0.0994	0.103	0.0995	0.085 to 0.115	99.4	70 to 130	3.57	20
AZ05846	Lead, Total	mg/L	-0.00000274	0.0022	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.926	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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 Calera, AL 35040
 (205) 664-6032 or 6171
 FAX (205) 257-1654

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum - MW-9V

Laboratory ID Number: AZ05845

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample		LCS Limit	Rec		Prec Limit	
							Duplicate	LCS		Rec	Limit		
AZ05846	Sulfate	mg/L	-0.532	0.50	20.0	19.9	-0.169	19.9	18 to 22	99.5	80 to 120	0.00	20
AZ05845	pH for Alkalinity	SU						7.00	6.95 to 7.05				
AZ05845	Solids, Dissolved	mg/L	0.0000	25			3140	44.0	40 to 60			1.41	5
AZ05846	Chloride	mg/L	0.0445	0.50	10.0	10.4	0.201	9.96	9 to 11	104	80 to 120	0.00	20
AZ05845	Alkalinity, Total as CaCO3	mg/L					62.5	50.0	45.0 to 55.0			0.733	10
AZ05846	Fluoride	mg/L	-0.0221	0.05	2.50	2.61	-0.0131	2.59	2.25 to 2.75	104	80 to 120	0.00	20

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CC:

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 FAX (205) 257-1654

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGFB
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ05846

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Beryllium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.02	0.1	J	0.0389	mg/L
* Calcium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.1	0.5	U	Not Detected	mg/L
* Cadmium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Molybdenum, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Cobalt, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Iron, Dissolved	GAS	3/13/2019	EPA 200.7		2.03	0.01	0.05	U	Not Detected	mg/L
* Iron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.05	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	3/20/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.02	U	Not Detected	mg/L
* Magnesium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.1	0.5	U	Not Detected	mg/L
* Manganese, Dissolved	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Manganese, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Potassium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.215	2.5	U	Not Detected	mg/L
* Sodium, Total	GAS	3/18/2019	EPA 200.7		2.03	0.1	0.5	U	Not Detected	mg/L
* Selenium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	3/8/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L

General Characteristics

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Certificate Of Analysis



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGFB
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ05846

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
* Solids, Dissolved	CRB	3/13/2019	SM 2540C		1		25	U Not Detected	mg/L
Filter Completion Date	CRB	3/8/2019	SM 2540C		1			03/08/2019	Date
* Chloride	JCC	3/11/2019	SM4500Cl E		1	0.50	1	U Not Detected	mg/L
* Fluoride	JCC	3/8/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	3/8/2019	SM4500SO4 E		1	0.50	1	U Not Detected	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGFB
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ05846

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec
			MB	Limit					Limit	Rec	Limit	Prec	
AZ05846	Iron, Dissolved	mg/L	-0.000448	0.022	0.2	0.197	0.194	0.198	0.17 to 0.23	98.4	70 to 130	1.51	20
AZ05846	Cobalt, Total	mg/L	-0.0000725	0.0044	0.10	0.0918	0.0956	0.0989	0.085 to 0.115	91.8	70 to 130	4.08	20
AZ05846	Chromium, Total	mg/L	-0.0000744	0.0044	0.10	0.0875	0.0917	0.0948	0.085 to 0.115	87.5	70 to 130	4.65	20
AZ05846	Manganese, Dissolved	mg/L	0.00000944	0.0022	0.10	0.101	0.0996		0.085 to 0.115	101	70 to 130	0.968	20
AZ05846	Barium, Total	mg/L	-0.00000243	0.0044	0.10	0.0915	0.0932	0.0938	0.085 to 0.115	91.5	70 to 130	1.80	20
AZ05846	Boron, Total	mg/L	-0.00343	0.044	1.00	1.03	1.03	1.01	0.85 to 1.15	99.6	70 to 130	0.866	20
AZ05846	Arsenic, Total	mg/L	0.00000209	0.0022	0.10	0.0995	0.100	0.100	0.085 to 0.115	99.5	70 to 130	0.723	20
AZ05846	Antimony, Total	mg/L	0.000222	0.00176	0.10	0.0992	0.101	0.0993	0.085 to 0.115	99.2	70 to 130	1.81	20
AZ05846	Potassium, Total	mg/L	0.00753	0.473	10.0	9.63	10.1	10.0	8.5 to 11.5	96.3	70 to 130	4.60	20
AZ05846	Lithium, Total	mg/L	-0.000157	0.022	0.20	0.203	0.201	0.199	0.17 to 0.23	102	70 to 130	0.875	20
AZ05846	Manganese, Total	mg/L	0.00000415	0.0022	0.10	0.0940	0.0965	0.0986	0.085 to 0.115	94.0	70 to 130	2.64	20
AZ05846	Sodium, Total	mg/L	-0.00267	0.22	5.00	5.19	5.13	5.11	4.25 to 5.75	104	70 to 130	1.16	20
AZ05846	Thallium, Total	mg/L	-0.00000150	0.00044	0.10	0.101	0.101	0.103	0.085 to 0.115	101	70 to 130	0.858	20
AZ05846	Cadmium, Total	mg/L	0.00000138	0.00066	0.10	0.0951	0.0980	0.0962	0.085 to 0.115	95.1	70 to 130	3.08	20
AZ05846	Mercury, Total by CVAA	mg/L	0.00000615	0.0005	0.004	0.00377	0.00379	0.00384	0.0034 to 0.0046	94.1	70 to 130	0.588	20
AZ05846	Beryllium, Total	mg/L	0.0000150	0.00132	0.10	0.0988	0.100	0.100	0.085 to 0.115	98.8	70 to 130	1.61	20
AZ05846	Calcium, Total	mg/L	0.00668	0.22	5.00	5.18	5.18	5.20	4.25 to 5.75	104	70 to 130	0.0032820	20
AZ05846	Iron, Total	mg/L	-0.00224	0.022	0.2	0.203	0.203	0.203	0.17 to 0.23	102	70 to 130	0.184	20
AZ05846	Magnesium, Total	mg/L	0.00295	0.22	5.00	5.30	5.26	5.23	4.25 to 5.75	106	70 to 130	0.691	20
AZ05846	Selenium, Total	mg/L	0.0000971	0.0044	0.10	0.0979	0.0981	0.101	0.085 to 0.115	97.9	70 to 130	0.253	20
AZ05846	Molybdenum, Total	mg/L	0.00000073	0.0044	0.10	0.0994	0.103	0.0995	0.085 to 0.115	99.4	70 to 130	3.57	20
AZ05846	Lead, Total	mg/L	-0.00000274	0.0022	0.10	0.104	0.103	0.103	0.085 to 0.115	104	70 to 130	0.926	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

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

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGFB
 Sample Date: 05-Mar-19
 Customer ID:
 Delivery Date: 06-Mar-19

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ05846

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec			Prec
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ05846	Sulfate	mg/L	-0.532	0.50	20.0	19.9	-0.169	19.9	18 to 22	99.5	80 to 120	0.00	20
AZ05846	Fluoride	mg/L	-0.0221	0.05	2.50	2.61	-0.0131	2.59	2.25 to 2.75	104	80 to 120	0.00	20
AZ05845	Solids, Dissolved	mg/L	0.0000	25			3140	44.0	40 to 60			1.41	5
AZ05846	Chloride	mg/L	0.0445	0.50	10.0	10.4	0.201	9.96	9 to 11	104	80 to 120	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/03/2019

CC:

Reported: 4/5/2019
 Version: 2.0

Definitions



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
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
BA	Analyte found in reagent blank is = RL AND is > 1/10 the amount of the sample.
C	Analyte was verified by re-analysis.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
E	Estimated reported value exceeded calibration range.
F	Water Field Group (WFG) qualifier; see comments for more information
FA	Field results were reviewed by the Water Field Group.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
J	Reported value is an estimate because concentration is less than reporting limit.
K	No MB or LCS were submitted with the sample for dissolved analysis.
L	Check standard is outside of specification limit.
LA	Analyte recovery in the check standard was above specification limit. Results may be biased high.
LL	Analyte recovery in the check standard was below specification limit. Results may be biased low.
M	LOQ verification analyzed with batch was outside of specification limit.
N	Organic constituents tentatively identified. Confirmation is needed.
P	Precision is out of specification limit.
R	Matrix spike recovery or matrix spike duplicate recovery is outside of specification limit.
RA	Matrix spike is invalid due to sample concentration.
S	Surrogate recovery is outside of specification limit.
T	Sample temperature is outside of specification limit.
U	Compound was analyzed, but not detected.



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA 03/06/2019 09:00

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer	
Site Representative	Che George	Requested By	Greg Dyer	
Collector	Ben Rothschild	Location	Gorgas Gypsum	

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

Comments: Mercury bottle not collected at MW-4V and MW-3V; test will be conducted using the Metals Bottle.

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-11H	3/4/19	13:30	6	Groundwater		AZ05840
MW-11H DUP	03/04/2019	13:30	6	Sample Duplicate		AZ05841
EB-1	03/04/2019	14:05	5	Equipment Blank		AZ05842
MW-4V	03/05/2019	09:55	5	Groundwater		AZ05843
MW-3V	03/05/2019	13:27	5	Groundwater		AZ05844
MW-9H	03/05/2019	15:13	6	Groundwater		AZ05845
FB-1	03/05/2019	15:50	5	Field Blank		AZ05846

Relinquished By	Received By	Date/Time
		03/06/2019 08:54

SmarTroll ID	6496-34170-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20010-2-2	Cooler Temp
Sample Event	1208	Thermometer ID
		pH Strip ID



Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA 03/06/2019 09:00

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Ben Rothschild	Location	Gorgas Gypsum

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 Duplicate Collected at MW-9H
----------	-------------------------------------

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-11H	3/4/19	13:30	1	Groundwater		AZ05847
MW-11H DUP	03/04/2019	13:30	1	Sample Duplicate		AZ05848
EB-1	03/04/2019	14:05	1	Equipment Blank		AZ05849
MW-4V	03/05/2019	09:55	1	Groundwater		AZ05850
MW-3V	03/05/2019	13:27	1	Groundwater		AZ05851
MW-9H	03/05/2019	15:13	3	Groundwater		AZ05852
FB-1	03/05/2019	15:50	1	Field Blank		AZ05853

Relinquished By	Received By	Date/Time
		03/06/2019 08:54

SmarTroll ID	6496-34170-1-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20010-2-2	Cooler Temp
Sample Event	1208	Thermometer ID
		pH Strip ID
		7260-39349-1-1

Alabama Power General Test Laboratory
744 County Road 87, GSC#8
Calera, AL 35040
(205) 664-6247 or 6171
FAX (205) 664-6108

Analytical Report



Sample Group : WMWGORG_1208TCLP

Project/Site : Gorgas Gypsum
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

The following data has been reviewed and approved by:

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: 2019.06.06 14:59:08 -0500

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: 2019.06.07 08:50:07 -0500



TCLP Extraction

Gorgas Gypsum

WMWGORG_1208TCLP

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ10368	645421	WMWGORG_1208TCLP

4. All of the above samples were prepared by EPA 1311 and WI 19200.
5. All samples were prepared within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Particle size reduction was not required.
- Percentage of dry solids was determined.
- pH meter was calibrated and verified. All acceptance criteria were met.
- pH of LCS buffer was performed. All acceptance criteria were met.
- Fluid used for extraction was within acceptable pH range.
- All samples were extracted with Fluid #1 per EPA 1311.
- Sample extraction time requirements were met.
- Room temperature requirements during extraction were met.
- Appropriate number of MS/MSD prepared per extraction fluids.
- Appropriate fluid blanks were prepared.
- Samples acidified to a pH of less than 2 after spiking for MS and MSD.
- Spiking was complete within 15 min of filtration.



Metals ICPMS

Gorgas Gypsum

WMWGORG_1208TCLP

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ10368	646017	WMWGORG_1208TCLP

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 TCLP method blank associated with the TCLP prep passed, except for the Barium.
- 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. All samples were analyzed at a x5.075 dilution to compensate for potential matrix effects.
 8. The raw data results are shown with dilution factors included.



Mercury

Gorgas Gypsum

WMWGORG_1208TCLP

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ10368	645580	WMWGORG_1208TCLP

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
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
Sample Date: 23-Apr-19
Customer ID:
Delivery Date: 24-Apr-19

Description: Gorgas Gypsum - G-1

Laboratory ID Number: AZ10368

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Pesticides									
Date Extracted	RDA	5/1/2019	EPA 1311		1	DATE		05/01/2019	DATE
Metals, Cyanide, Total Phenols									
* Arsenic, Total	DLJ	5/3/2019	EPA 200.8		5.075	0.001	0.005	J 0.00458	mg/L
* Barium, Total	DLJ	5/8/2019	EPA 200.8		5.075	0.002	0.01	0.0528	mg/L
* Cadmium, Total	DLJ	5/8/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Chromium, Total	DLJ	5/3/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/6/2019	EPA 245.1		1.01	0.000303	0.000505	J 0.000347	mg/L
* Lead, Total	DLJ	5/3/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/3/2019	EPA 200.8		5.075	0.002	0.01	0.0135	mg/L
General Characteristics									
TCLP Extraction Fluid#	RDA	5/2/2019	EPA 1311		1			1	
pH of Extraction Fluid	RDA	5/2/2019	EPA 1311		1		4.00	4.97	
Solids Content of Sample	RDA	5/2/2019	EPA 1311		1	0.01		100	%

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Barium results are qualified due to analyte was found at concentrations greater than the RL and greater than 1/10 the sample amounts in the TCLP method blank. LBM 5/24/19

Alabama Power General Test Laboratory
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 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 23-Apr-19
 Customer ID:
 Delivery Date: 24-Apr-19

Description: Gorgas Gypsum - G-1

Laboratory ID Number: AZ10368

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec
			Limit	MB					Limit	Rec	Limit	Prec	
AZ10368	Arsenic, Total	mg/L	0.000133	0.0022	0.10	0.103	0.0995	0.0972	0.085 to 0.115	98.4	70 to 130	3.40	20
AZ10368	Barium, Total	mg/L	0.0226	0.0044	0.10	0.125	0.144	0.0934	0.085 to 0.115	72.2	70 to 130	14.1	20
AZ10368	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0900	0.0927	0.0939	0.085 to 0.115	90.0	70 to 130	2.96	20
AZ10368	Chromium, Total	mg/L	0.000536	0.0044	0.10	0.0963	0.0953	0.0964	0.085 to 0.115	96.3	70 to 130	1.04	20
AZ10368	Mercury, Total by CVAA	mg/L	0.000293	0.0005	0.004	0.00342	0.00354	0.00413	0.0034 to 0.0046	76.8	70 to 130	3.33	20
AZ10368	Lead, Total	mg/L	0.000468	0.0022	0.10	0.101	0.100	0.103	0.085 to 0.115	101	70 to 130	0.213	20
AZ10368	Selenium, Total	mg/L	0.000121	0.0044	0.10	0.110	0.108	0.0984	0.085 to 0.115	96.4	70 to 130	1.98	20
AZ10368	pH of Extraction Fluid							6.95	6.95 to 7.05	99.3	98 to 102		

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Barium results are qualified due to analyte was found at concentrations greater than the RL and greater than 1/10 the sample amounts in the TCLP method blank. LBM 5/24/19



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
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
BA	Analyte found in reagent blank is = RL AND is > 1/10 the amount of the sample.
C	Analyte was verified by re-analysis.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
E	Estimated reported value exceeded calibration range.
F	Water Field Group (WFG) qualifier; see comments for more information
FA	Field results were reviewed by the Water Field Group.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
J	Reported value is an estimate because concentration is less than reporting limit.
K	No MB or LCS were submitted with the sample for dissolved analysis.
L	Check standard is outside of specification limit.
LA	Analyte recovery in the check standard was above specification limit. Results may be biased high.
LL	Analyte recovery in the check standard was below specification limit. Results may be biased low.
M	LOQ verification analyzed with batch was outside of specification limit.
N	Organic constituents tentatively identified. Confirmation is needed.
P	Precision is out of specification limit.
R	Matrix spike recovery or matrix spike duplicate recovery is outside of specification limit.
RA	Matrix spike is invalid due to sample concentration.
S	Surrogate recovery is outside of specification limit.
T	Sample temperature is outside of specification limit.
U	Compound was analyzed, but not detected.

**Chain of Custody
Sample Analysis Request**
General Test Laboratory, G.S.C. 8



Requested Completion Date Routine Results To: Greg Pyer Ext. _____

(Explain) _____ Dustin Brooks

Dept. No. 4004D

Site Representative Chey George Requested By Greg Pyer

Collector(s) N. Pitts Date Sampled 4-23-19 Time 1400 AM PM

Location of Sampling (Name of Facility, etc) Gorges Gypsum Storage WNWGOR G-1208

Analyses Requested
TCLP RCRA 8 (but no Ag) WNWGOR G-1208 TCLP
SPLP RCRA 8 (but no Ag) WNWGOR G-1208 SPLP

Special Handling and/or Storage Relinquished to Dallas Gentry @ 4-23-19/1455 for transport Dallas Gentry 4/24/19 0711

Relinquished By Greg Pyer Date/Time 4-23-19/1420 Received By Rauna Midkiff Date/Time 4/24/19 0711

Sample No.	Field Information (Sample Description, Date, Etc.)	* Lab ID
G-1	TCLP Gypsum sample collected off of pile @ old Gypsum storage area @ 1400	AZ10368
G-1	SPLP Gypsum sample collected off of pile @ old Gypsum storage area @ 1400	AZ10369

* For General Lab Use Only

NOTE: See instructions on reverse side.
Shaded areas used when chain of custody is required.

Alabama Power General Test Laboratory
744 County Road 87, GSC#8
Calera, AL 35040
(205) 664-6247 or 6171
FAX (205) 664-6108

Analytical Report



Sample Group : WMWGORG_1208SPLP

Project/Site : Gorgas Gypsum
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) 807-2676

The following data has been reviewed and approved by:

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: 2019.06.06 15:12:09 -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: 2019.06.07 09:09:07 -05'00'



SPLP Extraction

Gorgas Gypsum

WMWGORG_1208SPLP

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ10369	645425	WMWGORG_1208SPLP

4. All of the above samples were prepared by EPA 1312 and WI 19200.
5. All samples were prepared within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- Particle size reduction was not required.
- Percentage of dry solids was determined.
- pH meter was calibrated and verified. All acceptance criteria were met.
- pH of LCS buffer was performed. All acceptance criteria were met.
- Fluid used for extraction was within acceptable pH range.
- All samples were extracted with Fluid #1 per EPA 1312.
- Sample extraction time requirements were met.
- Room temperature requirements during extraction were met.
- Appropriate number of MS/MSD prepared per extraction fluids.
- Appropriate fluid blanks were prepared.
- Samples acidified to a pH of less than 2 after spiking for MS and MSD.
- Spiking was complete within 15 min of filtration.



Metals ICPMS

Gorgas Gypsum

WMWGORG_1208SPLP

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ10369	646199	WMWGORG_1208SPLP

4. All of the above samples were analyzed by EPA 200.8 and prepared by EPA 1638.
5. All samples were analyzed and prepared 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 SPLP method blank associated with the SPLP prep passed, except for the Barium.
- 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. All samples were analyzed at a x5.075 dilution to compensate for potential matrix effects.
 8. The raw data results are shown with dilution factors included.



Mercury

Gorgas Gypsum

WMWGORG_1208SPLP

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ10369	645581	WMWGORG_1208SPLP

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
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 23-Apr-19
 Customer ID:
 Delivery Date: 24-Apr-19

Description: Gorgas Gypsum - G-1

Laboratory ID Number: AZ10369

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Pesticides									
Date Extracted	RDA	5/2/2019	EPA 1312		1	DATE		5/2/2019	DATE
Metals, Cyanide, Total Phenols									
* Arsenic, Total	DLJ	5/3/2019	EPA 200.8		5.075	0.001	0.005	J 0.00136	mg/L
* Barium, Total	DLJ	5/8/2019	EPA 200.8		5.075	0.002	0.01	0.0163	mg/L
* Cadmium, Total	DLJ	5/8/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Chromium, Total	DLJ	5/3/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	5/6/2019	EPA 245.1		1.01	0.000303	0.000505	U Not Detected	mg/L
* Lead, Total	DLJ	5/3/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/3/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
General Characteristics									
SPLP Extraction Fluid#	RDA	5/2/2019	EPA 1312		1			1	
pH of Extraction Fluid	RDA	5/2/2019	EPA 1312		1		4.00	4.25	
Solids Content of Sample	RDA	5/2/2019	EPA 1312		1	0.01		100	%

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Barium results are qualified due to analyte was found at concentrations greater than the RL and greater than 1/10 the sample amounts in the SPLP method blank. LBM 5/24/19

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 23-Apr-19
 Customer ID:
 Delivery Date: 24-Apr-19

Description: Gorgas Gypsum - G-1

Laboratory ID Number: AZ10369

Sample	Analysis	Units	MB		Spike	MS	MSD	LCS	LCS		Rec		Prec
			Limit	MB					Limit	Rec	Limit	Prec	
AZ10369	Arsenic, Total	mg/L	0.000570	0.0022	0.10	0.0985	0.0970	0.0969	0.085 to 0.115	97.1	70 to 130	1.54	20
AZ10369	Barium, Total	mg/L	0.00573	0.0044	0.10	0.111	0.106	0.0921	0.085 to 0.115	94.2	70 to 130	3.92	20
AZ10369	Cadmium, Total	mg/L	0.00000145	0.00066	0.10	0.0914	0.0884	0.0900	0.085 to 0.115	91.4	70 to 130	3.32	20
AZ10369	Chromium, Total	mg/L	0.000147	0.0044	0.10	0.0948	0.0954	0.0966	0.085 to 0.115	94.8	70 to 130	0.560	20
AZ10369	Mercury, Total by CVAA	mg/L	0.000199	0.0005	0.004	0.00303	0.00309	0.00403	0.0034 to 0.0046	75.7	70 to 130	2.07	20
AZ10369	Lead, Total	mg/L	0.0000142	0.0022	0.10	0.100	0.100	0.105	0.085 to 0.115	100	70 to 130	0.138	20
AZ10369	Selenium, Total	mg/L	0.000189	0.0044	0.10	0.0943	0.0939	0.0999	0.085 to 0.115	94.3	70 to 130	0.472	20
AZ10369	pH of Extraction Fluid							7.01	6.95 to 7.05	100	98 to 102		

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Barium results are qualified due to analyte was found at concentrations greater than the RL and greater than 1/10 the sample amounts in the SPLP method blank. LBM 5/24/19



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
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
BA	Analyte found in reagent blank is = RL AND is > 1/10 the amount of the sample.
C	Analyte was verified by re-analysis.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
E	Estimated reported value exceeded calibration range.
F	Water Field Group (WFG) qualifier; see comments for more information
FA	Field results were reviewed by the Water Field Group.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
J	Reported value is an estimate because concentration is less than reporting limit.
K	No MB or LCS were submitted with the sample for dissolved analysis.
L	Check standard is outside of specification limit.
LA	Analyte recovery in the check standard was above specification limit. Results may be biased high.
LL	Analyte recovery in the check standard was below specification limit. Results may be biased low.
M	LOQ verification analyzed with batch was outside of specification limit.
N	Organic constituents tentatively identified. Confirmation is needed.
P	Precision is out of specification limit.
R	Matrix spike recovery or matrix spike duplicate recovery is outside of specification limit.
RA	Matrix spike is invalid due to sample concentration.
S	Surrogate recovery is outside of specification limit.
T	Sample temperature is outside of specification limit.
U	Compound was analyzed, but not detected.

Chain of Custody
Sample Analysis Request
 General Test Laboratory, G.S.C. 8



Requested Completion Date Routine

Results To: Greg Pyer Ext. _____

(Explain) _____

Dustin Brooks

Dept. No. 4004D

Site Representative <u>Chey George</u>	Requested By <u>Greg Pyer</u>
Collector(s) <u>N. Pitts</u>	Date Sampled <u>4-23-19</u>
Location of Sampling (Name of Facility, etc.) <u>Gorges Gypsum Storage WMWGORG-1208</u>	

Time 1400 AM PM

Analyses Requested
TCLP RCRA 8 (but no Ag) WMWGORG-1208 TCLP
SPLP RCRA 8 (but no Ag) WMWGORG-1208 SPLP

Special Handling and/or Storage
Relinquished to Dallas Gentry @ 4-23-19/1455 for transport *Dallas Gentry* 4/24/19 0711

Relinquished By <u>Mad Per</u>	Date/Time <u>4-23-19/1420</u>	Received By <u>Rauna Miduff</u>	Date/Time <u>4/24/19 0711</u>
-----------------------------------	----------------------------------	------------------------------------	----------------------------------

Sample No.	Field Information (Sample Description, Date, Etc.)	* Lab ID
<u>G-1</u>	<u>TCLP Gypsum sample collected off of pile @ Old Gypsum Storage area @ 1400</u>	<u>AZ10368</u>
<u>G-1</u>	<u>SPLP Gypsum sample collected off of pile @ old gypsum storage area @ 1400</u>	<u>AZ10369</u>

* For General Lab Use Only

NOTE: See instructions on reverse side.
 Shaded areas used when chain of custody is required.

ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-166992-1
Laboratory Sample Delivery Group: Gorgas Gypsum 1208
Client Project/Site: CCR Plant Gorgas

For:
Alabama Power General Test Laboratory
744 County Rd 87
GSC #8
Calera, Alabama 35040

Attn: Laura Midkiff



Authorized for release by:
4/23/2019 3:22:40 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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



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Case Narrative

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
SDG: Gorgas Gypsum 1208

Job ID: 400-166992-1

Laboratory: Eurofins TestAmerica, Pensacola

Narrative

Job Narrative 400-166992-1

RAD

Method(s) 9315: Radium-226 Prep Batch 160-421329. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ05847 MW-11H (400-166992-1), AZ05848 MW-11H DUP (400-166992-2), AZ05849 EB-1 (400-166992-3), AZ05850 MW-4V (400-166992-4), AZ05851 MW-3V (400-166992-5), AZ05852 MW-9H (400-166992-6), AZ05852 MW-9H (400-166992-6[DU]), AZ05853 FB-1 (400-166992-7), (LCS 160-421329/1-A) and (MB 160-421329/24-A)

Method(s) 9320: Ra-228 Prep Batch 160-421330. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ05847 MW-11H (400-166992-1), AZ05848 MW-11H DUP (400-166992-2), AZ05849 EB-1 (400-166992-3), AZ05850 MW-4V (400-166992-4), AZ05851 MW-3V (400-166992-5), AZ05852 MW-9H (400-166992-6), AZ05852 MW-9H (400-166992-6[DU]), AZ05853 FB-1 (400-166992-7), (LCS 160-421330/1-A) and (MB 160-421330/24-A)

Method Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
SDG: Gorgas Gypsum 1208

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
SDG: Gorgas Gypsum 1208

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-166992-1	AZ05847 MW-11H	Water	03/04/19 13:30	03/07/19 14:00
400-166992-2	AZ05848 MW-11H DUP	Water	03/04/19 13:30	03/07/19 14:00
400-166992-3	AZ05849 EB-1	Water	03/04/19 14:05	03/07/19 14:00
400-166992-4	AZ05850 MW-4V	Water	03/05/19 09:55	03/07/19 14:00
400-166992-5	AZ05851 MW-3V	Water	03/05/19 13:27	03/07/19 14:00
400-166992-6	AZ05852 MW-9H	Water	03/05/19 15:13	03/07/19 14:00
400-166992-7	AZ05853 FB-1	Water	03/05/19 15:50	03/07/19 14:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Client Sample ID: AZ05847 MW-11H

Lab Sample ID: 400-166992-1

Date Collected: 03/04/19 13:30

Matrix: Water

Date Received: 03/07/19 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0402	U	0.0502	0.0503	1.00	0.0823	pCi/L	03/26/19 17:36	04/17/19 21:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					03/26/19 17:36	04/17/19 21:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0951	U	0.261	0.261	1.00	0.452	pCi/L	03/26/19 18:03	04/02/19 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					03/26/19 18:03	04/02/19 16:01	1
Y Carrier	81.1		40 - 110					03/26/19 18:03	04/02/19 16:01	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.135	U	0.266	0.266	5.00	0.452	pCi/L		04/22/19 13:05	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Client Sample ID: AZ05848 MW-11H DUP

Lab Sample ID: 400-166992-2

Date Collected: 03/04/19 13:30

Matrix: Water

Date Received: 03/07/19 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00299	U	0.0385	0.0385	1.00	0.0877	pCi/L	03/26/19 17:36	04/17/19 21:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					03/26/19 17:36	04/17/19 21:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.159	U	0.285	0.286	1.00	0.486	pCi/L	03/26/19 18:03	04/02/19 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					03/26/19 18:03	04/02/19 16:01	1
Y Carrier	76.3		40 - 110					03/26/19 18:03	04/02/19 16:01	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.156	U	0.288	0.289	5.00	0.486	pCi/L		04/22/19 13:05	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Client Sample ID: AZ05849 EB-1

Lab Sample ID: 400-166992-3

Date Collected: 03/04/19 14:05

Matrix: Water

Date Received: 03/07/19 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0202	U	0.0484	0.0485	1.00	0.111	pCi/L	03/26/19 17:36	04/17/19 21:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					03/26/19 17:36	04/17/19 21:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0274	U	0.248	0.248	1.00	0.445	pCi/L	03/26/19 18:03	04/02/19 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					03/26/19 18:03	04/02/19 16:01	1
Y Carrier	75.5		40 - 110					03/26/19 18:03	04/02/19 16:01	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.00716	U	0.253	0.253	5.00	0.445	pCi/L		04/22/19 13:05	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Client Sample ID: AZ05850 MW-4V

Lab Sample ID: 400-166992-4

Date Collected: 03/05/19 09:55

Matrix: Water

Date Received: 03/07/19 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0787	U	0.0666	0.0670	1.00	0.0981	pCi/L	03/26/19 17:36	04/17/19 21:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.4		40 - 110					03/26/19 17:36	04/17/19 21:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.285	U	0.335	0.336	1.00	0.552	pCi/L	03/26/19 18:03	04/02/19 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.4		40 - 110					03/26/19 18:03	04/02/19 16:01	1
Y Carrier	72.9		40 - 110					03/26/19 18:03	04/02/19 16:01	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.364	U	0.342	0.343	5.00	0.552	pCi/L		04/22/19 13:05	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Client Sample ID: AZ05851 MW-3V

Lab Sample ID: 400-166992-5

Date Collected: 03/05/19 13:27

Matrix: Water

Date Received: 03/07/19 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.277		0.0934	0.0967	1.00	0.0799	pCi/L	03/26/19 17:36	04/17/19 21:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					03/26/19 17:36	04/17/19 21:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.656		0.308	0.313	1.00	0.442	pCi/L	03/26/19 18:03	04/02/19 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					03/26/19 18:03	04/02/19 16:01	1
Y Carrier	78.1		40 - 110					03/26/19 18:03	04/02/19 16:01	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.932		0.322	0.328	5.00	0.442	pCi/L		04/22/19 13:05	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Client Sample ID: AZ05852 MW-9H

Lab Sample ID: 400-166992-6

Date Collected: 03/05/19 15:13

Matrix: Water

Date Received: 03/07/19 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.365		0.103	0.108	1.00	0.0684	pCi/L	03/26/19 17:36	04/17/19 21:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/26/19 17:36	04/17/19 21:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.487		0.281	0.285	1.00	0.422	pCi/L	03/26/19 18:03	04/02/19 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/26/19 18:03	04/02/19 16:01	1
Y Carrier	80.0		40 - 110					03/26/19 18:03	04/02/19 16:01	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.852		0.299	0.305	5.00	0.422	pCi/L		04/22/19 13:05	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Client Sample ID: AZ05853 FB-1

Lab Sample ID: 400-166992-7

Date Collected: 03/05/19 15:50

Matrix: Water

Date Received: 03/07/19 14:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0596	U	0.0506	0.0509	1.00	0.0721	pCi/L	03/26/19 17:36	04/17/19 21:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					03/26/19 17:36	04/17/19 21:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0161	U	0.193	0.193	1.00	0.350	pCi/L	03/26/19 18:03	04/02/19 16:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					03/26/19 18:03	04/02/19 16:02	1
Y Carrier	81.1		40 - 110					03/26/19 18:03	04/02/19 16:02	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0758	U	0.200	0.200	5.00	0.350	pCi/L		04/22/19 13:05	1

Definitions/Glossary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
SDG: Gorgas Gypsum 1208

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Client Sample ID: AZ05847 MW-11H

Lab Sample ID: 400-166992-1

Date Collected: 03/04/19 13:30

Matrix: Water

Date Received: 03/07/19 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			421329	03/26/19 17:36	CLP	TAL SL
Total/NA	Analysis	9315		1	424264	04/17/19 21:02	BLH	TAL SL
Total/NA	Prep	PrecSep_0			421330	03/26/19 18:03	CLP	TAL SL
Total/NA	Analysis	9320		1	422365	04/02/19 16:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	424957	04/22/19 13:05	CDR	TAL SL

Client Sample ID: AZ05848 MW-11H DUP

Lab Sample ID: 400-166992-2

Date Collected: 03/04/19 13:30

Matrix: Water

Date Received: 03/07/19 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			421329	03/26/19 17:36	CLP	TAL SL
Total/NA	Analysis	9315		1	424264	04/17/19 21:03	BLH	TAL SL
Total/NA	Prep	PrecSep_0			421330	03/26/19 18:03	CLP	TAL SL
Total/NA	Analysis	9320		1	422365	04/02/19 16:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	424957	04/22/19 13:05	CDR	TAL SL

Client Sample ID: AZ05849 EB-1

Lab Sample ID: 400-166992-3

Date Collected: 03/04/19 14:05

Matrix: Water

Date Received: 03/07/19 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			421329	03/26/19 17:36	CLP	TAL SL
Total/NA	Analysis	9315		1	424264	04/17/19 21:03	BLH	TAL SL
Total/NA	Prep	PrecSep_0			421330	03/26/19 18:03	CLP	TAL SL
Total/NA	Analysis	9320		1	422365	04/02/19 16:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	424957	04/22/19 13:05	CDR	TAL SL

Client Sample ID: AZ05850 MW-4V

Lab Sample ID: 400-166992-4

Date Collected: 03/05/19 09:55

Matrix: Water

Date Received: 03/07/19 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			421329	03/26/19 17:36	CLP	TAL SL
Total/NA	Analysis	9315		1	424310	04/17/19 21:06	BLH	TAL SL
Total/NA	Prep	PrecSep_0			421330	03/26/19 18:03	CLP	TAL SL
Total/NA	Analysis	9320		1	422365	04/02/19 16:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	424957	04/22/19 13:05	CDR	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Client Sample ID: AZ05851 MW-3V

Lab Sample ID: 400-166992-5

Date Collected: 03/05/19 13:27

Matrix: Water

Date Received: 03/07/19 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			421329	03/26/19 17:36	CLP	TAL SL
Total/NA	Analysis	9315		1	424310	04/17/19 21:06	BLH	TAL SL
Total/NA	Prep	PrecSep_0			421330	03/26/19 18:03	CLP	TAL SL
Total/NA	Analysis	9320		1	422365	04/02/19 16:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	424957	04/22/19 13:05	CDR	TAL SL

Client Sample ID: AZ05852 MW-9H

Lab Sample ID: 400-166992-6

Date Collected: 03/05/19 15:13

Matrix: Water

Date Received: 03/07/19 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			421329	03/26/19 17:36	CLP	TAL SL
Total/NA	Analysis	9315		1	424310	04/17/19 21:07	BLH	TAL SL
Total/NA	Prep	PrecSep_0			421330	03/26/19 18:03	CLP	TAL SL
Total/NA	Analysis	9320		1	422365	04/02/19 16:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	424957	04/22/19 13:05	CDR	TAL SL

Client Sample ID: AZ05853 FB-1

Lab Sample ID: 400-166992-7

Date Collected: 03/05/19 15:50

Matrix: Water

Date Received: 03/07/19 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			421329	03/26/19 17:36	CLP	TAL SL
Total/NA	Analysis	9315		1	424310	04/17/19 21:07	BLH	TAL SL
Total/NA	Prep	PrecSep_0			421330	03/26/19 18:03	CLP	TAL SL
Total/NA	Analysis	9320		1	422365	04/02/19 16:02	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	424957	04/22/19 13:05	CDR	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
SDG: Gorgas Gypsum 1208

Rad

Prep Batch: 421329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166992-1	AZ05847 MW-11H	Total/NA	Water	PrecSep-21	
400-166992-2	AZ05848 MW-11H DUP	Total/NA	Water	PrecSep-21	
400-166992-3	AZ05849 EB-1	Total/NA	Water	PrecSep-21	
400-166992-4	AZ05850 MW-4V	Total/NA	Water	PrecSep-21	
400-166992-5	AZ05851 MW-3V	Total/NA	Water	PrecSep-21	
400-166992-6	AZ05852 MW-9H	Total/NA	Water	PrecSep-21	
400-166992-7	AZ05853 FB-1	Total/NA	Water	PrecSep-21	
MB 160-421329/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-421329/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-166992-6 DU	AZ05852 MW-9H	Total/NA	Water	PrecSep-21	

Prep Batch: 421330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166992-1	AZ05847 MW-11H	Total/NA	Water	PrecSep_0	
400-166992-2	AZ05848 MW-11H DUP	Total/NA	Water	PrecSep_0	
400-166992-3	AZ05849 EB-1	Total/NA	Water	PrecSep_0	
400-166992-4	AZ05850 MW-4V	Total/NA	Water	PrecSep_0	
400-166992-5	AZ05851 MW-3V	Total/NA	Water	PrecSep_0	
400-166992-6	AZ05852 MW-9H	Total/NA	Water	PrecSep_0	
400-166992-7	AZ05853 FB-1	Total/NA	Water	PrecSep_0	
MB 160-421330/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-421330/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-166992-6 DU	AZ05852 MW-9H	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-421329/24-A
Matrix: Water
Analysis Batch: 424263

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 421329

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.006982	U	0.0478	0.0478	1.00	0.0946	pCi/L	03/26/19 17:36	04/17/19 21:09	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba Carrier	99.1		40 - 110			03/26/19 17:36	04/17/19 21:09	1		

Lab Sample ID: LCS 160-421329/1-A
Matrix: Water
Analysis Batch: 424264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 421329

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.558		1.00	1.00	0.0791	pCi/L	84	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	90.9		40 - 110						

Lab Sample ID: 400-166992-6 DU
Matrix: Water
Analysis Batch: 424310

Client Sample ID: AZ05852 MW-9H
Prep Type: Total/NA
Prep Batch: 421329

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.365		0.2607		0.0955	1.00	0.0843	pCi/L	0.51	1
Carrier	DU %Yield	DU Qualifier	Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	89.1		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-421330/24-A
Matrix: Water
Analysis Batch: 422380

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 421330

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1904	U	0.234	0.235	1.00	0.388	pCi/L	03/26/19 18:03	04/02/19 15:51	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba Carrier	99.1		40 - 110			03/26/19 18:03	04/02/19 15:51	1		
Y Carrier	82.2		40 - 110			03/26/19 18:03	04/02/19 15:51	1		

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-421330/1-A
Matrix: Water
Analysis Batch: 422416

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 421330

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.34	8.726		1.09	1.00	0.461	pCi/L	93	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.9		40 - 110
Y Carrier	74.4		40 - 110

Lab Sample ID: 400-166992-6 DU
Matrix: Water
Analysis Batch: 422365

Client Sample ID: AZ05852 MW-9H
Prep Type: Total/NA
Prep Batch: 421330

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.487		0.4352	U	0.290	1.00	0.441	pCi/L	0.09	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	89.1		40 - 110
Y Carrier	77.4		40 - 110

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-166992-6 DU
Matrix: Water
Analysis Batch: 424957

Client Sample ID: AZ05852 MW-9H
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.852		0.6959		0.305	5.00	0.441	pCi/L	0.26	

TestAmerica Pensacola
 3355 McLeimore Drive
 Pensacola, FL 32514
 Phone: (850) 474-7001 Fax: (850) 478-2671

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Sampler: Ben Rothschild Client Contact: Laura Midkiff Company: Alabama Power General Test Laboratory Address: 744 County Rd 87, GSC #8 City: Callera State, Zip: AL, 35040 Phone: 205-664-6197(Tel) Email: bmidkiff@southernco.com Project Name: Gorgas Gypsum 1208 COR: 40007143 SOW#:		Lab PM: Whitmire, Chyenne R. E-Mail: chyenne.whitmire@testamericainc.com Carrier Tracking No(s):					
Due Date Requested: TAT Requested (days): Routine PO #:		COC No: 400-56525-24537.1 Page: Page 1 of 1 Job #:					
Analysis Requested							
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)					
SM 4500 F_C SM 4500 CL_E SM 4500 SQA_F 9315_Ra226, 9320_Ra228, Ra228Ra228_GFP_C		Total Number of Containers					
Sample Identification		Special Instructions/Note:					
AZ05847	3/4/19	13:30	G	Water	1	MW-11H	
AZ05848	3/4/19	13:30	G	Water	1	MW-11H Dup (Sample Duplicate)	
AZ05849	3/4/19	14:05	G	Water	1	EB-1 (Equipment Blank)	
AZ05850	3/5/19	09:55	G	Water	1	MW-4V	
AZ05851	3/5/19	13:27	G	Water	1	MW-3V	
AZ05852	3/5/19	15:13	G	Water	3	MW-8H	
AZ05853	3/5/19	15:50	G	Water	1	FB-1 (Field Blank)	



Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: Laura Midkiff
 Relinquished by: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Received by: *Kathy Owen* Date/Time: 3-7-19 1400 Company: *APC*
 Received by: _____ Date/Time: _____ Company: _____
 Received by: _____ Date/Time: _____ Company: _____
 Cooler Temperature(s) °C and Other Remarks: 14.0°C FC



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-166992-1
SDG Number: Gorgas Gypsum 1208

Login Number: 166992

List Number: 1

Creator: Perez, Trina M

List Source: Eurofins TestAmerica, Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	14.0°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-166992-1
SDG Number: Gorgas Gypsum 1208

Login Number: 166992

List Number: 2

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 03/11/19 08:40 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	20.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Laboratory: Eurofins TestAmerica, Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	07-31-19

Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-166992-1
 SDG: Gorgas Gypsum 1208

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD / DOE		L2305	04-06-22
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-19 *
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-19 *
Hawaii	State Program	9	NA	06-30-19
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19 *
New York	NELAP	2	11616	03-31-20
North Dakota	State Program	8	R207	06-30-19 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-13	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19 *
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

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

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-11H	3/4/2019 12:48	Conductivity	1535.4	uS/cm
GS-GSA-MW-11H	3/4/2019 12:48	DO	0.24	mg/L
GS-GSA-MW-11H	3/4/2019 12:48	Depth to Water Detail	7.17	ft
GS-GSA-MW-11H	3/4/2019 12:48	Oxidation Reduction Potention	44.6	mv
GS-GSA-MW-11H	3/4/2019 12:48	pH	6.05	pH
GS-GSA-MW-11H	3/4/2019 12:48	Temperature	18.44	C
GS-GSA-MW-11H	3/4/2019 12:48	Turbidity	69.2	NTU
GS-GSA-MW-11H	3/4/2019 12:53	Conductivity	1505.4	uS/cm
GS-GSA-MW-11H	3/4/2019 12:53	DO	0.19	mg/L
GS-GSA-MW-11H	3/4/2019 12:53	Depth to Water Detail	7.38	ft
GS-GSA-MW-11H	3/4/2019 12:53	Oxidation Reduction Potention	37.8	mv
GS-GSA-MW-11H	3/4/2019 12:53	pH	6.05	pH
GS-GSA-MW-11H	3/4/2019 12:53	Temperature	18.57	C
GS-GSA-MW-11H	3/4/2019 12:53	Turbidity	40.1	NTU
GS-GSA-MW-11H	3/4/2019 12:58	Conductivity	1480.1	uS/cm
GS-GSA-MW-11H	3/4/2019 12:58	DO	0.16	mg/L
GS-GSA-MW-11H	3/4/2019 12:58	Depth to Water Detail	7.51	ft
GS-GSA-MW-11H	3/4/2019 12:58	Oxidation Reduction Potention	35.6	mv
GS-GSA-MW-11H	3/4/2019 12:58	pH	6.04	pH
GS-GSA-MW-11H	3/4/2019 12:58	Temperature	18.82	C
GS-GSA-MW-11H	3/4/2019 12:58	Turbidity	26.6	NTU
GS-GSA-MW-11H	3/4/2019 13:03	Conductivity	1463.6	uS/cm
GS-GSA-MW-11H	3/4/2019 13:03	DO	0.14	mg/L
GS-GSA-MW-11H	3/4/2019 13:03	Depth to Water Detail	7.6	ft
GS-GSA-MW-11H	3/4/2019 13:03	Oxidation Reduction Potention	34.2	mv
GS-GSA-MW-11H	3/4/2019 13:03	pH	6.04	pH
GS-GSA-MW-11H	3/4/2019 13:03	Temperature	19.43	C
GS-GSA-MW-11H	3/4/2019 13:03	Turbidity	13.2	NTU
GS-GSA-MW-11H	3/4/2019 13:08	Conductivity	1443.2	uS/cm
GS-GSA-MW-11H	3/4/2019 13:08	DO	0.13	mg/L
GS-GSA-MW-11H	3/4/2019 13:08	Depth to Water Detail	7.65	ft
GS-GSA-MW-11H	3/4/2019 13:08	Oxidation Reduction Potention	34.3	mv
GS-GSA-MW-11H	3/4/2019 13:08	pH	6.03	pH
GS-GSA-MW-11H	3/4/2019 13:08	Temperature	19.28	C
GS-GSA-MW-11H	3/4/2019 13:08	Turbidity	13.26	NTU
GS-GSA-MW-11H	3/4/2019 13:13	Conductivity	1434.2	uS/cm
GS-GSA-MW-11H	3/4/2019 13:13	DO	0.12	mg/L
GS-GSA-MW-11H	3/4/2019 13:13	Depth to Water Detail	7.68	ft
GS-GSA-MW-11H	3/4/2019 13:13	Oxidation Reduction Potention	33.7	mv
GS-GSA-MW-11H	3/4/2019 13:13	pH	6.04	pH
GS-GSA-MW-11H	3/4/2019 13:13	Temperature	19.46	C
GS-GSA-MW-11H	3/4/2019 13:13	Turbidity	9.32	NTU
GS-GSA-MW-11H	3/4/2019 13:18	Conductivity	1419.5	uS/cm
GS-GSA-MW-11H	3/4/2019 13:18	DO	0.11	mg/L
GS-GSA-MW-11H	3/4/2019 13:18	Depth to Water Detail	7.72	ft
GS-GSA-MW-11H	3/4/2019 13:18	Oxidation Reduction Potention	33	mv
GS-GSA-MW-11H	3/4/2019 13:18	pH	6.04	pH

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-11H	3/4/2019 13:18	Temperature	19.6	C
GS-GSA-MW-11H	3/4/2019 13:18	Turbidity	6.62	NTU
GS-GSA-MW-11H	3/4/2019 13:23	Conductivity	1407.2	uS/cm
GS-GSA-MW-11H	3/4/2019 13:23	DO	0.11	mg/L
GS-GSA-MW-11H	3/4/2019 13:23	Depth to Water Detail	7.74	ft
GS-GSA-MW-11H	3/4/2019 13:23	Oxidation Reduction Potention	33	mv
GS-GSA-MW-11H	3/4/2019 13:23	pH	6.04	pH
GS-GSA-MW-11H	3/4/2019 13:23	Temperature	19.62	C
GS-GSA-MW-11H	3/4/2019 13:23	Turbidity	5.24	NTU
GS-GSA-MW-11H	3/4/2019 13:28	Conductivity	1415.3	uS/cm
GS-GSA-MW-11H	3/4/2019 13:28	DO	0.11	mg/L
GS-GSA-MW-11H	3/4/2019 13:28	Depth to Water Detail	7.75	ft
GS-GSA-MW-11H	3/4/2019 13:28	Oxidation Reduction Potention	32.9	mv
GS-GSA-MW-11H	3/4/2019 13:28	pH	6.04	pH
GS-GSA-MW-11H	3/4/2019 13:28	Temperature	19.5	C
GS-GSA-MW-11H	3/4/2019 13:28	Turbidity	4.58	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-4V	3/5/2019 9:38	Conductivity	1967.9	uS/cm
GS-GSA-MW-4V	3/5/2019 9:38	DO	0.45	mg/L
GS-GSA-MW-4V	3/5/2019 9:38	Depth to Water Detail	109.26	ft
GS-GSA-MW-4V	3/5/2019 9:38	Oxidation Reduction Potention	-17.5	mv
GS-GSA-MW-4V	3/5/2019 9:38	pH	6.19	pH
GS-GSA-MW-4V	3/5/2019 9:38	Temperature	18.61	C
GS-GSA-MW-4V	3/5/2019 9:38	Turbidity	5.89	NTU
GS-GSA-MW-4V	3/5/2019 9:43	Conductivity	1965.9	uS/cm
GS-GSA-MW-4V	3/5/2019 9:43	DO	0.4	mg/L
GS-GSA-MW-4V	3/5/2019 9:43	Depth to Water Detail	109.26	ft
GS-GSA-MW-4V	3/5/2019 9:43	Oxidation Reduction Potention	-19.5	mv
GS-GSA-MW-4V	3/5/2019 9:43	pH	6.2	pH
GS-GSA-MW-4V	3/5/2019 9:43	Temperature	18.43	C
GS-GSA-MW-4V	3/5/2019 9:43	Turbidity	4.83	NTU
GS-GSA-MW-4V	3/5/2019 9:48	Conductivity	1966.4	uS/cm
GS-GSA-MW-4V	3/5/2019 9:48	DO	0.34	mg/L
GS-GSA-MW-4V	3/5/2019 9:48	Depth to Water Detail	109.26	ft
GS-GSA-MW-4V	3/5/2019 9:48	Oxidation Reduction Potention	-20.5	mv
GS-GSA-MW-4V	3/5/2019 9:48	pH	6.19	pH
GS-GSA-MW-4V	3/5/2019 9:48	Temperature	18.79	C
GS-GSA-MW-4V	3/5/2019 9:48	Turbidity	4.17	NTU
GS-GSA-MW-4V	3/5/2019 9:53	Conductivity	1963.2	uS/cm
GS-GSA-MW-4V	3/5/2019 9:53	DO	0.33	mg/L
GS-GSA-MW-4V	3/5/2019 9:53	Depth to Water Detail	109.26	ft
GS-GSA-MW-4V	3/5/2019 9:53	Oxidation Reduction Potention	-20.7	mv
GS-GSA-MW-4V	3/5/2019 9:53	pH	6.19	pH
GS-GSA-MW-4V	3/5/2019 9:53	Temperature	18.84	C
GS-GSA-MW-4V	3/5/2019 9:53	Turbidity	3.21	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3V	3/5/2019 11:10	Conductivity	3012.7	uS/cm
GS-GSA-MW-3V	3/5/2019 11:10	DO	1.28	mg/L
GS-GSA-MW-3V	3/5/2019 11:10	Depth to Water Detail	117.5	ft
GS-GSA-MW-3V	3/5/2019 11:10	Oxidation Reduction Potention	-33.1	mv
GS-GSA-MW-3V	3/5/2019 11:10	pH	6.56	pH
GS-GSA-MW-3V	3/5/2019 11:10	Temperature	17.99	C
GS-GSA-MW-3V	3/5/2019 11:10	Turbidity	3.83	NTU
GS-GSA-MW-3V	3/5/2019 11:15	Conductivity	2991.5	uS/cm
GS-GSA-MW-3V	3/5/2019 11:15	DO	0.76	mg/L
GS-GSA-MW-3V	3/5/2019 11:15	Depth to Water Detail	118.1	ft
GS-GSA-MW-3V	3/5/2019 11:15	Oxidation Reduction Potention	-35.3	mv
GS-GSA-MW-3V	3/5/2019 11:15	pH	6.52	pH
GS-GSA-MW-3V	3/5/2019 11:15	Temperature	18.3	C
GS-GSA-MW-3V	3/5/2019 11:15	Turbidity	3.86	NTU
GS-GSA-MW-3V	3/5/2019 11:20	Conductivity	2940.4	uS/cm
GS-GSA-MW-3V	3/5/2019 11:20	DO	0.57	mg/L
GS-GSA-MW-3V	3/5/2019 11:20	Depth to Water Detail	118.5	ft
GS-GSA-MW-3V	3/5/2019 11:20	Oxidation Reduction Potention	-36.5	mv
GS-GSA-MW-3V	3/5/2019 11:20	pH	6.52	pH
GS-GSA-MW-3V	3/5/2019 11:20	Temperature	18.13	C
GS-GSA-MW-3V	3/5/2019 11:20	Turbidity	4.8	NTU
GS-GSA-MW-3V	3/5/2019 11:25	Conductivity	2939.8	uS/cm
GS-GSA-MW-3V	3/5/2019 11:25	DO	0.48	mg/L
GS-GSA-MW-3V	3/5/2019 11:25	Depth to Water Detail	119.06	ft
GS-GSA-MW-3V	3/5/2019 11:25	Oxidation Reduction Potention	-37.2	mv
GS-GSA-MW-3V	3/5/2019 11:25	pH	6.53	pH
GS-GSA-MW-3V	3/5/2019 11:25	Temperature	18.03	C
GS-GSA-MW-3V	3/5/2019 11:25	Turbidity	6.29	NTU
GS-GSA-MW-3V	3/5/2019 11:30	Conductivity	2960.7	uS/cm
GS-GSA-MW-3V	3/5/2019 11:30	DO	0.44	mg/L
GS-GSA-MW-3V	3/5/2019 11:30	Depth to Water Detail	119.44	ft
GS-GSA-MW-3V	3/5/2019 11:30	Oxidation Reduction Potention	-38.2	mv
GS-GSA-MW-3V	3/5/2019 11:30	pH	6.52	pH
GS-GSA-MW-3V	3/5/2019 11:30	Temperature	18.26	C
GS-GSA-MW-3V	3/5/2019 11:30	Turbidity	10.09	NTU
GS-GSA-MW-3V	3/5/2019 11:35	Conductivity	2942.6	uS/cm
GS-GSA-MW-3V	3/5/2019 11:35	DO	0.41	mg/L
GS-GSA-MW-3V	3/5/2019 11:35	Depth to Water Detail	119.98	ft
GS-GSA-MW-3V	3/5/2019 11:35	Oxidation Reduction Potention	-38.6	mv
GS-GSA-MW-3V	3/5/2019 11:35	pH	6.53	pH
GS-GSA-MW-3V	3/5/2019 11:35	Temperature	18.12	C
GS-GSA-MW-3V	3/5/2019 11:35	Turbidity	7.36	NTU
GS-GSA-MW-3V	3/5/2019 11:40	Conductivity	2964.3	uS/cm
GS-GSA-MW-3V	3/5/2019 11:40	DO	0.38	mg/L
GS-GSA-MW-3V	3/5/2019 11:40	Depth to Water Detail	120.2	ft
GS-GSA-MW-3V	3/5/2019 11:40	Oxidation Reduction Potention	-39.2	mv
GS-GSA-MW-3V	3/5/2019 11:40	pH	6.54	pH

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3V	3/5/2019 11:40	Temperature	18.1	C
GS-GSA-MW-3V	3/5/2019 11:40	Turbidity	8.46	NTU
GS-GSA-MW-3V	3/5/2019 11:45	Conductivity	2937.8	uS/cm
GS-GSA-MW-3V	3/5/2019 11:45	DO	0.41	mg/L
GS-GSA-MW-3V	3/5/2019 11:45	Depth to Water Detail	120.66	ft
GS-GSA-MW-3V	3/5/2019 11:45	Oxidation Reduction Potention	-41.9	mv
GS-GSA-MW-3V	3/5/2019 11:45	pH	6.56	pH
GS-GSA-MW-3V	3/5/2019 11:45	Temperature	18.35	C
GS-GSA-MW-3V	3/5/2019 11:45	Turbidity	7.81	NTU
GS-GSA-MW-3V	3/5/2019 11:50	Conductivity	2889.8	uS/cm
GS-GSA-MW-3V	3/5/2019 11:50	DO	0.36	mg/L
GS-GSA-MW-3V	3/5/2019 11:50	Depth to Water Detail	120.87	ft
GS-GSA-MW-3V	3/5/2019 11:50	Oxidation Reduction Potention	-47.8	mv
GS-GSA-MW-3V	3/5/2019 11:50	pH	6.64	pH
GS-GSA-MW-3V	3/5/2019 11:50	Temperature	18.73	C
GS-GSA-MW-3V	3/5/2019 11:50	Turbidity	11.84	NTU
GS-GSA-MW-3V	3/5/2019 11:55	Conductivity	2873.1	uS/cm
GS-GSA-MW-3V	3/5/2019 11:55	DO	0.38	mg/L
GS-GSA-MW-3V	3/5/2019 11:55	Depth to Water Detail	121.21	ft
GS-GSA-MW-3V	3/5/2019 11:55	Oxidation Reduction Potention	-48.6	mv
GS-GSA-MW-3V	3/5/2019 11:55	pH	6.67	pH
GS-GSA-MW-3V	3/5/2019 11:55	Temperature	18.61	C
GS-GSA-MW-3V	3/5/2019 11:55	Turbidity	12.75	NTU
GS-GSA-MW-3V	3/5/2019 12:00	Conductivity	2879.3	uS/cm
GS-GSA-MW-3V	3/5/2019 12:00	DO	0.36	mg/L
GS-GSA-MW-3V	3/5/2019 12:00	Depth to Water Detail	121.47	ft
GS-GSA-MW-3V	3/5/2019 12:00	Oxidation Reduction Potention	-48.9	mv
GS-GSA-MW-3V	3/5/2019 12:00	pH	6.68	pH
GS-GSA-MW-3V	3/5/2019 12:00	Temperature	18.57	C
GS-GSA-MW-3V	3/5/2019 12:00	Turbidity	12.5	NTU
GS-GSA-MW-3V	3/5/2019 12:05	Conductivity	2871.9	uS/cm
GS-GSA-MW-3V	3/5/2019 12:05	DO	0.39	mg/L
GS-GSA-MW-3V	3/5/2019 12:05	Depth to Water Detail	121.84	ft
GS-GSA-MW-3V	3/5/2019 12:05	Oxidation Reduction Potention	-49.5	mv
GS-GSA-MW-3V	3/5/2019 12:05	pH	6.68	pH
GS-GSA-MW-3V	3/5/2019 12:05	Temperature	18.92	C
GS-GSA-MW-3V	3/5/2019 12:05	Turbidity	12.2	NTU
GS-GSA-MW-3V	3/5/2019 12:10	Conductivity	2883.7	uS/cm
GS-GSA-MW-3V	3/5/2019 12:10	DO	0.36	mg/L
GS-GSA-MW-3V	3/5/2019 12:10	Depth to Water Detail	122.04	ft
GS-GSA-MW-3V	3/5/2019 12:10	Oxidation Reduction Potention	-49.1	mv
GS-GSA-MW-3V	3/5/2019 12:10	pH	6.68	pH
GS-GSA-MW-3V	3/5/2019 12:10	Temperature	18.73	C
GS-GSA-MW-3V	3/5/2019 12:10	Turbidity	17.9	NTU
GS-GSA-MW-3V	3/5/2019 12:15	Conductivity	2866.8	uS/cm
GS-GSA-MW-3V	3/5/2019 12:15	DO	0.33	mg/L
GS-GSA-MW-3V	3/5/2019 12:15	Depth to Water Detail	122.24	ft

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3V	3/5/2019 12:15	Oxidation Reduction Potention	-49.3	mv
GS-GSA-MW-3V	3/5/2019 12:15	pH	6.68	pH
GS-GSA-MW-3V	3/5/2019 12:15	Temperature	18.78	C
GS-GSA-MW-3V	3/5/2019 12:15	Turbidity	13.3	NTU
GS-GSA-MW-3V	3/5/2019 12:20	Conductivity	2891.4	uS/cm
GS-GSA-MW-3V	3/5/2019 12:20	DO	0.31	mg/L
GS-GSA-MW-3V	3/5/2019 12:20	Depth to Water Detail	122.48	ft
GS-GSA-MW-3V	3/5/2019 12:20	Oxidation Reduction Potention	-49	mv
GS-GSA-MW-3V	3/5/2019 12:20	pH	6.68	pH
GS-GSA-MW-3V	3/5/2019 12:20	Temperature	18.43	C
GS-GSA-MW-3V	3/5/2019 12:20	Turbidity	12.34	NTU
GS-GSA-MW-3V	3/5/2019 12:25	Conductivity	2886.2	uS/cm
GS-GSA-MW-3V	3/5/2019 12:25	DO	0.33	mg/L
GS-GSA-MW-3V	3/5/2019 12:25	Depth to Water Detail	122.69	ft
GS-GSA-MW-3V	3/5/2019 12:25	Oxidation Reduction Potention	-48.7	mv
GS-GSA-MW-3V	3/5/2019 12:25	pH	6.69	pH
GS-GSA-MW-3V	3/5/2019 12:25	Temperature	18.28	C
GS-GSA-MW-3V	3/5/2019 12:25	Turbidity	9.9	NTU
GS-GSA-MW-3V	3/5/2019 12:30	Conductivity	2886.4	uS/cm
GS-GSA-MW-3V	3/5/2019 12:30	DO	0.32	mg/L
GS-GSA-MW-3V	3/5/2019 12:30	Depth to Water Detail	122.93	ft
GS-GSA-MW-3V	3/5/2019 12:30	Oxidation Reduction Potention	-49.3	mv
GS-GSA-MW-3V	3/5/2019 12:30	pH	6.69	pH
GS-GSA-MW-3V	3/5/2019 12:30	Temperature	18.5	C
GS-GSA-MW-3V	3/5/2019 12:30	Turbidity	9.01	NTU
GS-GSA-MW-3V	3/5/2019 12:35	Conductivity	2890.5	uS/cm
GS-GSA-MW-3V	3/5/2019 12:35	DO	0.32	mg/L
GS-GSA-MW-3V	3/5/2019 12:35	Depth to Water Detail	123.15	ft
GS-GSA-MW-3V	3/5/2019 12:35	Oxidation Reduction Potention	-48.8	mv
GS-GSA-MW-3V	3/5/2019 12:35	pH	6.69	pH
GS-GSA-MW-3V	3/5/2019 12:35	Temperature	18.26	C
GS-GSA-MW-3V	3/5/2019 12:35	Turbidity	8.35	NTU
GS-GSA-MW-3V	3/5/2019 12:40	Conductivity	2911.5	uS/cm
GS-GSA-MW-3V	3/5/2019 12:40	DO	0.32	mg/L
GS-GSA-MW-3V	3/5/2019 12:40	Depth to Water Detail	123.35	ft
GS-GSA-MW-3V	3/5/2019 12:40	Oxidation Reduction Potention	-49	mv
GS-GSA-MW-3V	3/5/2019 12:40	pH	6.69	pH
GS-GSA-MW-3V	3/5/2019 12:40	Temperature	18.54	C
GS-GSA-MW-3V	3/5/2019 12:40	Turbidity	7.5	NTU
GS-GSA-MW-3V	3/5/2019 12:45	Conductivity	2892.1	uS/cm
GS-GSA-MW-3V	3/5/2019 12:45	DO	0.31	mg/L
GS-GSA-MW-3V	3/5/2019 12:45	Depth to Water Detail	123.56	ft
GS-GSA-MW-3V	3/5/2019 12:45	Oxidation Reduction Potention	-49.2	mv
GS-GSA-MW-3V	3/5/2019 12:45	pH	6.68	pH
GS-GSA-MW-3V	3/5/2019 12:45	Temperature	18.88	C
GS-GSA-MW-3V	3/5/2019 12:45	Turbidity	6.45	NTU
GS-GSA-MW-3V	3/5/2019 12:50	Conductivity	2883.8	uS/cm

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3V	3/5/2019 12:50	DO	0.3	mg/L
GS-GSA-MW-3V	3/5/2019 12:50	Depth to Water Detail	123.77	ft
GS-GSA-MW-3V	3/5/2019 12:50	Oxidation Reduction Potention	-48.8	mv
GS-GSA-MW-3V	3/5/2019 12:50	pH	6.69	pH
GS-GSA-MW-3V	3/5/2019 12:50	Temperature	18.61	C
GS-GSA-MW-3V	3/5/2019 12:50	Turbidity	6.35	NTU
GS-GSA-MW-3V	3/5/2019 12:55	Conductivity	2898.1	uS/cm
GS-GSA-MW-3V	3/5/2019 12:55	DO	0.3	mg/L
GS-GSA-MW-3V	3/5/2019 12:55	Depth to Water Detail	123.97	ft
GS-GSA-MW-3V	3/5/2019 12:55	Oxidation Reduction Potention	-48.5	mv
GS-GSA-MW-3V	3/5/2019 12:55	pH	6.68	pH
GS-GSA-MW-3V	3/5/2019 12:55	Temperature	18.53	C
GS-GSA-MW-3V	3/5/2019 12:55	Turbidity	4.67	NTU
GS-GSA-MW-3V	3/5/2019 13:00	Conductivity	2868.5	uS/cm
GS-GSA-MW-3V	3/5/2019 13:00	DO	0.3	mg/L
GS-GSA-MW-3V	3/5/2019 13:00	Depth to Water Detail	124.13	ft
GS-GSA-MW-3V	3/5/2019 13:00	Oxidation Reduction Potention	-48.6	mv
GS-GSA-MW-3V	3/5/2019 13:00	pH	6.69	pH
GS-GSA-MW-3V	3/5/2019 13:00	Temperature	18.61	C
GS-GSA-MW-3V	3/5/2019 13:00	Turbidity	4.09	NTU
GS-GSA-MW-3V	3/5/2019 13:05	Conductivity	2870.8	uS/cm
GS-GSA-MW-3V	3/5/2019 13:05	DO	0.29	mg/L
GS-GSA-MW-3V	3/5/2019 13:05	Depth to Water Detail	124.31	ft
GS-GSA-MW-3V	3/5/2019 13:05	Oxidation Reduction Potention	-48.5	mv
GS-GSA-MW-3V	3/5/2019 13:05	pH	6.69	pH
GS-GSA-MW-3V	3/5/2019 13:05	Temperature	18.59	C
GS-GSA-MW-3V	3/5/2019 13:05	Turbidity	3.58	NTU
GS-GSA-MW-3V	3/5/2019 13:10	Conductivity	2881.1	uS/cm
GS-GSA-MW-3V	3/5/2019 13:10	DO	0.3	mg/L
GS-GSA-MW-3V	3/5/2019 13:10	Depth to Water Detail	124.48	ft
GS-GSA-MW-3V	3/5/2019 13:10	Oxidation Reduction Potention	-48.6	mv
GS-GSA-MW-3V	3/5/2019 13:10	pH	6.69	pH
GS-GSA-MW-3V	3/5/2019 13:10	Temperature	18.52	C
GS-GSA-MW-3V	3/5/2019 13:10	Turbidity	4.02	NTU
GS-GSA-MW-3V	3/5/2019 13:15	Conductivity	2899.1	uS/cm
GS-GSA-MW-3V	3/5/2019 13:15	DO	0.35	mg/L
GS-GSA-MW-3V	3/5/2019 13:15	Depth to Water Detail	124.63	ft
GS-GSA-MW-3V	3/5/2019 13:15	Oxidation Reduction Potention	-48.7	mv
GS-GSA-MW-3V	3/5/2019 13:15	pH	6.69	pH
GS-GSA-MW-3V	3/5/2019 13:15	Temperature	18.12	C
GS-GSA-MW-3V	3/5/2019 13:15	Turbidity	3.09	NTU
GS-GSA-MW-3V	3/5/2019 13:20	Conductivity	2897.6	uS/cm
GS-GSA-MW-3V	3/5/2019 13:20	DO	0.31	mg/L
GS-GSA-MW-3V	3/5/2019 13:20	Depth to Water Detail	124.79	ft
GS-GSA-MW-3V	3/5/2019 13:20	Oxidation Reduction Potention	-48.7	mv
GS-GSA-MW-3V	3/5/2019 13:20	pH	6.7	pH
GS-GSA-MW-3V	3/5/2019 13:20	Temperature	17.94	C

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3V	3/5/2019 13:20	Turbidity	2.98	NTU
GS-GSA-MW-3V	3/5/2019 13:25	Conductivity	2891.5	uS/cm
GS-GSA-MW-3V	3/5/2019 13:25	DO	0.33	mg/L
GS-GSA-MW-3V	3/5/2019 13:25	Depth to Water Detail	124.9	ft
GS-GSA-MW-3V	3/5/2019 13:25	Oxidation Reduction Potention	-49	mv
GS-GSA-MW-3V	3/5/2019 13:25	pH	6.7	pH
GS-GSA-MW-3V	3/5/2019 13:25	Temperature	17.94	C
GS-GSA-MW-3V	3/5/2019 13:25	Turbidity	2.96	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-9H	3/5/2019 14:41	Conductivity	3708.9	uS/cm
GS-GSA-MW-9H	3/5/2019 14:41	DO	7.23	mg/L
GS-GSA-MW-9H	3/5/2019 14:41	Depth to Water Detail	43.15	ft
GS-GSA-MW-9H	3/5/2019 14:41	Oxidation Reduction Potention	81.1	mv
GS-GSA-MW-9H	3/5/2019 14:41	pH	5.88	pH
GS-GSA-MW-9H	3/5/2019 14:41	Temperature	20.06	C
GS-GSA-MW-9H	3/5/2019 14:41	Turbidity	11.7	NTU
GS-GSA-MW-9H	3/5/2019 14:46	Conductivity	3659.8	uS/cm
GS-GSA-MW-9H	3/5/2019 14:46	DO	7.01	mg/L
GS-GSA-MW-9H	3/5/2019 14:46	Depth to Water Detail	43.71	ft
GS-GSA-MW-9H	3/5/2019 14:46	Oxidation Reduction Potention	79	mv
GS-GSA-MW-9H	3/5/2019 14:46	pH	5.88	pH
GS-GSA-MW-9H	3/5/2019 14:46	Temperature	20.12	C
GS-GSA-MW-9H	3/5/2019 14:46	Turbidity	9.23	NTU
GS-GSA-MW-9H	3/5/2019 14:51	Conductivity	3626.4	uS/cm
GS-GSA-MW-9H	3/5/2019 14:51	DO	6.8	mg/L
GS-GSA-MW-9H	3/5/2019 14:51	Depth to Water Detail	44.15	ft
GS-GSA-MW-9H	3/5/2019 14:51	Oxidation Reduction Potention	77.8	mv
GS-GSA-MW-9H	3/5/2019 14:51	pH	5.87	pH
GS-GSA-MW-9H	3/5/2019 14:51	Temperature	20.17	C
GS-GSA-MW-9H	3/5/2019 14:51	Turbidity	5.85	NTU
GS-GSA-MW-9H	3/5/2019 14:56	Conductivity	3605	uS/cm
GS-GSA-MW-9H	3/5/2019 14:56	DO	6.57	mg/L
GS-GSA-MW-9H	3/5/2019 14:56	Depth to Water Detail	45.71	ft
GS-GSA-MW-9H	3/5/2019 14:56	Oxidation Reduction Potention	76.6	mv
GS-GSA-MW-9H	3/5/2019 14:56	pH	5.88	pH
GS-GSA-MW-9H	3/5/2019 14:56	Temperature	20.2	C
GS-GSA-MW-9H	3/5/2019 14:56	Turbidity	6.46	NTU
GS-GSA-MW-9H	3/5/2019 15:01	Conductivity	3582.8	uS/cm
GS-GSA-MW-9H	3/5/2019 15:01	DO	6.32	mg/L
GS-GSA-MW-9H	3/5/2019 15:01	Depth to Water Detail	46.08	ft
GS-GSA-MW-9H	3/5/2019 15:01	Oxidation Reduction Potention	76	mv
GS-GSA-MW-9H	3/5/2019 15:01	pH	5.88	pH
GS-GSA-MW-9H	3/5/2019 15:01	Temperature	20.28	C
GS-GSA-MW-9H	3/5/2019 15:01	Turbidity	4.21	NTU
GS-GSA-MW-9H	3/5/2019 15:06	Conductivity	3575.8	uS/cm
GS-GSA-MW-9H	3/5/2019 15:06	DO	6.46	mg/L
GS-GSA-MW-9H	3/5/2019 15:06	Depth to Water Detail	46.1	ft
GS-GSA-MW-9H	3/5/2019 15:06	Oxidation Reduction Potention	75.5	mv
GS-GSA-MW-9H	3/5/2019 15:06	pH	5.88	pH
GS-GSA-MW-9H	3/5/2019 15:06	Temperature	20.22	C
GS-GSA-MW-9H	3/5/2019 15:06	Turbidity	4.15	NTU
GS-GSA-MW-9H	3/5/2019 15:11	Conductivity	3562.1	uS/cm
GS-GSA-MW-9H	3/5/2019 15:11	DO	6.37	mg/L
GS-GSA-MW-9H	3/5/2019 15:11	Depth to Water Detail	46.16	ft
GS-GSA-MW-9H	3/5/2019 15:11	Oxidation Reduction Potention	75.1	mv
GS-GSA-MW-9H	3/5/2019 15:11	pH	5.88	pH

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-9H	3/5/2019 15:11	Temperature	20.22	C
GS-GSA-MW-9H	3/5/2019 15:11	Turbidity	2.74	NTU

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



Gorgas Gypsum Pond

2019 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).

Recent drilling and installation of delineation wells next to MW-3 and MW-4 resulted in elevated turbidity levels and longer pump times. Turbidity readings eventually fell below 10 NTU and samples were collected.

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) 664-6247 or 6171
FAX (205) 664-6108

Analytical Report



Sample Group : WMWGORG_1215
Project/Site : Gorgas Gypsum
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) 807-2676

The following data has been reviewed and approved by:

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: 2019.06.05 12:00:01 -0500

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: 2019.06.06 10:19:23 -0500



Total Metals ICP

Gorgas Gypsum

WMWGORG_1215

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ09369	644899	WMWGORG_1215
AZ09370	644899	WMWGORG_1215
AZ09371	644899	WMWGORG_1215
AZ09372	644899	WMWGORG_1215
AZ09373	644899	WMWGORG_1215
AZ09374	644899	WMWGORG_1215
AZ09375	644899	WMWGORG_1215
AZ09376	644899	WMWGORG_1215
AZ09377	644899	WMWGORG_1215
AZ09378	644899	WMWGORG_1215

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.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.



- The high standard readbacks associated with EPA 200.7 were within acceptance criteria.
- 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. All samples were analyzed at a x2.03 dilution to compensate for potential matrix effects. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AZ09369	Calcium	x10.15
AZ09370	Calcium	x10.15
AZ09372	Calcium	x10.15
AZ09373	Calcium	x10.15
AZ09374	Calcium	x10.15
AZ09375	Calcium	x101.5
AZ09376	Calcium	x10.15
AZ09377	Calcium	x101.5

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



Total Metals ICPMS

Gorgas Gypsum

WMWGORG_1215

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ09369	644324	WMWGORG_1215
AZ09370	644324	WMWGORG_1215
AZ09371	644324	WMWGORG_1215
AZ09372	644324	WMWGORG_1215
AZ09373	644324	WMWGORG_1215
AZ09374	644324	WMWGORG_1215
AZ09375	644324	WMWGORG_1215
AZ09376	644324	WMWGORG_1215
AZ09377	644324	WMWGORG_1215
AZ09378	644324	WMWGORG_1215

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. All samples were analyzed at a x5.075 dilution to compensate for potential matrix effects.
 8. The raw data results are shown with dilution factors included.



Mercury

Gorgas Gypsum

WMWGORG_1215

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ09369	645062	WMWGORG_1215
AZ09370	645062	WMWGORG_1215
AZ09371	645062	WMWGORG_1215
AZ09372	645062	WMWGORG_1215
AZ09373	645062	WMWGORG_1215
AZ09374	645062	WMWGORG_1215
AZ09375	645062	WMWGORG_1215
AZ09376	645062	WMWGORG_1215
AZ09377	645062	WMWGORG_1215
AZ09378	645062	WMWGORG_1215

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.



TDS

Gorgas Gypsum

WMWGORG_1215

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ09369	644480	WMWGORG_1215
AZ09370	644480	WMWGORG_1215
AZ09371	644480	WMWGORG_1215
AZ09372	644480	WMWGORG_1215
AZ09373	644480	WMWGORG_1215
AZ09374	644480	WMWGORG_1215
AZ09375	644480	WMWGORG_1215
AZ09376	644480	WMWGORG_1215
AZ09377	644480	WMWGORG_1215
AZ09378	644480	WMWGORG_1215

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:
 - AZ09371
 - AZ09378



Anions

Gorgas Gypsum

WMWGORG_1215

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ09369	644246, 644143, & 644144	WMWGORG_1215
AZ09370	644246, 644143, & 644144	WMWGORG_1215
AZ09371	644246, 644143, & 644144	WMWGORG_1215
AZ09372	644246, 644143, & 644144	WMWGORG_1215
AZ09373	644246, 644143, & 644144	WMWGORG_1215
AZ09374	644246, 644143, & 644144	WMWGORG_1215
AZ09375	644246, 644143, & 644144	WMWGORG_1215
AZ09376	644246, 644143, & 644144	WMWGORG_1215
AZ09377	644246, 644143, & 644144	WMWGORG_1215
AZ09378	644246, 644143, & 644144	WMWGORG_1215

4. All of the above samples were analyzed and prepared by SM4500 Cl E, SM4500 F C, 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 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.
- 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 high standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AZ09369	Sulfate	x100
AZ09370	Sulfate	x100
AZ09372	Sulfate	x80
AZ09373	Sulfate	x100
AZ09374	Sulfate	x100
AZ09375	Sulfate	x100
AZ09375	Chloride	x25
AZ09376	Sulfate	x80
AZ09376	Chloride	x10
AZ09377	Sulfate	x100
AZ09377	Chloride	x25

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



Dissolved Metals ICP

Gorgas Gypsum

WMWGORG_1215

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ09379	644934	WMWGORG_1215

4. All of the above samples were analyzed by EPA 200.7 and prepared by EPA 1638 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.
- A method blank and laboratory control sample were filtered during the sample filtration, then 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.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- The high standard readbacks associated with EPA 200.7 were within acceptance criteria.
- 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, except for the following:
 - AZ09379 MS/MSD recoveries failed for Lithium. Serial Dilution and Post Digestion Spike passed.
 - 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 at a x2.03 dilution to compensate for potential matrix effects.
 8. The raw data results are shown with dilution factors included.



Dissolved Metals ICPMS

Gorgas Gypsum

WMWGORG_1215

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ09379	645384	WMWGORG_1215

4. All of the above samples were analyzed by EPA 200.8 and prepared by EPA 1638 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.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.
- A method blank and laboratory control sample were filtered during the sample filtration, then 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.



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. All samples were analyzed at a x5.075 dilution to compensate for potential matrix effects.
 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
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-1L

Laboratory ID Number: AZ09369

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01		0.0105	mg/L
* Beryllium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	4/26/2019	EPA 200.7		2.03	0.03	0.1	J	0.0304	mg/L
* Calcium, Total	GAS	4/26/2019	EPA 200.7		10.15	1.015	5.075		243	mg/L
* Cadmium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0003	0.001		0.00224	mg/L
* Antimony, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0008	0.003	J	0.00143	mg/L
* Cobalt, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.005		0.0445	mg/L
* Chromium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	4/29/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02		0.0285	mg/L
* Molybdenum, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	J	0.00471	mg/L
* Thallium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	4/19/2019	SM 2540C		1		125		2630	mg/L
Filter Completion Date	CRB	4/16/2019	SM 2540C		1				04/16/2019	Date
* Chloride	JCC	4/17/2019	SM4500CI E		1	0.50	1		2.36	mg/L
* Fluoride	JCC	4/16/2019	SM4500F C		1	0.05	0.1		0.102	mg/L
* Sulfate	JCC	4/16/2019	SM4500SO4 E		100	50.00	100		1700	mg/L
Field Measurements										
pH	AWG	4/10/2019							FA 5.11	SU

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-1L

Laboratory ID Number: AZ09369

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Limit	
			MB	Limit					Rec	Limit			
AZ09378	Barium, Total	mg/L	0.00000346	0.0044	0.10	0.0932	0.0938	0.0948	0.085 to 0.115	93.2	70 to 130	0.608	20
AZ09378	Chromium, Total	mg/L	0.0000101	0.0044	0.10	0.101	0.101	0.102	0.085 to 0.115	101	70 to 130	0.0653	20
AZ09378	Molybdenum, Total	mg/L	0.00000060	0.0044	0.10	0.0978	0.103	0.0988	0.085 to 0.115	97.8	70 to 130	5.26	20
AZ09378	Antimony, Total	mg/L	0.000160	0.00176	0.10	0.0987	0.0997	0.0996	0.085 to 0.115	97.6	70 to 130	0.998	20
AZ09378	Thallium, Total	mg/L	0.00000402	0.00044	0.10	0.0966	0.102	0.105	0.085 to 0.115	96.6	70 to 130	5.15	20
AZ09378	Boron, Total	mg/L	0.000886	0.065025	1.00	1.01	1.01	1.00	0.85 to 1.15	101	70 to 130	0.188	20
AZ09378	Lead, Total	mg/L	0.00000325	0.0022	0.10	0.0992	0.101	0.107	0.085 to 0.115	99.2	70 to 130	1.58	20
AZ09378	Cobalt, Total	mg/L	0.00000561	0.0044	0.10	0.107	0.109	0.106	0.085 to 0.115	107	70 to 130	1.63	20
AZ09378	Mercury, Total by CVAA	mg/L	0.000286	0.0005	0.004	0.00433	0.00426	0.00431	0.0034 to 0.0046	108	70 to 130	1.50	20
AZ09378	Selenium, Total	mg/L	0.0000547	0.0044	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.414	20
AZ09378	Arsenic, Total	mg/L	0.00000562	0.0022	0.10	0.102	0.0989	0.101	0.085 to 0.115	102	70 to 130	3.46	20
AZ09378	Beryllium, Total	mg/L	0.0000690	0.00132	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	2.13	20
AZ09378	Calcium, Total	mg/L	0.0230	0.216749	5.00	5.45	5.44	5.32	4.25 to 5.75	109	70 to 130	0.208	20
AZ09378	Cadmium, Total	mg/L	0.00000083	0.00066	0.10	0.0977	0.0997	0.101	0.085 to 0.115	97.7	70 to 130	2.07	20
AZ09378	Lithium, Total	mg/L	-0.0000242	0.019704	0.20	0.202	0.199	0.201	0.17 to 0.23	101	70 to 130	1.30	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-1L

Laboratory ID Number: AZ09369

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec			Prec
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ09378	Fluoride	mg/L	0.0178	0.05	2.50	2.52	0.0209	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ09378	Chloride	mg/L	0.0468	0.50	10.0	9.96	0.179	9.65	9 to 11	99.6	80 to 120	0.00	20
AZ09378	Sulfate	mg/L	-0.585	0.50	20.0	18.9	0.108	19.7	18 to 22	94.5	80 to 120	0.00	20
AZ09377	Solids, Dissolved	mg/L	-1.00	25			4950	51.0	40 to 60			1.39	5

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CC:

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 Calera, AL 35040
 (205) 664-6247 or 6171
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Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-1L DUP

Laboratory ID Number: AZ09370

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	0.0102	mg/L
* Beryllium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	4/26/2019	EPA 200.7		2.03	0.03	0.1	U Not Detected	mg/L
* Calcium, Total	GAS	4/26/2019	EPA 200.7		10.15	1.015	5.075	270	mg/L
* Cadmium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0003	0.001	0.00219	mg/L
* Antimony, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0008	0.003	J 0.00114	mg/L
* Cobalt, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.005	0.0453	mg/L
* Chromium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	4/29/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02	0.0294	mg/L
* Molybdenum, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	J 0.00467	mg/L
* Thallium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	4/19/2019	SM 2540C		1		125	2600	mg/L
Filter Completion Date	CRB	4/16/2019	SM 2540C		1			04/16/2019	Date
* Chloride	JCC	4/17/2019	SM4500CI E		1	0.50	1	2.35	mg/L
* Fluoride	JCC	4/16/2019	SM4500F C		1	0.05	0.1	0.105	mg/L
* Sulfate	JCC	4/16/2019	SM4500SO4 E		100	50.00	100	1760	mg/L
Field Measurements									
pH	AWG	4/10/2019						FA 5.11	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-1L DUP

Laboratory ID Number: AZ09370

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
				Limit	Spike					Rec	Limit		
AZ09378	Barium, Total	mg/L	0.00000346	0.0044	0.10	0.0932	0.0938	0.0948	0.085 to 0.115	93.2	70 to 130	0.608	20
AZ09378	Chromium, Total	mg/L	0.0000101	0.0044	0.10	0.101	0.101	0.102	0.085 to 0.115	101	70 to 130	0.0653	20
AZ09378	Lithium, Total	mg/L	-0.0000242	0.019704	0.20	0.202	0.199	0.201	0.17 to 0.23	101	70 to 130	1.30	20
AZ09378	Cobalt, Total	mg/L	0.00000561	0.0044	0.10	0.107	0.109	0.106	0.085 to 0.115	107	70 to 130	1.63	20
AZ09378	Mercury, Total by CVAA	mg/L	0.000286	0.0005	0.004	0.00433	0.00426	0.00431	0.0034 to 0.0046	108	70 to 130	1.50	20
AZ09378	Selenium, Total	mg/L	0.0000547	0.0044	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.414	20
AZ09378	Arsenic, Total	mg/L	0.00000562	0.0022	0.10	0.102	0.0989	0.101	0.085 to 0.115	102	70 to 130	3.46	20
AZ09378	Beryllium, Total	mg/L	0.0000690	0.00132	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	2.13	20
AZ09378	Calcium, Total	mg/L	0.0230	0.216749	5.00	5.45	5.44	5.32	4.25 to 5.75	109	70 to 130	0.208	20
AZ09378	Cadmium, Total	mg/L	0.00000083	0.00066	0.10	0.0977	0.0997	0.101	0.085 to 0.115	97.7	70 to 130	2.07	20
AZ09378	Molybdenum, Total	mg/L	0.00000060	0.0044	0.10	0.0978	0.103	0.0988	0.085 to 0.115	97.8	70 to 130	5.26	20
AZ09378	Antimony, Total	mg/L	0.000160	0.00176	0.10	0.0987	0.0997	0.0996	0.085 to 0.115	97.6	70 to 130	0.998	20
AZ09378	Thallium, Total	mg/L	0.00000402	0.00044	0.10	0.0966	0.102	0.105	0.085 to 0.115	96.6	70 to 130	5.15	20
AZ09378	Boron, Total	mg/L	0.000886	0.065025	1.00	1.01	1.01	1.00	0.85 to 1.15	101	70 to 130	0.188	20
AZ09378	Lead, Total	mg/L	0.00000325	0.0022	0.10	0.0992	0.101	0.107	0.085 to 0.115	99.2	70 to 130	1.58	20

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-1L DUP

Laboratory ID Number: AZ09370

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec			Prec
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ09378	Fluoride	mg/L	0.0178	0.05	2.50	2.52	0.0209	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ09378	Chloride	mg/L	0.0468	0.50	10.0	9.96	0.179	9.65	9 to 11	99.6	80 to 120	0.00	20
AZ09377	Solids, Dissolved	mg/L	-1.00	25			4950	51.0	40 to 60			1.39	5
AZ09378	Sulfate	mg/L	-0.585	0.50	20.0	18.9	0.108	19.7	18 to 22	94.5	80 to 120	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGFB
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ09371

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Beryllium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	4/26/2019	EPA 200.7		2.03	0.03	0.1	U	Not Detected	mg/L
* Calcium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.1	0.5	U	Not Detected	mg/L
* Cadmium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0008	0.003	J	0.00106	mg/L
* Cobalt, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	4/29/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02	U	Not Detected	mg/L
* Molybdenum, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	4/19/2019	SM 2540C		1		25	U	Not Detected	mg/L
Filter Completion Date	CRB	4/16/2019	SM 2540C		1				04/16/2019	Date
* Chloride	JCC	4/17/2019	SM4500Cl E		1	0.50	1	U	Not Detected	mg/L
* Fluoride	JCC	4/16/2019	SM4500F C		1	0.05	0.1	U	Not Detected	mg/L
* Sulfate	JCC	4/16/2019	SM4500SO4 E		1	0.50	1	U	Not Detected	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGFB
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ09371

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
				Limit	Spike					Rec	Limit		
AZ09378	Chromium, Total	mg/L	0.0000101	0.0044	0.10	0.101	0.101	0.102	0.085 to 0.115	101	70 to 130	0.0653	20
AZ09378	Lithium, Total	mg/L	-0.0000242	0.019704	0.20	0.202	0.199	0.201	0.17 to 0.23	101	70 to 130	1.30	20
AZ09378	Molybdenum, Total	mg/L	0.00000060	0.0044	0.10	0.0978	0.103	0.0988	0.085 to 0.115	97.8	70 to 130	5.26	20
AZ09378	Antimony, Total	mg/L	0.000160	0.00176	0.10	0.0987	0.0997	0.0996	0.085 to 0.115	97.6	70 to 130	0.998	20
AZ09378	Thallium, Total	mg/L	0.00000402	0.00044	0.10	0.0966	0.102	0.105	0.085 to 0.115	96.6	70 to 130	5.15	20
AZ09378	Barium, Total	mg/L	0.00000346	0.0044	0.10	0.0932	0.0938	0.0948	0.085 to 0.115	93.2	70 to 130	0.608	20
AZ09378	Cobalt, Total	mg/L	0.00000561	0.0044	0.10	0.107	0.109	0.106	0.085 to 0.115	107	70 to 130	1.63	20
AZ09378	Mercury, Total by CVAA	mg/L	0.000286	0.0005	0.004	0.00433	0.00426	0.00431	0.0034 to 0.0046	108	70 to 130	1.50	20
AZ09378	Selenium, Total	mg/L	0.0000547	0.0044	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.414	20
AZ09378	Boron, Total	mg/L	0.000886	0.065025	1.00	1.01	1.01	1.00	0.85 to 1.15	101	70 to 130	0.188	20
AZ09378	Lead, Total	mg/L	0.00000325	0.0022	0.10	0.0992	0.101	0.107	0.085 to 0.115	99.2	70 to 130	1.58	20
AZ09378	Arsenic, Total	mg/L	0.00000562	0.0022	0.10	0.102	0.0989	0.101	0.085 to 0.115	102	70 to 130	3.46	20
AZ09378	Beryllium, Total	mg/L	0.0000690	0.00132	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	2.13	20
AZ09378	Calcium, Total	mg/L	0.0230	0.216749	5.00	5.45	5.44	5.32	4.25 to 5.75	109	70 to 130	0.208	20
AZ09378	Cadmium, Total	mg/L	0.00000083	0.00066	0.10	0.0977	0.0997	0.101	0.085 to 0.115	97.7	70 to 130	2.07	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGFB
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ09371

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec			Prec
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ09378	Sulfate	mg/L	-0.585	0.50	20.0	18.9	0.108	19.7	18 to 22	94.5	80 to 120	0.00	20
AZ09378	Chloride	mg/L	0.0468	0.50	10.0	9.96	0.179	9.65	9 to 11	99.6	80 to 120	0.00	20
AZ09378	Fluoride	mg/L	0.0178	0.05	2.50	2.52	0.0209	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ09377	Solids, Dissolved	mg/L	-1.00	25			4950	51.0	40 to 60			1.39	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-2L

Laboratory ID Number: AZ09372

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	0.0111	mg/L
* Beryllium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	4/26/2019	EPA 200.7		2.03	0.03	0.1	U Not Detected	mg/L
* Calcium, Total	GAS	4/26/2019	EPA 200.7		10.15	1.015	5.075	200	mg/L
* Cadmium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0008	0.003	J 0.000993	mg/L
* Cobalt, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.005	0.0152	mg/L
* Chromium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	4/29/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02	0.0574	mg/L
* Molybdenum, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	J 0.00322	mg/L
* Thallium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	4/19/2019	SM 2540C		1		100	1250	mg/L
Filter Completion Date	CRB	4/16/2019	SM 2540C		1			04/16/2019	Date
* Chloride	JCC	4/17/2019	SM4500CI E		1	0.50	1	1.76	mg/L
* Fluoride	JCC	4/16/2019	SM4500F C		1	0.05	0.1	0.262	mg/L
* Sulfate	JCC	4/16/2019	SM4500SO4 E		80	40.00	80	889	mg/L
Field Measurements									
pH	AWG	4/10/2019						FA 6.1	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-2L

Laboratory ID Number: AZ09372

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ09378	Chromium, Total	mg/L	0.0000101	0.0044	0.10	0.101	0.101	0.102	0.085 to 0.115	101	70 to 130	0.0653	20	
AZ09378	Barium, Total	mg/L	0.00000346	0.0044	0.10	0.0932	0.0938	0.0948	0.085 to 0.115	93.2	70 to 130	0.608	20	
AZ09378	Molybdenum, Total	mg/L	0.00000060	0.0044	0.10	0.0978	0.103	0.0988	0.085 to 0.115	97.8	70 to 130	5.26	20	
AZ09378	Antimony, Total	mg/L	0.000160	0.00176	0.10	0.0987	0.0997	0.0996	0.085 to 0.115	97.6	70 to 130	0.998	20	
AZ09378	Thallium, Total	mg/L	0.00000402	0.00044	0.10	0.0966	0.102	0.105	0.085 to 0.115	96.6	70 to 130	5.15	20	
AZ09378	Lithium, Total	mg/L	-0.0000242	0.019704	0.20	0.202	0.199	0.201	0.17 to 0.23	101	70 to 130	1.30	20	
AZ09378	Cobalt, Total	mg/L	0.00000561	0.0044	0.10	0.107	0.109	0.106	0.085 to 0.115	107	70 to 130	1.63	20	
AZ09378	Mercury, Total by CVAA	mg/L	0.000286	0.0005	0.004	0.00433	0.00426	0.00431	0.0034 to 0.0046	108	70 to 130	1.50	20	
AZ09378	Selenium, Total	mg/L	0.0000547	0.0044	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.414	20	
AZ09378	Boron, Total	mg/L	0.000886	0.065025	1.00	1.01	1.01	1.00	0.85 to 1.15	101	70 to 130	0.188	20	
AZ09378	Lead, Total	mg/L	0.00000325	0.0022	0.10	0.0992	0.101	0.107	0.085 to 0.115	99.2	70 to 130	1.58	20	
AZ09378	Arsenic, Total	mg/L	0.00000562	0.0022	0.10	0.102	0.0989	0.101	0.085 to 0.115	102	70 to 130	3.46	20	
AZ09378	Beryllium, Total	mg/L	0.0000690	0.00132	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	2.13	20	
AZ09378	Calcium, Total	mg/L	0.0230	0.216749	5.00	5.45	5.44	5.32	4.25 to 5.75	109	70 to 130	0.208	20	
AZ09378	Cadmium, Total	mg/L	0.00000083	0.00066	0.10	0.0977	0.0997	0.101	0.085 to 0.115	97.7	70 to 130	2.07	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-2L

Laboratory ID Number: AZ09372

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec			Prec
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ09378	Sulfate	mg/L	-0.585	0.50	20.0	18.9	0.108	19.7	18 to 22	94.5	80 to 120	0.00	20
AZ09378	Chloride	mg/L	0.0468	0.50	10.0	9.96	0.179	9.65	9 to 11	99.6	80 to 120	0.00	20
AZ09378	Fluoride	mg/L	0.0178	0.05	2.50	2.52	0.0209	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ09377	Solids, Dissolved	mg/L	-1.00	25			4950	51.0	40 to 60			1.39	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-3L

Laboratory ID Number: AZ09373

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01		0.0101	mg/L
* Beryllium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	4/26/2019	EPA 200.7		2.03	0.03	0.1	U	Not Detected	mg/L
* Calcium, Total	GAS	4/26/2019	EPA 200.7		10.15	1.015	5.075		348	mg/L
* Cadmium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0003	0.001		0.00337	mg/L
* Antimony, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0008	0.003	J	0.000978	mg/L
* Cobalt, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.005		0.0144	mg/L
* Chromium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	4/29/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02		0.0905	mg/L
* Molybdenum, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01		0.0113	mg/L
* Thallium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	4/19/2019	SM 2540C		1		125		3680	mg/L
Filter Completion Date	CRB	4/16/2019	SM 2540C		1				04/16/2019	Date
* Chloride	JCC	4/17/2019	SM4500CI E		1	0.50	1		2.25	mg/L
* Fluoride	JCC	4/16/2019	SM4500F C		1	0.05	0.1		0.273	mg/L
* Sulfate	JCC	4/16/2019	SM4500SO4 E		100	50.00	100		2460	mg/L
Field Measurements										
pH	AWG	4/10/2019							FA 5.54	SU

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-3L

Laboratory ID Number: AZ09373

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ09378	Chromium, Total	mg/L	0.0000101	0.0044	0.10	0.101	0.101	0.102	0.085 to 0.115	101	70 to 130	0.0653	20
AZ09378	Lithium, Total	mg/L	-0.0000242	0.019704	0.20	0.202	0.199	0.201	0.17 to 0.23	101	70 to 130	1.30	20
AZ09378	Molybdenum, Total	mg/L	0.00000060	0.0044	0.10	0.0978	0.103	0.0988	0.085 to 0.115	97.8	70 to 130	5.26	20
AZ09378	Antimony, Total	mg/L	0.000160	0.00176	0.10	0.0987	0.0997	0.0996	0.085 to 0.115	97.6	70 to 130	0.998	20
AZ09378	Thallium, Total	mg/L	0.00000402	0.00044	0.10	0.0966	0.102	0.105	0.085 to 0.115	96.6	70 to 130	5.15	20
AZ09378	Barium, Total	mg/L	0.00000346	0.0044	0.10	0.0932	0.0938	0.0948	0.085 to 0.115	93.2	70 to 130	0.608	20
AZ09378	Cobalt, Total	mg/L	0.00000561	0.0044	0.10	0.107	0.109	0.106	0.085 to 0.115	107	70 to 130	1.63	20
AZ09378	Mercury, Total by CVAA	mg/L	0.000286	0.0005	0.004	0.00433	0.00426	0.00431	0.0034 to 0.0046	108	70 to 130	1.50	20
AZ09378	Selenium, Total	mg/L	0.0000547	0.0044	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.414	20
AZ09378	Boron, Total	mg/L	0.000886	0.065025	1.00	1.01	1.01	1.00	0.85 to 1.15	101	70 to 130	0.188	20
AZ09378	Lead, Total	mg/L	0.00000325	0.0022	0.10	0.0992	0.101	0.107	0.085 to 0.115	99.2	70 to 130	1.58	20
AZ09378	Arsenic, Total	mg/L	0.00000562	0.0022	0.10	0.102	0.0989	0.101	0.085 to 0.115	102	70 to 130	3.46	20
AZ09378	Beryllium, Total	mg/L	0.0000690	0.00132	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	2.13	20
AZ09378	Calcium, Total	mg/L	0.0230	0.216749	5.00	5.45	5.44	5.32	4.25 to 5.75	109	70 to 130	0.208	20
AZ09378	Cadmium, Total	mg/L	0.00000083	0.00066	0.10	0.0977	0.0997	0.101	0.085 to 0.115	97.7	70 to 130	2.07	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-3L

Laboratory ID Number: AZ09373

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec			Prec
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ09378	Fluoride	mg/L	0.0178	0.05	2.50	2.52	0.0209	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ09378	Chloride	mg/L	0.0468	0.50	10.0	9.96	0.179	9.65	9 to 11	99.6	80 to 120	0.00	20
AZ09378	Sulfate	mg/L	-0.585	0.50	20.0	18.9	0.108	19.7	18 to 22	94.5	80 to 120	0.00	20
AZ09377	Solids, Dissolved	mg/L	-1.00	25			4950	51.0	40 to 60			1.39	5

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-4L

Laboratory ID Number: AZ09374

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01		0.0107	mg/L
* Beryllium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	4/26/2019	EPA 200.7		2.03	0.03	0.1	J	0.0438	mg/L
* Calcium, Total	GAS	4/26/2019	EPA 200.7		10.15	1.015	5.075		356	mg/L
* Cadmium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0008	0.003	J	0.000970	mg/L
* Cobalt, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	4/29/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02		0.0504	mg/L
* Molybdenum, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	4/19/2019	SM 2540C		1		125		3280	mg/L
Filter Completion Date	CRB	4/16/2019	SM 2540C		1				04/16/2019	Date
* Chloride	JCC	4/17/2019	SM4500CI E		1	0.50	1		1.88	mg/L
* Fluoride	JCC	4/16/2019	SM4500F C		1	0.05	0.1		0.384	mg/L
* Sulfate	JCC	4/16/2019	SM4500SO4 E		100	50.00	100		2090	mg/L
Field Measurements										
pH	AWG	4/10/2019							FA 6.14	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-4L

Laboratory ID Number: AZ09374

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS	Rec	Rec	Prec	Prec
				Limit	Spike								
AZ09378	Barium, Total	mg/L	0.00000346	0.0044	0.10	0.0932	0.0938	0.0948	0.085 to 0.115	93.2	70 to 130	0.608	20
AZ09378	Lithium, Total	mg/L	-0.0000242	0.019704	0.20	0.202	0.199	0.201	0.17 to 0.23	101	70 to 130	1.30	20
AZ09378	Chromium, Total	mg/L	0.0000101	0.0044	0.10	0.101	0.101	0.102	0.085 to 0.115	101	70 to 130	0.0653	20
AZ09378	Arsenic, Total	mg/L	0.00000562	0.0022	0.10	0.102	0.0989	0.101	0.085 to 0.115	102	70 to 130	3.46	20
AZ09378	Beryllium, Total	mg/L	0.0000690	0.00132	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	2.13	20
AZ09378	Calcium, Total	mg/L	0.0230	0.216749	5.00	5.45	5.44	5.32	4.25 to 5.75	109	70 to 130	0.208	20
AZ09378	Cadmium, Total	mg/L	0.00000083	0.00066	0.10	0.0977	0.0997	0.101	0.085 to 0.115	97.7	70 to 130	2.07	20
AZ09378	Cobalt, Total	mg/L	0.00000561	0.0044	0.10	0.107	0.109	0.106	0.085 to 0.115	107	70 to 130	1.63	20
AZ09378	Mercury, Total by CVAA	mg/L	0.000286	0.0005	0.004	0.00433	0.00426	0.00431	0.0034 to 0.0046	108	70 to 130	1.50	20
AZ09378	Selenium, Total	mg/L	0.0000547	0.0044	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.414	20
AZ09378	Molybdenum, Total	mg/L	0.00000060	0.0044	0.10	0.0978	0.103	0.0988	0.085 to 0.115	97.8	70 to 130	5.26	20
AZ09378	Antimony, Total	mg/L	0.000160	0.00176	0.10	0.0987	0.0997	0.0996	0.085 to 0.115	97.6	70 to 130	0.998	20
AZ09378	Thallium, Total	mg/L	0.00000402	0.00044	0.10	0.0966	0.102	0.105	0.085 to 0.115	96.6	70 to 130	5.15	20
AZ09378	Boron, Total	mg/L	0.000886	0.065025	1.00	1.01	1.01	1.00	0.85 to 1.15	101	70 to 130	0.188	20
AZ09378	Lead, Total	mg/L	0.00000325	0.0022	0.10	0.0992	0.101	0.107	0.085 to 0.115	99.2	70 to 130	1.58	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-4L

Laboratory ID Number: AZ09374

Sample	Analysis	Units	MB	MB	Limit	Spike	MS	Sample Duplicate	LCS	LCS	Limit	Rec	Rec	Limit	Prec	Prec	Limit
AZ09378	Sulfate	mg/L	-0.585	0.50	20.0	18.9	0.108	19.7	18 to 22	94.5	80 to 120	0.00	20				
AZ09378	Chloride	mg/L	0.0468	0.50	10.0	9.96	0.179	9.65	9 to 11	99.6	80 to 120	0.00	20				
AZ09378	Fluoride	mg/L	0.0178	0.05	2.50	2.52	0.0209	2.54	2.25 to 2.75	101	80 to 120	0.00	20				
AZ09377	Solids, Dissolved	mg/L	-1.00	25			4950	51.0	40 to 60			1.39	5				

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-8

Laboratory ID Number: AZ09375

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	0.0200	mg/L
* Beryllium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	GAS	4/26/2019	EPA 200.7		2.03	0.03	0.1	0.944	mg/L
* Calcium, Total	GAS	4/26/2019	EPA 200.7		101.5	10.15	50.75	533	mg/L
* Cadmium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0008	0.003	J 0.00102	mg/L
* Cobalt, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	ABB	4/29/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02	0.195	mg/L
* Molybdenum, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	4/19/2019	SM 2540C		1		250	3580	mg/L
Filter Completion Date	CRB	4/16/2019	SM 2540C		1			04/16/2019	Date
* Chloride	JCC	4/17/2019	SM4500CI E		25	12.50	25	174	mg/L
* Fluoride	JCC	4/16/2019	SM4500F C		1	0.05	0.1	0.156	mg/L
* Sulfate	JCC	4/16/2019	SM4500SO4 E		100	50.00	100	2150	mg/L
Field Measurements									
pH	AWG	4/10/2019						FA 6.71	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-8

Laboratory ID Number: AZ09375

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec Limit		
			MB	Limit					Rec	Limit			
AZ09378	Lithium, Total	mg/L	-0.0000242	0.019704	0.20	0.202	0.199	0.201	0.17 to 0.23	101	70 to 130	1.30	20
AZ09378	Barium, Total	mg/L	0.00000346	0.0044	0.10	0.0932	0.0938	0.0948	0.085 to 0.115	93.2	70 to 130	0.608	20
AZ09378	Chromium, Total	mg/L	0.0000101	0.0044	0.10	0.101	0.101	0.102	0.085 to 0.115	101	70 to 130	0.0653	20
AZ09378	Molybdenum, Total	mg/L	0.00000060	0.0044	0.10	0.0978	0.103	0.0988	0.085 to 0.115	97.8	70 to 130	5.26	20
AZ09378	Antimony, Total	mg/L	0.000160	0.00176	0.10	0.0987	0.0997	0.0996	0.085 to 0.115	97.6	70 to 130	0.998	20
AZ09378	Thallium, Total	mg/L	0.00000402	0.00044	0.10	0.0966	0.102	0.105	0.085 to 0.115	96.6	70 to 130	5.15	20
AZ09378	Cobalt, Total	mg/L	0.00000561	0.0044	0.10	0.107	0.109	0.106	0.085 to 0.115	107	70 to 130	1.63	20
AZ09378	Mercury, Total by CVAA	mg/L	0.000286	0.0005	0.004	0.00433	0.00426	0.00431	0.0034 to 0.0046	108	70 to 130	1.50	20
AZ09378	Selenium, Total	mg/L	0.0000547	0.0044	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.414	20
AZ09378	Arsenic, Total	mg/L	0.00000562	0.0022	0.10	0.102	0.0989	0.101	0.085 to 0.115	102	70 to 130	3.46	20
AZ09378	Beryllium, Total	mg/L	0.0000690	0.00132	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	2.13	20
AZ09378	Calcium, Total	mg/L	0.0230	0.216749	5.00	5.45	5.44	5.32	4.25 to 5.75	109	70 to 130	0.208	20
AZ09378	Cadmium, Total	mg/L	0.00000083	0.00066	0.10	0.0977	0.0997	0.101	0.085 to 0.115	97.7	70 to 130	2.07	20
AZ09378	Boron, Total	mg/L	0.000886	0.065025	1.00	1.01	1.01	1.00	0.85 to 1.15	101	70 to 130	0.188	20
AZ09378	Lead, Total	mg/L	0.00000325	0.0022	0.10	0.0992	0.101	0.107	0.085 to 0.115	99.2	70 to 130	1.58	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

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Comments:

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 Calera, AL 35040
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 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-8

Laboratory ID Number: AZ09375

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec			Prec
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ09378	Fluoride	mg/L	0.0178	0.05	2.50	2.52	0.0209	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ09378	Chloride	mg/L	0.0468	0.50	10.0	9.96	0.179	9.65	9 to 11	99.6	80 to 120	0.00	20
AZ09378	Sulfate	mg/L	-0.585	0.50	20.0	18.9	0.108	19.7	18 to 22	94.5	80 to 120	0.00	20
AZ09377	Solids, Dissolved	mg/L	-1.00	25			4950	51.0	40 to 60			1.39	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-4

Laboratory ID Number: AZ09376

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	J	0.00176	mg/L
* Barium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01		0.0136	mg/L
* Beryllium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0006	0.003		0.00469	mg/L
* Boron, Total	GAS	4/26/2019	EPA 200.7		2.03	0.03	0.1		3.74	mg/L
* Calcium, Total	GAS	4/26/2019	EPA 200.7		10.15	1.015	5.075		129	mg/L
* Cadmium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0003	0.001		0.00176	mg/L
* Antimony, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0008	0.003	J	0.000976	mg/L
* Cobalt, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.005		0.241	mg/L
* Chromium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	4/29/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02		0.282	mg/L
* Molybdenum, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	J	0.00322	mg/L
* Thallium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	4/19/2019	SM 2540C		1		50		1000	mg/L
Filter Completion Date	CRB	4/16/2019	SM 2540C		1				04/16/2019	Date
* Chloride	JCC	4/17/2019	SM4500CI E		10	5.00	10		74.3	mg/L
* Fluoride	JCC	4/16/2019	SM4500F C		1	0.05	0.1	U	Not Detected	mg/L
* Sulfate	JCC	4/16/2019	SM4500SO4 E		80	40.00	80		616	mg/L
Field Measurements										
pH	AWG	4/10/2019							FA 3.83	SU

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-4

Laboratory ID Number: AZ09376

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ09378	Barium, Total	mg/L	0.00000346	0.0044	0.10	0.0932	0.0938	0.0948	0.085 to 0.115	93.2	70 to 130	0.608	20	
AZ09378	Lithium, Total	mg/L	-0.0000242	0.019704	0.20	0.202	0.199	0.201	0.17 to 0.23	101	70 to 130	1.30	20	
AZ09378	Chromium, Total	mg/L	0.0000101	0.0044	0.10	0.101	0.101	0.102	0.085 to 0.115	101	70 to 130	0.0653	20	
AZ09378	Molybdenum, Total	mg/L	0.00000060	0.0044	0.10	0.0978	0.103	0.0988	0.085 to 0.115	97.8	70 to 130	5.26	20	
AZ09378	Antimony, Total	mg/L	0.000160	0.00176	0.10	0.0987	0.0997	0.0996	0.085 to 0.115	97.6	70 to 130	0.998	20	
AZ09378	Thallium, Total	mg/L	0.00000402	0.00044	0.10	0.0966	0.102	0.105	0.085 to 0.115	96.6	70 to 130	5.15	20	
AZ09378	Cobalt, Total	mg/L	0.00000561	0.0044	0.10	0.107	0.109	0.106	0.085 to 0.115	107	70 to 130	1.63	20	
AZ09378	Mercury, Total by CVAA	mg/L	0.000286	0.0005	0.004	0.00433	0.00426	0.00431	0.0034 to 0.0046	108	70 to 130	1.50	20	
AZ09378	Selenium, Total	mg/L	0.0000547	0.0044	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.414	20	
AZ09378	Arsenic, Total	mg/L	0.00000562	0.0022	0.10	0.102	0.0989	0.101	0.085 to 0.115	102	70 to 130	3.46	20	
AZ09378	Beryllium, Total	mg/L	0.0000690	0.00132	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	2.13	20	
AZ09378	Calcium, Total	mg/L	0.0230	0.216749	5.00	5.45	5.44	5.32	4.25 to 5.75	109	70 to 130	0.208	20	
AZ09378	Cadmium, Total	mg/L	0.00000083	0.00066	0.10	0.0977	0.0997	0.101	0.085 to 0.115	97.7	70 to 130	2.07	20	
AZ09378	Boron, Total	mg/L	0.000886	0.065025	1.00	1.01	1.01	1.00	0.85 to 1.15	101	70 to 130	0.188	20	
AZ09378	Lead, Total	mg/L	0.00000325	0.0022	0.10	0.0992	0.101	0.107	0.085 to 0.115	99.2	70 to 130	1.58	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-4

Laboratory ID Number: AZ09376

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec			Prec
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ09378	Chloride	mg/L	0.0468	0.50	10.0	9.96	0.179	9.65	9 to 11	99.6	80 to 120	0.00	20
AZ09378	Sulfate	mg/L	-0.585	0.50	20.0	18.9	0.108	19.7	18 to 22	94.5	80 to 120	0.00	20
AZ09378	Fluoride	mg/L	0.0178	0.05	2.50	2.52	0.0209	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ09377	Solids, Dissolved	mg/L	-1.00	25			4950	51.0	40 to 60			1.39	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-3

Laboratory ID Number: AZ09377

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	J	0.00121	mg/L
* Barium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01		0.0153	mg/L
* Beryllium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0006	0.003	J	0.00257	mg/L
* Boron, Total	GAS	4/26/2019	EPA 200.7		2.03	0.03	0.1		3.35	mg/L
* Calcium, Total	GAS	4/26/2019	EPA 200.7		101.5	10.15	50.75		659	mg/L
* Cadmium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0008	0.003	J	0.00111	mg/L
* Cobalt, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.005		0.151	mg/L
* Chromium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	4/29/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02		0.425	mg/L
* Molybdenum, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	J	0.00234	mg/L
* Thallium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	4/19/2019	SM 2540C		1		250		5090	mg/L
Filter Completion Date	CRB	4/16/2019	SM 2540C		1				04/16/2019	Date
* Chloride	JCC	4/17/2019	SM4500CI E		25	12.50	25		249	mg/L
* Fluoride	JCC	4/16/2019	SM4500F C		1	0.05	0.1		0.738	mg/L
* Sulfate	JCC	4/16/2019	SM4500SO4 E		100	50.00	100		2980	mg/L
Field Measurements										
pH	AWG	4/10/2019							FA 5.83	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-3

Laboratory ID Number: AZ09377

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec Limit		
			MB	Limit					Rec	Limit			
AZ09378	Chromium, Total	mg/L	0.0000101	0.0044	0.10	0.101	0.101	0.102	0.085 to 0.115	101	70 to 130	0.0653	20
AZ09378	Barium, Total	mg/L	0.00000346	0.0044	0.10	0.0932	0.0938	0.0948	0.085 to 0.115	93.2	70 to 130	0.608	20
AZ09378	Lithium, Total	mg/L	-0.0000242	0.019704	0.20	0.202	0.199	0.201	0.17 to 0.23	101	70 to 130	1.30	20
AZ09378	Arsenic, Total	mg/L	0.00000562	0.0022	0.10	0.102	0.0989	0.101	0.085 to 0.115	102	70 to 130	3.46	20
AZ09378	Beryllium, Total	mg/L	0.0000690	0.00132	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	2.13	20
AZ09378	Calcium, Total	mg/L	0.0230	0.216749	5.00	5.45	5.44	5.32	4.25 to 5.75	109	70 to 130	0.208	20
AZ09378	Cadmium, Total	mg/L	0.00000083	0.00066	0.10	0.0977	0.0997	0.101	0.085 to 0.115	97.7	70 to 130	2.07	20
AZ09378	Cobalt, Total	mg/L	0.00000561	0.0044	0.10	0.107	0.109	0.106	0.085 to 0.115	107	70 to 130	1.63	20
AZ09378	Mercury, Total by CVAA	mg/L	0.000286	0.0005	0.004	0.00433	0.00426	0.00431	0.0034 to 0.0046	108	70 to 130	1.50	20
AZ09378	Selenium, Total	mg/L	0.0000547	0.0044	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.414	20
AZ09378	Molybdenum, Total	mg/L	0.00000060	0.0044	0.10	0.0978	0.103	0.0988	0.085 to 0.115	97.8	70 to 130	5.26	20
AZ09378	Antimony, Total	mg/L	0.000160	0.00176	0.10	0.0987	0.0997	0.0996	0.085 to 0.115	97.6	70 to 130	0.998	20
AZ09378	Thallium, Total	mg/L	0.00000402	0.00044	0.10	0.0966	0.102	0.105	0.085 to 0.115	96.6	70 to 130	5.15	20
AZ09378	Boron, Total	mg/L	0.000886	0.065025	1.00	1.01	1.01	1.00	0.85 to 1.15	101	70 to 130	0.188	20
AZ09378	Lead, Total	mg/L	0.00000325	0.0022	0.10	0.0992	0.101	0.107	0.085 to 0.115	99.2	70 to 130	1.58	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-3

Laboratory ID Number: AZ09377

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec			Prec
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ09378	Fluoride	mg/L	0.0178	0.05	2.50	2.52	0.0209	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ09378	Chloride	mg/L	0.0468	0.50	10.0	9.96	0.179	9.65	9 to 11	99.6	80 to 120	0.00	20
AZ09377	Solids, Dissolved	mg/L	-1.00	25			4950	51.0	40 to 60			1.39	5
AZ09378	Sulfate	mg/L	-0.585	0.50	20.0	18.9	0.108	19.7	18 to 22	94.5	80 to 120	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGEB
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum Equipment Blank

Laboratory ID Number: AZ09378

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Beryllium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	GAS	4/26/2019	EPA 200.7		2.03	0.03	0.1	U	Not Detected	mg/L
* Calcium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.1	0.5	U	Not Detected	mg/L
* Cadmium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0008	0.003	J	0.00101	mg/L
* Cobalt, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	ABB	4/29/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02	U	Not Detected	mg/L
* Molybdenum, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	4/16/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	4/19/2019	SM 2540C		1		25	U	Not Detected	mg/L
Filter Completion Date	CRB	4/16/2019	SM 2540C		1				04/16/2019	Date
* Chloride	JCC	4/17/2019	SM4500CI E		1	0.50	1	U	Not Detected	mg/L
* Fluoride	JCC	4/16/2019	SM4500F C		1	0.05	0.1	U	Not Detected	mg/L
* Sulfate	JCC	4/16/2019	SM4500SO4 E		1	0.50	1	U	Not Detected	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

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Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGEB
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum Equipment Blank

Laboratory ID Number: AZ09378

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Limit	
			MB	Limit					Rec	Limit			
AZ09378	Lithium, Total	mg/L	-0.0000242	0.019704	0.20	0.202	0.199	0.201	0.17 to 0.23	101	70 to 130	1.30	20
AZ09378	Chromium, Total	mg/L	0.0000101	0.0044	0.10	0.101	0.101	0.102	0.085 to 0.115	101	70 to 130	0.0653	20
AZ09378	Barium, Total	mg/L	0.00000346	0.0044	0.10	0.0932	0.0938	0.0948	0.085 to 0.115	93.2	70 to 130	0.608	20
AZ09378	Molybdenum, Total	mg/L	0.00000060	0.0044	0.10	0.0978	0.103	0.0988	0.085 to 0.115	97.8	70 to 130	5.26	20
AZ09378	Antimony, Total	mg/L	0.000160	0.00176	0.10	0.0987	0.0997	0.0996	0.085 to 0.115	97.6	70 to 130	0.998	20
AZ09378	Thallium, Total	mg/L	0.00000402	0.00044	0.10	0.0966	0.102	0.105	0.085 to 0.115	96.6	70 to 130	5.15	20
AZ09378	Cobalt, Total	mg/L	0.00000561	0.0044	0.10	0.107	0.109	0.106	0.085 to 0.115	107	70 to 130	1.63	20
AZ09378	Mercury, Total by CVAA	mg/L	0.000286	0.0005	0.004	0.00433	0.00426	0.00431	0.0034 to 0.0046	108	70 to 130	1.50	20
AZ09378	Selenium, Total	mg/L	0.0000547	0.0044	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.414	20
AZ09378	Boron, Total	mg/L	0.000886	0.065025	1.00	1.01	1.01	1.00	0.85 to 1.15	101	70 to 130	0.188	20
AZ09378	Lead, Total	mg/L	0.00000325	0.0022	0.10	0.0992	0.101	0.107	0.085 to 0.115	99.2	70 to 130	1.58	20
AZ09378	Arsenic, Total	mg/L	0.00000562	0.0022	0.10	0.102	0.0989	0.101	0.085 to 0.115	102	70 to 130	3.46	20
AZ09378	Beryllium, Total	mg/L	0.0000690	0.00132	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	2.13	20
AZ09378	Calcium, Total	mg/L	0.0230	0.216749	5.00	5.45	5.44	5.32	4.25 to 5.75	109	70 to 130	0.208	20
AZ09378	Cadmium, Total	mg/L	0.00000083	0.00066	0.10	0.0977	0.0997	0.101	0.085 to 0.115	97.7	70 to 130	2.07	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORGEB
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum Equipment Blank

Laboratory ID Number: AZ09378

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec			Prec
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ09378	Fluoride	mg/L	0.0178	0.05	2.50	2.52	0.0209	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ09378	Chloride	mg/L	0.0468	0.50	10.0	9.96	0.179	9.65	9 to 11	99.6	80 to 120	0.00	20
AZ09378	Sulfate	mg/L	-0.585	0.50	20.0	18.9	0.108	19.7	18 to 22	94.5	80 to 120	0.00	20
AZ09377	Solids, Dissolved	mg/L	-1.00	25			4950	51.0	40 to 60			1.39	5

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Laboratory certification ID: E571114

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Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-3 Dis

Laboratory ID Number: AZ09379

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.002	0.01	0.0110	mg/L
* Beryllium, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.0006	0.003	J 0.00195	mg/L
* Cadmium, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.0008	0.003	J 0.000803	mg/L
* Cobalt, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.002	0.005	0.150	mg/L
* Chromium, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lithium, Dissolved	GAS	4/26/2019	EPA 200.7		2.03	0.01	0.02	0.408	mg/L
* Molybdenum, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Dissolved	DLJ	4/29/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L

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* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Customer requested dissolved metals results on 4/15/19. Dissolved results are qualified due to sample was not lab filtered until 4/16/19, 6 days after collection. Recovery for Lithium is out of spec. PDS and serial dilution test passed.

LBM 5/17/19

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer

Customer Account: WMWGORG
 Sample Date: 10-Apr-19
 Customer ID:
 Delivery Date: 15-Apr-19

Description: Gorgas Gypsum - MW-3 Dis

Laboratory ID Number: AZ09379

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ09379	Molybdenum, Dissolved	mg/L	0.00000007	0.0044	0.10	0.0952	0.0952		0.085 to 0.115	95.2	70 to 130	0.0110	20
AZ09379	Cobalt, Dissolved	mg/L	0.00000466	0.0044	0.10	0.251	0.252		0.085 to 0.115	101	70 to 130	0.347	20
AZ09379	Beryllium, Dissolved	mg/L	0.0000218	0.00132	0.10	0.0992	0.0959		0.085 to 0.115	97.3	70 to 130	3.35	20
AZ09379	Selenium, Dissolved	mg/L	-0.00000847	0.0044	0.10	0.0955	0.0978		0.085 to 0.115	95.5	70 to 130	2.35	20
AZ09379	Barium, Dissolved	mg/L	-0.00000043	0.0044	0.10	0.105	0.104		0.085 to 0.115	93.7	70 to 130	0.901	20
AZ09379	Cadmium, Dissolved	mg/L	0.00000085	0.00066	0.10	0.0983	0.100		0.085 to 0.115	98.3	70 to 130	2.01	20
AZ09379	Lead, Dissolved	mg/L	0.00000399	0.0022	0.10	0.0988	0.1000		0.085 to 0.115	98.8	70 to 130	1.19	20
AZ09379	Arsenic, Dissolved	mg/L	0.00000757	0.0022	0.10	0.103	0.101		0.085 to 0.115	103	70 to 130	2.60	20
AZ09379	Lithium, Dissolved	mg/L	0.0000202	0.019704	0.20	0.673	0.670	0.194	0.17 to 0.23	132	70 to 130	0.476	20
AZ09379	Antimony, Dissolved	mg/L	0.00000890	0.00176	0.10	0.0906	0.0900		0.085 to 0.115	89.8	70 to 130	0.669	20
AZ09379	Chromium, Dissolved	mg/L	0.0000112	0.0044	0.10	0.100	0.102		0.085 to 0.115	100	70 to 130	1.52	20
AZ09379	Thallium, Dissolved	mg/L	0.00000125	0.00044	0.10	0.100	0.0994		0.085 to 0.115	100	70 to 130	1.12	20

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Customer requested dissolved metals results on 4/15/19. Dissolved results are qualified due to sample was not lab filtered until 4/16/19, 6 days after collection. Recovery for Lithium is out of spec. PDS and serial dilution test passed.
 LBM 5/17/19



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
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
BA	Analyte found in reagent blank is = RL AND is > 1/10 the amount of the sample.
C	Analyte was verified by re-analysis.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
E	Estimated reported value exceeded calibration range.
F	Water Field Group (WFG) qualifier; see comments for more information
FA	Field results were reviewed by the Water Field Group.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
J	Reported value is an estimate because concentration is less than reporting limit.
K	No MB or LCS were submitted with the sample for dissolved analysis.
L	Check standard is outside of specification limit.
LA	Analyte recovery in the check standard was above specification limit. Results may be biased high.
LL	Analyte recovery in the check standard was below specification limit. Results may be biased low.
M	LOQ verification analyzed with batch was outside of specification limit.
N	Organic constituents tentatively identified. Confirmation is needed.
P	Precision is out of specification limit.
R	Matrix spike recovery or matrix spike duplicate recovery is outside of specification limit.
RA	Matrix spike is invalid due to sample concentration.
S	Surrogate recovery is outside of specification limit.
T	Sample temperature is outside of specification limit.
U	Compound was analyzed, but not detected.



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA 04/11/2019 08:00

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Anthony Goggins	Location	Gorgas Gypsum

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

Comments: Correcting date on EB-1 to 04/10/2019. LBM 4/15/2019
 MW-3 DIS was lab filtered for metals analysis per customer request. LBM 04/15/2019

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1L	4/10/19	09:44	4	Groundwater		AZ09369
MW-1LDUP	04/10/2019	09:44	4	Groundwater		AZ09370
FB-1	04/10/2019	10:20	4	Field Blank		AZ09371
MW-2L	04/10/2019	10:38	4	Groundwater		AZ09372
MW-3L	04/10/2019	12:15	4	Groundwater		AZ09373
MW-4L	04/10/2019	13:15	4	Groundwater		AZ09374
MW-8	04/10/2019	14:08	4	Groundwater		AZ09375
MW-4	04/10/2019	15:54	4	Groundwater		AZ09376
MW-3	04/10/2019	18:55	4	Groundwater		AZ09377
EB-1	04/10/2019	19:00	4	Equipment Blank		AZ09378
MW-3 DIS	04/10/2019	18:55	1	Groundwater		AZ09379

Relinquished By	Received By	Date/Time
		04/11/2019 10:03

SmarTroll ID	7151-38849-2-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	5160-26211-1-1	Cooler Temp
Sample Event	1215	Thermometer ID
		pH Strip ID
		0.3 degrees C
		5408-27568-2-2
		7260-39349-1-1



Field Complete
 Lab Complete

Outside Lab

Lab ETA **04/11/2019 08:00**

Requested Complete Date	Routine	Results To	Dustin Brooks,Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Anthony Goggins	Location	Gorgas Gypsum

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 Duplicate collected at MW-2L. Correcting date on EB-1 to 04/10/2019. LBM 04/15/2019

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1L	4/10/19	09:44	1	Groundwater		AZ09380
MW-1LDUP	04/10/2019	09:44	1	Groundwater		AZ09381
FB-1	04/10/2019	10:20	1	Field Blank		AZ09382
MW-2L	04/10/2019	10:38	3	Groundwater		AZ09383
MW-3L	04/10/2019	12:15	1	Groundwater		AZ09384
MW-4L	04/10/2019	13:15	1	Groundwater		AZ09385
MW-8	04/10/2019	14:08	1	Groundwater		AZ09386
MW-4	04/10/2019	15:54	1	Groundwater		AZ09387
MW-3	04/10/2019	18:55	1	Groundwater		AZ09388
EB-1	04/10/2019	19:00	1	Equipment Blank		AZ08389

Relinquished By	Received By	Date/Time
		04/11/2019 10:03

SmarTroll ID	7151-38849-2-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>	
Turbidity ID	5160-26211-1-1		
Sample Event	1215		
Cooler Temp	N/A		
Thermometer ID	N/A	pH Strip ID	7260-39349-1-1

ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

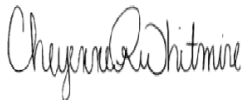
Laboratory Job ID: 400-168971-1

Laboratory Sample Delivery Group: Gorgas Gypsum 1215
Client Project/Site: CCR Plant Gorgas

For:

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

Attn: Laura Midkiff



Authorized for release by:
7/24/2019 3:09:11 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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



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Case Narrative

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
SDG: Gorgas Gypsum 1215

Job ID: 400-168971-1

Laboratory: Eurofins TestAmerica, Pensacola

Narrative

Job Narrative 400-168971-1

RAD

Method(s) 9315: Ra-226 Prep Batch 160-429255. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ09380 MW-1L (400-168971-1), AZ09381 MW-1L DUP (400-168971-2), AZ09382 FB-1 (400-168971-3), AZ09383 MW-2L (400-168971-4), AZ09383 MW-2L (400-168971-4[DU]), AZ09384 MW-3L (400-168971-5), AZ09385 MW-4L (400-168971-6), AZ09386 MW-8 (400-168971-7), AZ09387 MW-4 (400-168971-8), AZ09388 MW-3 (400-168971-9), AZ09389 EB-1 (400-168971-10), (LCS 160-429255/1-A), (MB 160-429255/24-A), (310-153330-D-5-B), (310-153330-C-5-C MS) and (310-153330-C-5-D MSD)

Method(s) 9320: Ra-228 Prep Batch 160-429269. The detector used to count the MS failed its beta source for the day. This excursion does not directly affect client samples. The LCS, MS and MSD are all were within QC limits demonstrating acceptable method performance. The data is reported per client request. AZ09380 MW-1L (400-168971-1), AZ09381 MW-1L DUP (400-168971-2), AZ09382 FB-1 (400-168971-3), AZ09383 MW-2L (400-168971-4), AZ09383 MW-2L (400-168971-4[DU]), AZ09384 MW-3L (400-168971-5), AZ09385 MW-4L (400-168971-6), AZ09386 MW-8 (400-168971-7), AZ09387 MW-4 (400-168971-8), AZ09388 MW-3 (400-168971-9), AZ09389 EB-1 (400-168971-10), (LCS 160-429269/1-A), (MB 160-429269/24-A), (310-153330-D-5-C), (310-153330-C-5-E MS) and (310-153330-C-5-F MSD)

Method(s) 9320: Ra-228 Prep Batch 160-429269. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ09380 MW-1L (400-168971-1), AZ09381 MW-1L DUP (400-168971-2), AZ09382 FB-1 (400-168971-3), AZ09383 MW-2L (400-168971-4), AZ09383 MW-2L (400-168971-4[DU]), AZ09384 MW-3L (400-168971-5), AZ09385 MW-4L (400-168971-6), AZ09386 MW-8 (400-168971-7), AZ09387 MW-4 (400-168971-8), AZ09388 MW-3 (400-168971-9), AZ09389 EB-1 (400-168971-10), (LCS 160-429269/1-A), (MB 160-429269/24-A), (310-153330-D-5-C), (310-153330-C-5-E MS) and (310-153330-C-5-F MSD)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-429269. The following samples had yellow discoloration: AZ09386 MW-8 (400-168971-7), AZ09387 MW-4 (400-168971-8) and AZ09388 MW-3 (400-168971-9). Samples 310-15330-C-5, 310-15330-C-5MS, 310-15330-C-5MSD, 310-310-15330-D-7 and 400-168971-A-9 were prepared at a reduced aliquot due to yellow discoloration: AZ09386 MW-8 (400-168971-7), AZ09387 MW-4 (400-168971-8) and AZ09388 MW-3 (400-168971-9).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-429255. The following samples had yellow discoloration: AZ09386 MW-8 (400-168971-7), AZ09387 MW-4 (400-168971-8) and AZ09388 MW-3 (400-168971-9). Samples 310-15330-C-5, 310-15330-C-5MS, 310-15330-C-5MSD, 310-310-15330-D-7 and 400-168971-A-9 were prepared at a reduced aliquot due to yellow discoloration: AZ09386 MW-8 (400-168971-7), AZ09387 MW-4 (400-168971-8) and AZ09388 MW-3 (400-168971-9).

Method Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
SDG: Gorgas Gypsum 1215

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
SDG: Gorgas Gypsum 1215

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
400-168971-1	AZ09380 MW-1L	Water	04/10/19 09:44	04/17/19 13:35	
400-168971-2	AZ09381 MW-1L DUP	Water	04/10/19 09:44	04/17/19 13:35	
400-168971-3	AZ09382 FB-1	Water	04/10/19 10:20	04/17/19 13:35	
400-168971-4	AZ09383 MW-2L	Water	04/10/19 10:38	04/17/19 13:35	
400-168971-5	AZ09384 MW-3L	Water	04/10/19 12:15	04/17/19 13:35	
400-168971-6	AZ09385 MW-4L	Water	04/10/19 13:15	04/17/19 13:35	
400-168971-7	AZ09386 MW-8	Water	04/10/19 14:08	04/17/19 13:35	
400-168971-8	AZ09387 MW-4	Water	04/10/19 15:54	04/17/19 13:35	
400-168971-9	AZ09388 MW-3	Water	04/10/19 18:55	04/17/19 13:35	
400-168971-10	AZ09389 EB-1	Water	04/10/19 19:00	04/17/19 13:35	

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09380 MW-1L

Lab Sample ID: 400-168971-1

Date Collected: 04/10/19 09:44

Matrix: Water

Date Received: 04/17/19 13:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0792	U	0.0874	0.0877	1.00	0.140	pCi/L	05/21/19 15:49	07/11/19 19:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/21/19 15:49	07/11/19 19:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.263	U	0.233	0.235	1.00	0.375	pCi/L	05/21/19 17:16	07/08/19 13:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/21/19 17:16	07/08/19 13:40	1
Y Carrier	84.5		40 - 110					05/21/19 17:16	07/08/19 13:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.342	U	0.249	0.251	5.00	0.375	pCi/L		07/16/19 08:14	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09381 MW-1L DUP

Lab Sample ID: 400-168971-2

Date Collected: 04/10/19 09:44

Matrix: Water

Date Received: 04/17/19 13:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00532	U	0.0633	0.0633	1.00	0.139	pCi/L	05/21/19 15:49	07/11/19 19:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/21/19 15:49	07/11/19 19:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.700		0.293	0.300	1.00	0.412	pCi/L	05/21/19 17:16	07/08/19 13:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/21/19 17:16	07/08/19 13:40	1
Y Carrier	78.9		40 - 110					05/21/19 17:16	07/08/19 13:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.695		0.300	0.307	5.00	0.412	pCi/L		07/16/19 08:14	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09382 FB-1

Lab Sample ID: 400-168971-3

Date Collected: 04/10/19 10:20

Matrix: Water

Date Received: 04/17/19 13:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0297	U	0.0856	0.0857	1.00	0.161	pCi/L	05/21/19 15:49	07/11/19 19:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					05/21/19 15:49	07/11/19 19:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.108	U	0.216	0.216	1.00	0.368	pCi/L	05/21/19 17:16	07/08/19 13:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					05/21/19 17:16	07/08/19 13:40	1
Y Carrier	85.6		40 - 110					05/21/19 17:16	07/08/19 13:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.137	U	0.232	0.232	5.00	0.368	pCi/L		07/16/19 08:14	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09383 MW-2L

Lab Sample ID: 400-168971-4

Date Collected: 04/10/19 10:38

Matrix: Water

Date Received: 04/17/19 13:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0125	U	0.101	0.101	1.00	0.198	pCi/L	05/21/19 15:49	07/11/19 19:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.4		40 - 110					05/21/19 15:49	07/11/19 19:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.317	U	0.269	0.271	1.00	0.431	pCi/L	05/21/19 17:16	07/08/19 13:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.4		40 - 110					05/21/19 17:16	07/08/19 13:40	1
Y Carrier	85.6		40 - 110					05/21/19 17:16	07/08/19 13:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.329	U	0.287	0.289	5.00	0.431	pCi/L		07/16/19 08:14	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09384 MW-3L

Lab Sample ID: 400-168971-5

Date Collected: 04/10/19 12:15

Matrix: Water

Date Received: 04/17/19 13:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0583	U	0.0812	0.0814	1.00	0.193	pCi/L	05/21/19 15:49	07/11/19 19:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.0		40 - 110					05/21/19 15:49	07/11/19 19:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.256	U	0.221	0.222	1.00	0.353	pCi/L	05/21/19 17:16	07/08/19 13:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.0		40 - 110					05/21/19 17:16	07/08/19 13:40	1
Y Carrier	89.0		40 - 110					05/21/19 17:16	07/08/19 13:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.198	U	0.235	0.236	5.00	0.353	pCi/L		07/16/19 08:14	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09385 MW-4L

Lab Sample ID: 400-168971-6

Date Collected: 04/10/19 13:15

Matrix: Water

Date Received: 04/17/19 13:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.114	U	0.0928	0.0934	1.00	0.132	pCi/L	05/21/19 15:49	07/11/19 19:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					05/21/19 15:49	07/11/19 19:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.401		0.243	0.245	1.00	0.370	pCi/L	05/21/19 17:16	07/08/19 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					05/21/19 17:16	07/08/19 13:41	1
Y Carrier	89.3		40 - 110					05/21/19 17:16	07/08/19 13:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.515		0.260	0.262	5.00	0.370	pCi/L		07/16/19 08:14	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09386 MW-8

Lab Sample ID: 400-168971-7

Date Collected: 04/10/19 14:08

Matrix: Water

Date Received: 04/17/19 13:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0160	U	0.0833	0.0834	1.00	0.178	pCi/L	05/21/19 15:49	07/11/19 19:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.6		40 - 110					05/21/19 15:49	07/11/19 19:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.144	U	0.309	0.309	1.00	0.525	pCi/L	05/21/19 17:16	07/08/19 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.6		40 - 110					05/21/19 17:16	07/08/19 13:41	1
Y Carrier	74.0		40 - 110					05/21/19 17:16	07/08/19 13:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.128	U	0.320	0.320	5.00	0.525	pCi/L		07/16/19 08:14	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09387 MW-4

Lab Sample ID: 400-168971-8

Date Collected: 04/10/19 15:54

Matrix: Water

Date Received: 04/17/19 13:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.137	U	0.115	0.115	1.00	0.170	pCi/L	05/21/19 15:49	07/11/19 21:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.0		40 - 110					05/21/19 15:49	07/11/19 21:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.485		0.303	0.307	1.00	0.471	pCi/L	05/21/19 17:16	07/08/19 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.0		40 - 110					05/21/19 17:16	07/08/19 13:41	1
Y Carrier	88.6		40 - 110					05/21/19 17:16	07/08/19 13:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.622		0.324	0.328	5.00	0.471	pCi/L		07/16/19 08:14	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09388 MW-3

Lab Sample ID: 400-168971-9

Date Collected: 04/10/19 18:55

Matrix: Water

Date Received: 04/17/19 13:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.187	U	0.163	0.164	1.00	0.248	pCi/L	05/21/19 15:49	07/11/19 21:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.5		40 - 110					05/21/19 15:49	07/11/19 21:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0780	U	0.298	0.298	1.00	0.518	pCi/L	05/21/19 17:16	07/08/19 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.5		40 - 110					05/21/19 17:16	07/08/19 13:41	1
Y Carrier	89.0		40 - 110					05/21/19 17:16	07/08/19 13:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.265	U	0.340	0.340	5.00	0.518	pCi/L		07/16/19 08:14	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09389 EB-1

Lab Sample ID: 400-168971-10

Date Collected: 04/10/19 19:00

Matrix: Water

Date Received: 04/17/19 13:35

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0439	U	0.104	0.104	1.00	0.220	pCi/L	05/21/19 15:49	07/11/19 21:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.9		40 - 110					05/21/19 15:49	07/11/19 21:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0859	U	0.237	0.237	1.00	0.408	pCi/L	05/21/19 17:16	07/08/19 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.9		40 - 110					05/21/19 17:16	07/08/19 13:41	1
Y Carrier	86.7		40 - 110					05/21/19 17:16	07/08/19 13:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0420	U	0.259	0.259	5.00	0.408	pCi/L		07/16/19 08:14	1

Definitions/Glossary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
SDG: Gorgas Gypsum 1215

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09380 MW-1L

Lab Sample ID: 400-168971-1

Date Collected: 04/10/19 09:44

Matrix: Water

Date Received: 04/17/19 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1	434526	07/11/19 19:34	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1	434009	07/08/19 13:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	434902	07/16/19 08:14	SMP	TAL SL

Client Sample ID: AZ09381 MW-1L DUP

Lab Sample ID: 400-168971-2

Date Collected: 04/10/19 09:44

Matrix: Water

Date Received: 04/17/19 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1	434526	07/11/19 19:34	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1	434009	07/08/19 13:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	434902	07/16/19 08:14	SMP	TAL SL

Client Sample ID: AZ09382 FB-1

Lab Sample ID: 400-168971-3

Date Collected: 04/10/19 10:20

Matrix: Water

Date Received: 04/17/19 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1	434541	07/11/19 19:39	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1	434009	07/08/19 13:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	434902	07/16/19 08:14	SMP	TAL SL

Client Sample ID: AZ09383 MW-2L

Lab Sample ID: 400-168971-4

Date Collected: 04/10/19 10:38

Matrix: Water

Date Received: 04/17/19 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1	434541	07/11/19 19:39	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1	434009	07/08/19 13:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	434902	07/16/19 08:14	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09384 MW-3L

Lab Sample ID: 400-168971-5

Date Collected: 04/10/19 12:15

Matrix: Water

Date Received: 04/17/19 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1	434541	07/11/19 19:39	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1	434009	07/08/19 13:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	434902	07/16/19 08:14	SMP	TAL SL

Client Sample ID: AZ09385 MW-4L

Lab Sample ID: 400-168971-6

Date Collected: 04/10/19 13:15

Matrix: Water

Date Received: 04/17/19 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1	434541	07/11/19 19:39	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1	434009	07/08/19 13:41	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	434902	07/16/19 08:14	SMP	TAL SL

Client Sample ID: AZ09386 MW-8

Lab Sample ID: 400-168971-7

Date Collected: 04/10/19 14:08

Matrix: Water

Date Received: 04/17/19 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1	434541	07/11/19 19:40	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1	434009	07/08/19 13:41	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	434902	07/16/19 08:14	SMP	TAL SL

Client Sample ID: AZ09387 MW-4

Lab Sample ID: 400-168971-8

Date Collected: 04/10/19 15:54

Matrix: Water

Date Received: 04/17/19 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1	434541	07/11/19 21:44	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1	434009	07/08/19 13:41	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	434902	07/16/19 08:14	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Client Sample ID: AZ09388 MW-3

Lab Sample ID: 400-168971-9

Date Collected: 04/10/19 18:55

Matrix: Water

Date Received: 04/17/19 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1	434541	07/11/19 21:44	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1	434009	07/08/19 13:41	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	434902	07/16/19 08:14	SMP	TAL SL

Client Sample ID: AZ09389 EB-1

Lab Sample ID: 400-168971-10

Date Collected: 04/10/19 19:00

Matrix: Water

Date Received: 04/17/19 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1	434541	07/11/19 21:44	CDR	TAL SL
Total/NA	Prep	PrecSep_0			429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1	434009	07/08/19 13:41	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	434902	07/16/19 08:14	SMP	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
SDG: Gorgas Gypsum 1215

Rad

Prep Batch: 429255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-168971-1	AZ09380 MW-1L	Total/NA	Water	PrecSep-21	
400-168971-2	AZ09381 MW-1L DUP	Total/NA	Water	PrecSep-21	
400-168971-3	AZ09382 FB-1	Total/NA	Water	PrecSep-21	
400-168971-4	AZ09383 MW-2L	Total/NA	Water	PrecSep-21	
400-168971-5	AZ09384 MW-3L	Total/NA	Water	PrecSep-21	
400-168971-6	AZ09385 MW-4L	Total/NA	Water	PrecSep-21	
400-168971-7	AZ09386 MW-8	Total/NA	Water	PrecSep-21	
400-168971-8	AZ09387 MW-4	Total/NA	Water	PrecSep-21	
400-168971-9	AZ09388 MW-3	Total/NA	Water	PrecSep-21	
400-168971-10	AZ09389 EB-1	Total/NA	Water	PrecSep-21	
MB 160-429255/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-429255/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-153330-C-5-C MS	Matrix Spike	Total/NA	Water	PrecSep-21	
310-153330-C-5-D MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	
400-168971-4 DU	AZ09383 MW-2L	Total/NA	Water	PrecSep-21	

Prep Batch: 429269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-168971-1	AZ09380 MW-1L	Total/NA	Water	PrecSep_0	
400-168971-2	AZ09381 MW-1L DUP	Total/NA	Water	PrecSep_0	
400-168971-3	AZ09382 FB-1	Total/NA	Water	PrecSep_0	
400-168971-4	AZ09383 MW-2L	Total/NA	Water	PrecSep_0	
400-168971-5	AZ09384 MW-3L	Total/NA	Water	PrecSep_0	
400-168971-6	AZ09385 MW-4L	Total/NA	Water	PrecSep_0	
400-168971-7	AZ09386 MW-8	Total/NA	Water	PrecSep_0	
400-168971-8	AZ09387 MW-4	Total/NA	Water	PrecSep_0	
400-168971-9	AZ09388 MW-3	Total/NA	Water	PrecSep_0	
400-168971-10	AZ09389 EB-1	Total/NA	Water	PrecSep_0	
MB 160-429269/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-429269/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-153330-C-5-E MS	Matrix Spike	Total/NA	Water	PrecSep_0	
310-153330-C-5-F MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	
400-168971-4 DU	AZ09383 MW-2L	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-429255/24-A
Matrix: Water
Analysis Batch: 434526

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 429255

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.02448	U	0.0674	0.0675	1.00	0.128	pCi/L	05/21/19 15:49	07/11/19 21:46	1
Carrier	MB MB		Limits			Prepared	Analyzed		Dil Fac	
Ba Carrier	%Yield	Qualifier	40 - 110			05/21/19 15:49	07/11/19 21:46		1	

Lab Sample ID: LCS 160-429255/1-A
Matrix: Water
Analysis Batch: 434543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 429255

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	
				Uncert. (2σ+/-)						
Radium-226	11.4	9.898		1.15	1.00	0.186	pCi/L	87	75 - 125	
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	87.6		40 - 110							

Lab Sample ID: 310-153330-C-5-C MS
Matrix: Water
Analysis Batch: 434752

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 429255

Analyte	Sample	Sample	Spike Added	MS	MS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	Result	Qual		Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.114	U	22.7	20.55		2.28	1.00	0.313	pCi/L	90	75 - 138
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	94.6		40 - 110								

Lab Sample ID: 310-153330-C-5-D MSD
Matrix: Water
Analysis Batch: 434543

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 429255

Analyte	Sample	Sample	Spike Added	MSD	MSD	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
	Result	Qual		Result	Qual	Uncert. (2σ+/-)							
Radium-226	0.114	U	22.7	18.85		2.13	1.00	0.287	pCi/L	83	75 - 138	0.38	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	90.4		40 - 110										

Lab Sample ID: 400-168971-4 DU
Matrix: Water
Analysis Batch: 434541

Client Sample ID: AZ09383 MW-2L
Prep Type: Total/NA
Prep Batch: 429255

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual		Result	Qual					
Radium-226	0.0125	U	0.07219	U	0.133	1.00	0.231	pCi/L	0.26	1

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 400-168971-4 DU
 Matrix: Water
 Analysis Batch: 434541

Client Sample ID: AZ09383 MW-2L
 Prep Type: Total/NA
 Prep Batch: 429255

Carrier	DU	DU	Qualifier	Limits
Ba Carrier	93.5			40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-429269/24-A
 Matrix: Water
 Analysis Batch: 434009

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 429269

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.03429	U	0.208	0.208	1.00	0.367	pCi/L	05/21/19 17:16	07/08/19 13:42	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	05/21/19 17:16	07/08/19 13:42	1
Y Carrier	83.7		40 - 110	05/21/19 17:16	07/08/19 13:42	1

Lab Sample ID: LCS 160-429269/1-A
 Matrix: Water
 Analysis Batch: 434047

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 429269

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.04	8.838		1.07	1.00	0.424	pCi/L	98	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	87.6		40 - 110
Y Carrier	83.4		40 - 110

Lab Sample ID: 310-153330-C-5-E MS
 Matrix: Water
 Analysis Batch: 434047

Client Sample ID: Matrix Spike
 Prep Type: Total/NA
 Prep Batch: 429269

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.455	U	18.1	17.83		2.13	1.00	0.798	pCi/L	96	45 - 150

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	94.6		40 - 110
Y Carrier	78.9		40 - 110

Lab Sample ID: 310-153330-C-5-F MSD
 Matrix: Water
 Analysis Batch: 434047

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA
 Prep Batch: 429269

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.455	U	18.1	21.88		2.53	1.00	0.885	pCi/L	119	45 - 150	0.87	1

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 310-153330-C-5-F MSD
Matrix: Water
Analysis Batch: 434047

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 429269

Carrier	MSD MSD		Limits
	%Yield	Qualifier	
Ba Carrier	90.4		40 - 110
Y Carrier	79.3		40 - 110

Lab Sample ID: 400-168971-4 DU
Matrix: Water
Analysis Batch: 434009

Client Sample ID: AZ09383 MW-2L
Prep Type: Total/NA
Prep Batch: 429269

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER
										Limit
Radium-228	0.317	U	0.1461	U	0.228	1.00	0.383	pCi/L	0.34	1

Carrier	DU DU		Limits
	%Yield	Qualifier	
Ba Carrier	93.5		40 - 110
Y Carrier	84.1		40 - 110

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-168971-4 DU
Matrix: Water
Analysis Batch: 434902


Client Sample ID: AZ09383 MW-2L
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER
										Limit
Combined Radium 226 + 228	0.329	U	0.2183	U	0.264	5.00	0.383	pCi/L	0.20	

TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC #8 City: Calera State, Zip: AL 35040 Phone: 205-664-6197 (Tel) Email: lbmidkiff@southernco.com Project Name: CCR Site: Gorgas Gypsum 1215		Sampler: Whitmire, Chyenne R Phone: chyenne.whitmire@testamericainc.com Lab PM: Whitmire, Chyenne R E-Mail: chyenne.whitmire@testamericainc.com		Carrier Tracking No(s): COC No: 400-56525-24537.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: 40007143 SSO#W#		Analysis Requested  400-168971 COC		Preservation Codes: M - Hexane A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: V - MCAA W - ph 4-5 Z - other (specify)	
Sample Identification AZ09380 AZ09381 AZ09382 AZ09383 AZ09384 AZ09385 AZ09386 AZ09387 AZ09388 AZ09389		Sample Date 4/10/19 4/10/19 4/10/19 4/10/19 4/10/19 4/10/19 4/10/19 4/10/19 4/10/19		Sample Time 09:44 09:44 10:20 10:38 12:15 13:15 14:08 15:54 18:55 19:00	
Sample Type (C=Comp, G=grab) Preservation Code: Matrix (Newwater, Spicall, Onwater, BPT, Thru, AAU)		G G G G G G G G G G		Water Water Water Water Water Water Water Water Water Water	
Field Filtered Sample (Yes or No) Form MS/MSD (Yes or No)		X X X X X X X X X X		N N N N N N N N N N	
Form MS/MSD (Yes or No) SM 4500 F SM 4500 Cl E SM 4500 SO4 E		X X X X X X X X X X		N N N N N N N N N N	
Special Instructions/Note: MW-1L MW-1L DUP (Sample Duplicate) FB-1 (Field Blank) MW-2L MW-3L MW-4L MW-5 MW-4 MW-3 EB-1 (Equipment Blank)		Total Number of Containers 1 1 1 3 1 1 1 1 1 1		X X X X X X X X X X	
Deliverable Requested: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Empty Kit Relinquished by: Laura Midkiff Relinquished by: Date/Time: 4/16/2019 7:15 Water APC Company Relinquished by: Date/Time: Company Custody Seal No.: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Special Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:					
Received by: Kelly R. Owens Date/Time: 4-17-19 1335 Company: TA Received by: Date/Time: Company Received by: Date/Time: Company Cooler Temperature(s) °C and Other Remarks: 22.22 307					

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Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-168971-1
SDG Number: Gorgas Gypsum 1215

Login Number: 168971

List Number: 1

Creator: Perez, Trina M

List Source: Eurofins TestAmerica, Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	22.2°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-168971-1
SDG Number: Gorgas Gypsum 1215

Login Number: 168971

List Number: 2

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 04/22/19 02:00 PM

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

Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Laboratory: Eurofins TestAmerica, Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State		40150	07-01-20
Alabama	State Program	4	40150	06-30-20
ANAB	ISO/IEC 17025		L2471	02-22-20
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State		AZ0710	01-12-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19 *
Florida	NELAP	4	E81010	06-30-20 *
Georgia	State Program	4	E81010 (FL)	06-30-20
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19 *
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-20
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-20
Massachusetts	State Program	1	M-FL094	06-30-20
Michigan	State Program	5	9912	05-06-20
New Jersey	NELAP	2	FL006	06-30-20
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Pennsylvania	NELAP		68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19 *
Tennessee	State Program	4	TN02907	06-30-20
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-20
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

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

Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-168971-1
 SDG: Gorgas Gypsum 1215

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	EPA Region	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP		L2305	04-06-22
ANAB	DoD		L2305	04-06-22
ANAB	DOE		L2305.01	04-06-22
Arizona	State		AZ0813	12-08-19
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-20
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-20
Florida	NELAP		E87689	06-30-20
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-20
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-20
Missouri	State Program	7	780	06-30-19 *
Nevada	State Program	9	MO000542018-1	07-31-19 *
New Jersey	NELAP	2	MO002	06-30-20
New York	NELAP	2	11616	03-31-20
New York	NELAP		11616	04-01-20
North Dakota	State Program	8	R207	06-30-19 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State		9997	08-31-19
Oklahoma	State Program	6	9997	08-31-19 *
Pennsylvania	NELAP	3	68-00540	02-28-20
Pennsylvania	NELAP		68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-19 *
Texas	NELAP	6	T104704193-18-13	07-31-19 *
Texas	NELAP		T104704193-19-13	07-31-20
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19 *
Virginia	NELAP	3	460230	06-14-20
Virginia	NELAP		10310	06-14-20
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

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

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-1	4/10/2019 9:22	Conductivity	2573.9	uS/cm
MW-1	4/10/2019 9:22	Depth to Water Detail	91.39	ft
MW-1	4/10/2019 9:22	DO	0.91	mg/L
MW-1	4/10/2019 9:22	Oxidation Reduction Potention	217.3	mv
MW-1	4/10/2019 9:22	pH	5.12	pH
MW-1	4/10/2019 9:22	Temperature	19.88	C
MW-1	4/10/2019 9:22	Turbidity	2.04	NTU
MW-1	4/10/2019 9:27	Conductivity	2543.7	uS/cm
MW-1	4/10/2019 9:27	Depth to Water Detail	91.47	ft
MW-1	4/10/2019 9:27	DO	1	mg/L
MW-1	4/10/2019 9:27	Oxidation Reduction Potention	212.5	mv
MW-1	4/10/2019 9:27	pH	5.12	pH
MW-1	4/10/2019 9:27	Temperature	19.92	C
MW-1	4/10/2019 9:27	Turbidity	0.7	NTU
MW-1	4/10/2019 9:32	Conductivity	2585.2	uS/cm
MW-1	4/10/2019 9:32	Depth to Water Detail	91.53	ft
MW-1	4/10/2019 9:32	DO	0.85	mg/L
MW-1	4/10/2019 9:32	Oxidation Reduction Potention	212	mv
MW-1	4/10/2019 9:32	pH	5.11	pH
MW-1	4/10/2019 9:32	Temperature	19.85	C
MW-1	4/10/2019 9:32	Turbidity	0.71	NTU
MW-1	4/10/2019 9:37	Conductivity	2600.8	uS/cm
MW-1	4/10/2019 9:37	Depth to Water Detail	91.53	ft
MW-1	4/10/2019 9:37	DO	0.73	mg/L
MW-1	4/10/2019 9:37	Oxidation Reduction Potention	212.4	mv
MW-1	4/10/2019 9:37	pH	5.11	pH
MW-1	4/10/2019 9:37	Temperature	19.99	C
MW-1	4/10/2019 9:37	Turbidity	0.72	NTU
MW-1	4/10/2019 9:42	Conductivity	2606.4	uS/cm
MW-1	4/10/2019 9:42	Depth to Water Detail	91.53	ft
MW-1	4/10/2019 9:42	DO	0.67	mg/L
MW-1	4/10/2019 9:42	Oxidation Reduction Potention	213.6	mv
MW-1	4/10/2019 9:42	pH	5.11	pH
MW-1	4/10/2019 9:42	Temperature	20.1	C
MW-1	4/10/2019 9:42	Turbidity	0.74	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-2	4/10/2019 10:20	Conductivity	1783.6	uS/cm
MW-2	4/10/2019 10:20	Depth to Water Detail	80.98	ft
MW-2	4/10/2019 10:20	DO	0.53	mg/L
MW-2	4/10/2019 10:20	Oxidation Reduction Potention	76.3	mv
MW-2	4/10/2019 10:20	pH	6.01	pH
MW-2	4/10/2019 10:20	Temperature	19.51	C
MW-2	4/10/2019 10:20	Turbidity	7.19	NTU
MW-2	4/10/2019 10:25	Conductivity	1715.7	uS/cm
MW-2	4/10/2019 10:25	Depth to Water Detail	80.98	ft
MW-2	4/10/2019 10:25	DO	0.43	mg/L
MW-2	4/10/2019 10:25	Oxidation Reduction Potention	91.1	mv
MW-2	4/10/2019 10:25	pH	6.08	pH
MW-2	4/10/2019 10:25	Temperature	19.43	C
MW-2	4/10/2019 10:25	Turbidity	4.65	NTU
MW-2	4/10/2019 10:30	Conductivity	1687.7	uS/cm
MW-2	4/10/2019 10:30	Depth to Water Detail	80.98	ft
MW-2	4/10/2019 10:30	DO	0.41	mg/L
MW-2	4/10/2019 10:30	Oxidation Reduction Potention	91.8	mv
MW-2	4/10/2019 10:30	pH	6.09	pH
MW-2	4/10/2019 10:30	Temperature	19.46	C
MW-2	4/10/2019 10:30	Turbidity	2.2	NTU
MW-2	4/10/2019 10:35	Conductivity	1671	uS/cm
MW-2	4/10/2019 10:35	Depth to Water Detail	80.98	ft
MW-2	4/10/2019 10:35	DO	0.44	mg/L
MW-2	4/10/2019 10:35	Oxidation Reduction Potention	92	mv
MW-2	4/10/2019 10:35	pH	6.1	pH
MW-2	4/10/2019 10:35	Temperature	19.48	C
MW-2	4/10/2019 10:35	Turbidity	1.39	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-3	4/10/2019 11:31	Conductivity	4155	uS/cm
MW-3	4/10/2019 11:31	Depth to Water Detail	108.61	ft
MW-3	4/10/2019 11:31	DO	8.03	mg/L
MW-3	4/10/2019 11:31	Oxidation Reduction Potention	480.8	mv
MW-3	4/10/2019 11:31	pH	3.37	pH
MW-3	4/10/2019 11:31	Temperature	22.87	C
MW-3	4/10/2019 11:31	Turbidity	0.96	NTU
MW-3	4/10/2019 11:36	Conductivity	3769.6	uS/cm
MW-3	4/10/2019 11:36	Depth to Water Detail	108.71	ft
MW-3	4/10/2019 11:36	DO	5.08	mg/L
MW-3	4/10/2019 11:36	Oxidation Reduction Potention	437	mv
MW-3	4/10/2019 11:36	pH	3.79	pH
MW-3	4/10/2019 11:36	Temperature	23.09	C
MW-3	4/10/2019 11:36	Turbidity	1.01	NTU
MW-3	4/10/2019 11:41	Conductivity	3388.6	uS/cm
MW-3	4/10/2019 11:41	Depth to Water Detail	108.74	ft
MW-3	4/10/2019 11:41	DO	3.18	mg/L
MW-3	4/10/2019 11:41	Oxidation Reduction Potention	292.2	mv
MW-3	4/10/2019 11:41	pH	5.17	pH
MW-3	4/10/2019 11:41	Temperature	23.23	C
MW-3	4/10/2019 11:41	Turbidity	1.84	NTU
MW-3	4/10/2019 11:46	Conductivity	3391.5	uS/cm
MW-3	4/10/2019 11:46	Depth to Water Detail	108.82	ft
MW-3	4/10/2019 11:46	DO	3.45	mg/L
MW-3	4/10/2019 11:46	Oxidation Reduction Potention	264.6	mv
MW-3	4/10/2019 11:46	pH	5.4	pH
MW-3	4/10/2019 11:46	Temperature	22.91	C
MW-3	4/10/2019 11:46	Turbidity	1.44	NTU
MW-3	4/10/2019 11:52	Conductivity	3382.6	uS/cm
MW-3	4/10/2019 11:52	Depth to Water Detail	108.93	ft
MW-3	4/10/2019 11:52	DO	3.55	mg/L
MW-3	4/10/2019 11:52	Oxidation Reduction Potention	257.2	mv
MW-3	4/10/2019 11:52	pH	5.47	pH
MW-3	4/10/2019 11:52	Temperature	22.87	C
MW-3	4/10/2019 11:52	Turbidity	1.11	NTU
MW-3	4/10/2019 11:57	Conductivity	3384.1	uS/cm
MW-3	4/10/2019 11:57	Depth to Water Detail	109	ft
MW-3	4/10/2019 11:57	DO	3.9	mg/L
MW-3	4/10/2019 11:57	Oxidation Reduction Potention	254.2	mv
MW-3	4/10/2019 11:57	pH	5.5	pH
MW-3	4/10/2019 11:57	Temperature	22.85	C
MW-3	4/10/2019 11:57	Turbidity	1.28	NTU
MW-3	4/10/2019 12:02	Conductivity	3397.9	uS/cm
MW-3	4/10/2019 12:02	Depth to Water Detail	109.06	ft

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-3	4/10/2019 12:02	DO	4.43	mg/L
MW-3	4/10/2019 12:02	Oxidation Reduction Potention	253.4	mv
MW-3	4/10/2019 12:02	pH	5.53	pH
MW-3	4/10/2019 12:02	Temperature	22.82	C
MW-3	4/10/2019 12:02	Turbidity	1.55	NTU
MW-3	4/10/2019 12:07	Conductivity	3403.8	uS/cm
MW-3	4/10/2019 12:07	Depth to Water Detail	109.18	ft
MW-3	4/10/2019 12:07	DO	4.57	mg/L
MW-3	4/10/2019 12:07	Oxidation Reduction Potention	253.2	mv
MW-3	4/10/2019 12:07	pH	5.54	pH
MW-3	4/10/2019 12:07	Temperature	22.6	C
MW-3	4/10/2019 12:07	Turbidity	1.76	NTU
MW-3	4/10/2019 12:12	Conductivity	3418.6	uS/cm
MW-3	4/10/2019 12:12	Depth to Water Detail	109.25	ft
MW-3	4/10/2019 12:12	DO	4.54	mg/L
MW-3	4/10/2019 12:12	Oxidation Reduction Potention	257.8	mv
MW-3	4/10/2019 12:12	pH	5.54	pH
MW-3	4/10/2019 12:12	Temperature	22.72	C
MW-3	4/10/2019 12:12	Turbidity	2.05	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-4	4/10/2019 12:58	Conductivity	3212.2	uS/cm
MW-4	4/10/2019 12:58	Depth to Water Detail	115.78	ft
MW-4	4/10/2019 12:58	DO	2.31	mg/L
MW-4	4/10/2019 12:58	Oxidation Reduction Potention	192.6	mv
MW-4	4/10/2019 12:58	pH	6.16	pH
MW-4	4/10/2019 12:58	Temperature	21.21	C
MW-4	4/10/2019 12:58	Turbidity	1.38	NTU
MW-4	4/10/2019 13:03	Conductivity	3206.9	uS/cm
MW-4	4/10/2019 13:03	Depth to Water Detail	115.78	ft
MW-4	4/10/2019 13:03	DO	2.17	mg/L
MW-4	4/10/2019 13:03	Oxidation Reduction Potention	201.6	mv
MW-4	4/10/2019 13:03	pH	6.14	pH
MW-4	4/10/2019 13:03	Temperature	21.22	C
MW-4	4/10/2019 13:03	Turbidity	0.91	NTU
MW-4	4/10/2019 13:08	Conductivity	3208.1	uS/cm
MW-4	4/10/2019 13:08	Depth to Water Detail	115.78	ft
MW-4	4/10/2019 13:08	DO	2.21	mg/L
MW-4	4/10/2019 13:08	Oxidation Reduction Potention	203.8	mv
MW-4	4/10/2019 13:08	pH	6.14	pH
MW-4	4/10/2019 13:08	Temperature	21.17	C
MW-4	4/10/2019 13:08	Turbidity	1.18	NTU
MW-4	4/10/2019 13:13	Conductivity	3210.7	uS/cm
MW-4	4/10/2019 13:13	Depth to Water Detail	115.78	ft
MW-4	4/10/2019 13:13	DO	2.28	mg/L
MW-4	4/10/2019 13:13	Oxidation Reduction Potention	205.3	mv
MW-4	4/10/2019 13:13	pH	6.14	pH
MW-4	4/10/2019 13:13	Temperature	21.33	C
MW-4	4/10/2019 13:13	Turbidity	0.9	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3	4/10/2019 16:18	Conductivity	4817.5	uS/cm
GS-GSA-MW-3	4/10/2019 16:18	Depth to Water Detail	101.38	ft
GS-GSA-MW-3	4/10/2019 16:18	DO	1.01	mg/L
GS-GSA-MW-3	4/10/2019 16:18	Oxidation Reduction Potention	10.5	mv
GS-GSA-MW-3	4/10/2019 16:18	pH	5.65	pH
GS-GSA-MW-3	4/10/2019 16:18	Temperature	22.51	C
GS-GSA-MW-3	4/10/2019 16:18	Turbidity	1719	NTU
GS-GSA-MW-3	4/10/2019 16:23	Conductivity	4812	uS/cm
GS-GSA-MW-3	4/10/2019 16:23	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 16:23	DO	0.64	mg/L
GS-GSA-MW-3	4/10/2019 16:23	Oxidation Reduction Potention	1.8	mv
GS-GSA-MW-3	4/10/2019 16:23	pH	5.74	pH
GS-GSA-MW-3	4/10/2019 16:23	Temperature	22.15	C
GS-GSA-MW-3	4/10/2019 16:23	Turbidity	1283	NTU
GS-GSA-MW-3	4/10/2019 16:28	Conductivity	4798.9	uS/cm
GS-GSA-MW-3	4/10/2019 16:28	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 16:28	DO	0.52	mg/L
GS-GSA-MW-3	4/10/2019 16:28	Oxidation Reduction Potention	0.3	mv
GS-GSA-MW-3	4/10/2019 16:28	pH	5.77	pH
GS-GSA-MW-3	4/10/2019 16:28	Temperature	22.02	C
GS-GSA-MW-3	4/10/2019 16:28	Turbidity	944	NTU
GS-GSA-MW-3	4/10/2019 16:33	Conductivity	4800.7	uS/cm
GS-GSA-MW-3	4/10/2019 16:33	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 16:33	DO	0.45	mg/L
GS-GSA-MW-3	4/10/2019 16:33	Oxidation Reduction Potention	0.5	mv
GS-GSA-MW-3	4/10/2019 16:33	pH	5.78	pH
GS-GSA-MW-3	4/10/2019 16:33	Temperature	21.97	C
GS-GSA-MW-3	4/10/2019 16:33	Turbidity	742	NTU
GS-GSA-MW-3	4/10/2019 16:38	Conductivity	4795.5	uS/cm
GS-GSA-MW-3	4/10/2019 16:38	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 16:38	DO	0.42	mg/L
GS-GSA-MW-3	4/10/2019 16:38	Oxidation Reduction Potention	1	mv
GS-GSA-MW-3	4/10/2019 16:38	pH	5.79	pH
GS-GSA-MW-3	4/10/2019 16:38	Temperature	21.97	C
GS-GSA-MW-3	4/10/2019 16:38	Turbidity	656	NTU
GS-GSA-MW-3	4/10/2019 16:43	Conductivity	4801.4	uS/cm
GS-GSA-MW-3	4/10/2019 16:43	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 16:43	DO	0.4	mg/L
GS-GSA-MW-3	4/10/2019 16:43	Oxidation Reduction Potention	1.7	mv
GS-GSA-MW-3	4/10/2019 16:43	pH	5.8	pH
GS-GSA-MW-3	4/10/2019 16:43	Temperature	21.94	C
GS-GSA-MW-3	4/10/2019 16:43	Turbidity	600	NTU
GS-GSA-MW-3	4/10/2019 16:48	Conductivity	4794.1	uS/cm
GS-GSA-MW-3	4/10/2019 16:48	Depth to Water Detail	101.48	ft

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3	4/10/2019 16:48	DO	0.38	mg/L
GS-GSA-MW-3	4/10/2019 16:48	Oxidation Reduction Potention	2.8	mv
GS-GSA-MW-3	4/10/2019 16:48	pH	5.8	pH
GS-GSA-MW-3	4/10/2019 16:48	Temperature	21.84	C
GS-GSA-MW-3	4/10/2019 16:48	Turbidity	600	NTU
GS-GSA-MW-3	4/10/2019 16:53	Conductivity	4803.8	uS/cm
GS-GSA-MW-3	4/10/2019 16:53	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 16:53	DO	0.38	mg/L
GS-GSA-MW-3	4/10/2019 16:53	Oxidation Reduction Potention	3.7	mv
GS-GSA-MW-3	4/10/2019 16:53	pH	5.8	pH
GS-GSA-MW-3	4/10/2019 16:53	Temperature	21.73	C
GS-GSA-MW-3	4/10/2019 16:53	Turbidity	59.8	NTU
GS-GSA-MW-3	4/10/2019 16:58	Conductivity	4794	uS/cm
GS-GSA-MW-3	4/10/2019 16:58	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 16:58	DO	0.38	mg/L
GS-GSA-MW-3	4/10/2019 16:58	Oxidation Reduction Potention	4.4	mv
GS-GSA-MW-3	4/10/2019 16:58	pH	5.8	pH
GS-GSA-MW-3	4/10/2019 16:58	Temperature	21.71	C
GS-GSA-MW-3	4/10/2019 16:58	Turbidity	53.5	NTU
GS-GSA-MW-3	4/10/2019 17:03	Conductivity	4796.1	uS/cm
GS-GSA-MW-3	4/10/2019 17:03	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:03	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 17:03	Oxidation Reduction Potention	5.1	mv
GS-GSA-MW-3	4/10/2019 17:03	pH	5.81	pH
GS-GSA-MW-3	4/10/2019 17:03	Temperature	21.6	C
GS-GSA-MW-3	4/10/2019 17:03	Turbidity	53.6	NTU
GS-GSA-MW-3	4/10/2019 17:08	Conductivity	4801.2	uS/cm
GS-GSA-MW-3	4/10/2019 17:08	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:08	DO	0.38	mg/L
GS-GSA-MW-3	4/10/2019 17:08	Oxidation Reduction Potention	5.3	mv
GS-GSA-MW-3	4/10/2019 17:08	pH	5.8	pH
GS-GSA-MW-3	4/10/2019 17:08	Temperature	21.64	C
GS-GSA-MW-3	4/10/2019 17:08	Turbidity	48	NTU
GS-GSA-MW-3	4/10/2019 17:13	Conductivity	4802.6	uS/cm
GS-GSA-MW-3	4/10/2019 17:13	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:13	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 17:13	Oxidation Reduction Potention	5.6	mv
GS-GSA-MW-3	4/10/2019 17:13	pH	5.81	pH
GS-GSA-MW-3	4/10/2019 17:13	Temperature	21.61	C
GS-GSA-MW-3	4/10/2019 17:13	Turbidity	42.8	NTU
GS-GSA-MW-3	4/10/2019 17:18	Conductivity	4804.5	uS/cm
GS-GSA-MW-3	4/10/2019 17:18	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:18	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 17:18	Oxidation Reduction Potention	5.6	mv

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3	4/10/2019 17:18	pH	5.81	pH
GS-GSA-MW-3	4/10/2019 17:18	Temperature	21.58	C
GS-GSA-MW-3	4/10/2019 17:18	Turbidity	39.2	NTU
GS-GSA-MW-3	4/10/2019 17:23	Conductivity	4799.5	uS/cm
GS-GSA-MW-3	4/10/2019 17:23	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:23	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 17:23	Oxidation Reduction Potention	5.5	mv
GS-GSA-MW-3	4/10/2019 17:23	pH	5.81	pH
GS-GSA-MW-3	4/10/2019 17:23	Temperature	21.57	C
GS-GSA-MW-3	4/10/2019 17:23	Turbidity	24.8	NTU
GS-GSA-MW-3	4/10/2019 17:28	Conductivity	4807.6	uS/cm
GS-GSA-MW-3	4/10/2019 17:28	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:28	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 17:28	Oxidation Reduction Potention	5.3	mv
GS-GSA-MW-3	4/10/2019 17:28	pH	5.82	pH
GS-GSA-MW-3	4/10/2019 17:28	Temperature	21.48	C
GS-GSA-MW-3	4/10/2019 17:28	Turbidity	26.2	NTU
GS-GSA-MW-3	4/10/2019 17:33	Conductivity	4791.7	uS/cm
GS-GSA-MW-3	4/10/2019 17:33	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:33	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 17:33	Oxidation Reduction Potention	5.3	mv
GS-GSA-MW-3	4/10/2019 17:33	pH	5.82	pH
GS-GSA-MW-3	4/10/2019 17:33	Temperature	21.46	C
GS-GSA-MW-3	4/10/2019 17:33	Turbidity	24	NTU
GS-GSA-MW-3	4/10/2019 17:38	Conductivity	4805.5	uS/cm
GS-GSA-MW-3	4/10/2019 17:38	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:38	DO	0.36	mg/L
GS-GSA-MW-3	4/10/2019 17:38	Oxidation Reduction Potention	5.2	mv
GS-GSA-MW-3	4/10/2019 17:38	pH	5.82	pH
GS-GSA-MW-3	4/10/2019 17:38	Temperature	21.36	C
GS-GSA-MW-3	4/10/2019 17:38	Turbidity	26.9	NTU
GS-GSA-MW-3	4/10/2019 17:43	Conductivity	4808.6	uS/cm
GS-GSA-MW-3	4/10/2019 17:43	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:43	DO	0.35	mg/L
GS-GSA-MW-3	4/10/2019 17:43	Oxidation Reduction Potention	5.2	mv
GS-GSA-MW-3	4/10/2019 17:43	pH	5.82	pH
GS-GSA-MW-3	4/10/2019 17:43	Temperature	21.49	C
GS-GSA-MW-3	4/10/2019 17:43	Turbidity	21.9	NTU
GS-GSA-MW-3	4/10/2019 17:48	Conductivity	4815.2	uS/cm
GS-GSA-MW-3	4/10/2019 17:48	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:48	DO	0.36	mg/L
GS-GSA-MW-3	4/10/2019 17:48	Oxidation Reduction Potention	5	mv
GS-GSA-MW-3	4/10/2019 17:48	pH	5.82	pH
GS-GSA-MW-3	4/10/2019 17:48	Temperature	21.57	C

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3	4/10/2019 17:48	Turbidity	19.3	NTU
GS-GSA-MW-3	4/10/2019 17:53	Conductivity	4809.1	uS/cm
GS-GSA-MW-3	4/10/2019 17:53	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:53	DO	0.35	mg/L
GS-GSA-MW-3	4/10/2019 17:53	Oxidation Reduction Potention	4.5	mv
GS-GSA-MW-3	4/10/2019 17:53	pH	5.82	pH
GS-GSA-MW-3	4/10/2019 17:53	Temperature	21.57	C
GS-GSA-MW-3	4/10/2019 17:53	Turbidity	19.2	NTU
GS-GSA-MW-3	4/10/2019 17:58	Conductivity	4816.3	uS/cm
GS-GSA-MW-3	4/10/2019 17:58	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 17:58	DO	0.35	mg/L
GS-GSA-MW-3	4/10/2019 17:58	Oxidation Reduction Potention	4	mv
GS-GSA-MW-3	4/10/2019 17:58	pH	5.82	pH
GS-GSA-MW-3	4/10/2019 17:58	Temperature	21.48	C
GS-GSA-MW-3	4/10/2019 17:58	Turbidity	15.1	NTU
GS-GSA-MW-3	4/10/2019 18:03	Conductivity	4826	uS/cm
GS-GSA-MW-3	4/10/2019 18:03	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:03	DO	0.36	mg/L
GS-GSA-MW-3	4/10/2019 18:03	Oxidation Reduction Potention	3.7	mv
GS-GSA-MW-3	4/10/2019 18:03	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:03	Temperature	21.44	C
GS-GSA-MW-3	4/10/2019 18:03	Turbidity	14.5	NTU
GS-GSA-MW-3	4/10/2019 18:08	Conductivity	4812.5	uS/cm
GS-GSA-MW-3	4/10/2019 18:08	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:08	DO	0.36	mg/L
GS-GSA-MW-3	4/10/2019 18:08	Oxidation Reduction Potention	3.9	mv
GS-GSA-MW-3	4/10/2019 18:08	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:08	Temperature	21.42	C
GS-GSA-MW-3	4/10/2019 18:08	Turbidity	12.7	NTU
GS-GSA-MW-3	4/10/2019 18:13	Conductivity	4824.9	uS/cm
GS-GSA-MW-3	4/10/2019 18:13	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:13	DO	0.36	mg/L
GS-GSA-MW-3	4/10/2019 18:13	Oxidation Reduction Potention	3.8	mv
GS-GSA-MW-3	4/10/2019 18:13	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:13	Temperature	21.39	C
GS-GSA-MW-3	4/10/2019 18:13	Turbidity	14	NTU
GS-GSA-MW-3	4/10/2019 18:18	Conductivity	4821.2	uS/cm
GS-GSA-MW-3	4/10/2019 18:18	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:18	DO	0.38	mg/L
GS-GSA-MW-3	4/10/2019 18:18	Oxidation Reduction Potention	3.6	mv
GS-GSA-MW-3	4/10/2019 18:18	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:18	Temperature	21.31	C
GS-GSA-MW-3	4/10/2019 18:18	Turbidity	13.3	NTU
GS-GSA-MW-3	4/10/2019 18:23	Conductivity	4826.5	uS/cm

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3	4/10/2019 18:23	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:23	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 18:23	Oxidation Reduction Potention	3.5	mv
GS-GSA-MW-3	4/10/2019 18:23	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:23	Temperature	21.17	C
GS-GSA-MW-3	4/10/2019 18:23	Turbidity	12	NTU
GS-GSA-MW-3	4/10/2019 18:28	Conductivity	4820	uS/cm
GS-GSA-MW-3	4/10/2019 18:28	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:28	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 18:28	Oxidation Reduction Potention	3.7	mv
GS-GSA-MW-3	4/10/2019 18:28	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:28	Temperature	21.05	C
GS-GSA-MW-3	4/10/2019 18:28	Turbidity	12.2	NTU
GS-GSA-MW-3	4/10/2019 18:33	Conductivity	4822.4	uS/cm
GS-GSA-MW-3	4/10/2019 18:33	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:33	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 18:33	Oxidation Reduction Potention	4.4	mv
GS-GSA-MW-3	4/10/2019 18:33	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:33	Temperature	20.99	C
GS-GSA-MW-3	4/10/2019 18:33	Turbidity	10.72	NTU
GS-GSA-MW-3	4/10/2019 18:38	Conductivity	4827.8	uS/cm
GS-GSA-MW-3	4/10/2019 18:38	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:38	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 18:38	Oxidation Reduction Potention	4.5	mv
GS-GSA-MW-3	4/10/2019 18:38	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:38	Temperature	20.99	C
GS-GSA-MW-3	4/10/2019 18:38	Turbidity	10.82	NTU
GS-GSA-MW-3	4/10/2019 18:43	Conductivity	4817.8	uS/cm
GS-GSA-MW-3	4/10/2019 18:43	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:43	DO	0.36	mg/L
GS-GSA-MW-3	4/10/2019 18:43	Oxidation Reduction Potention	4.6	mv
GS-GSA-MW-3	4/10/2019 18:43	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:43	Temperature	20.92	C
GS-GSA-MW-3	4/10/2019 18:43	Turbidity	10.65	NTU
GS-GSA-MW-3	4/10/2019 18:48	Conductivity	4817.5	uS/cm
GS-GSA-MW-3	4/10/2019 18:48	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:48	DO	0.37	mg/L
GS-GSA-MW-3	4/10/2019 18:48	Oxidation Reduction Potention	4.9	mv
GS-GSA-MW-3	4/10/2019 18:48	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:48	Temperature	20.77	C
GS-GSA-MW-3	4/10/2019 18:48	Turbidity	10.38	NTU
GS-GSA-MW-3	4/10/2019 18:53	Conductivity	4823	uS/cm
GS-GSA-MW-3	4/10/2019 18:53	Depth to Water Detail	101.48	ft
GS-GSA-MW-3	4/10/2019 18:53	DO	0.36	mg/L

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3	4/10/2019 18:53	Oxidation Reduction Potention	4.4	mv
GS-GSA-MW-3	4/10/2019 18:53	pH	5.83	pH
GS-GSA-MW-3	4/10/2019 18:53	Temperature	20.69	C
GS-GSA-MW-3	4/10/2019 18:53	Turbidity	9.48	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-4	4/10/2019 14:57	Conductivity	1245.7	uS/cm
GS-GSA-MW-4	4/10/2019 14:57	Depth to Water Detail	89.31	ft
GS-GSA-MW-4	4/10/2019 14:57	DO	0.43	mg/L
GS-GSA-MW-4	4/10/2019 14:57	Oxidation Reduction Potention	277.3	mv
GS-GSA-MW-4	4/10/2019 14:57	pH	3.87	pH
GS-GSA-MW-4	4/10/2019 14:57	Temperature	22.24	C
GS-GSA-MW-4	4/10/2019 14:57	Turbidity	628	NTU
GS-GSA-MW-4	4/10/2019 15:02	Conductivity	1249.1	uS/cm
GS-GSA-MW-4	4/10/2019 15:02	Depth to Water Detail	89.38	ft
GS-GSA-MW-4	4/10/2019 15:02	DO	0.34	mg/L
GS-GSA-MW-4	4/10/2019 15:02	Oxidation Reduction Potention	273.3	mv
GS-GSA-MW-4	4/10/2019 15:02	pH	3.86	pH
GS-GSA-MW-4	4/10/2019 15:02	Temperature	21.97	C
GS-GSA-MW-4	4/10/2019 15:02	Turbidity	54	NTU
GS-GSA-MW-4	4/10/2019 15:07	Conductivity	1247.4	uS/cm
GS-GSA-MW-4	4/10/2019 15:07	Depth to Water Detail	89.38	ft
GS-GSA-MW-4	4/10/2019 15:07	DO	0.32	mg/L
GS-GSA-MW-4	4/10/2019 15:07	Oxidation Reduction Potention	272.3	mv
GS-GSA-MW-4	4/10/2019 15:07	pH	3.85	pH
GS-GSA-MW-4	4/10/2019 15:07	Temperature	21.92	C
GS-GSA-MW-4	4/10/2019 15:07	Turbidity	67.1	NTU
GS-GSA-MW-4	4/10/2019 15:12	Conductivity	1246.3	uS/cm
GS-GSA-MW-4	4/10/2019 15:12	Depth to Water Detail	89.38	ft
GS-GSA-MW-4	4/10/2019 15:12	DO	0.31	mg/L
GS-GSA-MW-4	4/10/2019 15:12	Oxidation Reduction Potention	271.8	mv
GS-GSA-MW-4	4/10/2019 15:12	pH	3.84	pH
GS-GSA-MW-4	4/10/2019 15:12	Temperature	22.07	C
GS-GSA-MW-4	4/10/2019 15:12	Turbidity	46.4	NTU
GS-GSA-MW-4	4/10/2019 15:17	Conductivity	1242.6	uS/cm
GS-GSA-MW-4	4/10/2019 15:17	Depth to Water Detail	89.38	ft
GS-GSA-MW-4	4/10/2019 15:17	DO	0.3	mg/L
GS-GSA-MW-4	4/10/2019 15:17	Oxidation Reduction Potention	271.1	mv
GS-GSA-MW-4	4/10/2019 15:17	pH	3.84	pH
GS-GSA-MW-4	4/10/2019 15:17	Temperature	21.94	C
GS-GSA-MW-4	4/10/2019 15:17	Turbidity	38.5	NTU
GS-GSA-MW-4	4/10/2019 15:22	Conductivity	1242.3	uS/cm
GS-GSA-MW-4	4/10/2019 15:22	Depth to Water Detail	89.38	ft
GS-GSA-MW-4	4/10/2019 15:22	DO	0.3	mg/L
GS-GSA-MW-4	4/10/2019 15:22	Oxidation Reduction Potention	270.7	mv
GS-GSA-MW-4	4/10/2019 15:22	pH	3.84	pH
GS-GSA-MW-4	4/10/2019 15:22	Temperature	21.98	C
GS-GSA-MW-4	4/10/2019 15:22	Turbidity	23.7	NTU
GS-GSA-MW-4	4/10/2019 15:27	Conductivity	1241.3	uS/cm
GS-GSA-MW-4	4/10/2019 15:27	Depth to Water Detail	89.38	ft

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-4	4/10/2019 15:27	DO	0.3	mg/L
GS-GSA-MW-4	4/10/2019 15:27	Oxidation Reduction Potention	270.2	mv
GS-GSA-MW-4	4/10/2019 15:27	pH	3.84	pH
GS-GSA-MW-4	4/10/2019 15:27	Temperature	21.93	C
GS-GSA-MW-4	4/10/2019 15:27	Turbidity	20.9	NTU
GS-GSA-MW-4	4/10/2019 15:32	Conductivity	1240.3	uS/cm
GS-GSA-MW-4	4/10/2019 15:32	Depth to Water Detail	89.38	ft
GS-GSA-MW-4	4/10/2019 15:32	DO	0.3	mg/L
GS-GSA-MW-4	4/10/2019 15:32	Oxidation Reduction Potention	269.7	mv
GS-GSA-MW-4	4/10/2019 15:32	pH	3.84	pH
GS-GSA-MW-4	4/10/2019 15:32	Temperature	22.02	C
GS-GSA-MW-4	4/10/2019 15:32	Turbidity	18.8	NTU
GS-GSA-MW-4	4/10/2019 15:37	Conductivity	1238.3	uS/cm
GS-GSA-MW-4	4/10/2019 15:37	Depth to Water Detail	89.38	ft
GS-GSA-MW-4	4/10/2019 15:37	DO	0.3	mg/L
GS-GSA-MW-4	4/10/2019 15:37	Oxidation Reduction Potention	269.6	mv
GS-GSA-MW-4	4/10/2019 15:37	pH	3.84	pH
GS-GSA-MW-4	4/10/2019 15:37	Temperature	21.95	C
GS-GSA-MW-4	4/10/2019 15:37	Turbidity	12.4	NTU
GS-GSA-MW-4	4/10/2019 15:42	Conductivity	1241.8	uS/cm
GS-GSA-MW-4	4/10/2019 15:42	Depth to Water Detail	89.38	ft
GS-GSA-MW-4	4/10/2019 15:42	DO	0.3	mg/L
GS-GSA-MW-4	4/10/2019 15:42	Oxidation Reduction Potention	269.4	mv
GS-GSA-MW-4	4/10/2019 15:42	pH	3.84	pH
GS-GSA-MW-4	4/10/2019 15:42	Temperature	22.1	C
GS-GSA-MW-4	4/10/2019 15:42	Turbidity	12.1	NTU
GS-GSA-MW-4	4/10/2019 15:47	Conductivity	1235.6	uS/cm
GS-GSA-MW-4	4/10/2019 15:47	Depth to Water Detail	89.38	ft
GS-GSA-MW-4	4/10/2019 15:47	DO	0.29	mg/L
GS-GSA-MW-4	4/10/2019 15:47	Oxidation Reduction Potention	268.8	mv
GS-GSA-MW-4	4/10/2019 15:47	pH	3.84	pH
GS-GSA-MW-4	4/10/2019 15:47	Temperature	22	C
GS-GSA-MW-4	4/10/2019 15:47	Turbidity	10.82	NTU
GS-GSA-MW-4	4/10/2019 15:52	Conductivity	1240.6	uS/cm
GS-GSA-MW-4	4/10/2019 15:52	Depth to Water Detail	89.38	ft
GS-GSA-MW-4	4/10/2019 15:52	DO	0.29	mg/L
GS-GSA-MW-4	4/10/2019 15:52	Oxidation Reduction Potention	269.1	mv
GS-GSA-MW-4	4/10/2019 15:52	pH	3.83	pH
GS-GSA-MW-4	4/10/2019 15:52	Temperature	21.97	C
GS-GSA-MW-4	4/10/2019 15:52	Turbidity	9.39	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-8	4/10/2019 13:50	Conductivity	4023.7	uS/cm
GS-GSA-MW-8	4/10/2019 13:50	Depth to Water Detail	74.49	ft
GS-GSA-MW-8	4/10/2019 13:50	DO	1.17	mg/L
GS-GSA-MW-8	4/10/2019 13:50	Oxidation Reduction Potention	-109	mv
GS-GSA-MW-8	4/10/2019 13:50	pH	6.66	pH
GS-GSA-MW-8	4/10/2019 13:50	Temperature	24.27	C
GS-GSA-MW-8	4/10/2019 13:50	Turbidity	1.66	NTU
GS-GSA-MW-8	4/10/2019 13:55	Conductivity	3980.3	uS/cm
GS-GSA-MW-8	4/10/2019 13:55	Depth to Water Detail	74.56	ft
GS-GSA-MW-8	4/10/2019 13:55	DO	0.83	mg/L
GS-GSA-MW-8	4/10/2019 13:55	Oxidation Reduction Potention	-61.1	mv
GS-GSA-MW-8	4/10/2019 13:55	pH	6.69	pH
GS-GSA-MW-8	4/10/2019 13:55	Temperature	24.25	C
GS-GSA-MW-8	4/10/2019 13:55	Turbidity	3.61	NTU
GS-GSA-MW-8	4/10/2019 14:00	Conductivity	3938.4	uS/cm
GS-GSA-MW-8	4/10/2019 14:00	Depth to Water Detail	74.58	ft
GS-GSA-MW-8	4/10/2019 14:00	DO	0.72	mg/L
GS-GSA-MW-8	4/10/2019 14:00	Oxidation Reduction Potention	-45.5	mv
GS-GSA-MW-8	4/10/2019 14:00	pH	6.7	pH
GS-GSA-MW-8	4/10/2019 14:00	Temperature	23.86	C
GS-GSA-MW-8	4/10/2019 14:00	Turbidity	1.55	NTU
GS-GSA-MW-8	4/10/2019 14:05	Conductivity	3945.7	uS/cm
GS-GSA-MW-8	4/10/2019 14:05	Depth to Water Detail	74.58	ft
GS-GSA-MW-8	4/10/2019 14:05	DO	0.66	mg/L
GS-GSA-MW-8	4/10/2019 14:05	Oxidation Reduction Potention	-39.2	mv
GS-GSA-MW-8	4/10/2019 14:05	pH	6.71	pH
GS-GSA-MW-8	4/10/2019 14:05	Temperature	24.17	C
GS-GSA-MW-8	4/10/2019 14:05	Turbidity	1.86	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



Sample Group : WMWGORG_1248

Project/Site : Gorgas Gypsum
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) 807-2676

November 14, 2019

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory on October 17, 2019. 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, 2020

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=lmidkif@southernco.com, c=US
Date: 2019.11.15 08:17:04 -06'00'

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: 2019.11.15 14:16:59 -06'00'



REPORT OF LABORATORY ANALYSIS

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Alabama Power's General Test Laboratory.



Metals ICP

Gorgas Gypsum

WMWGORG_1248

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ23590	658830	WMWGORG_1248
AZ23591	658830	WMWGORG_1248
AZ23592	658830	WMWGORG_1248
AZ23593	658830	WMWGORG_1248
AZ23594	658830	WMWGORG_1248
AZ23595	658830	WMWGORG_1248
AZ23596	658830	WMWGORG_1248
AZ23597	658830	WMWGORG_1248
AZ23598	658830	WMWGORG_1248
AZ23599	658830	WMWGORG_1248
AZ23600	658831	WMWGORG_1248
AZ23601	658831	WMWGORG_1248
AZ23602	658831	WMWGORG_1248
AZ23603	658831	WMWGORG_1248
AZ23604	658831	WMWGORG_1248
AZ23605	658831	WMWGORG_1248

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.

Revision 4

- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- The high standard readbacks associated with EPA 200.7 were within acceptance criteria.
- 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:
 - AZ23605 MS/MSD spike level is less than 30% of the sample nominal concentration.
 - 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:

<u>Sample</u>	<u>Analyte</u>	<u>Dilution</u>
AZ23590	Calcium	20.3
AZ23591	Calcium	20.3
AZ23592	Calcium	20.3
AZ23593	Calcium	20.3
AZ23595	Calcium & Boron	20.3
AZ23596	Calcium & Boron	20.3
AZ23598	Calcium	20.3
AZ23599	Calcium	20.3
AZ23601	Calcium	20.3
AZ23602	Calcium	20.3
AZ23603	Calcium	20.3
AZ23604	Calcium	20.3
AZ23605	Calcium	20.3

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

Metals ICPMS

Gorgas Gypsum

WMWGORG_1248

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ23590	659323	WMWGORG_1248
AZ23591	659323	WMWGORG_1248
AZ23592	659323	WMWGORG_1248
AZ23593	659323	WMWGORG_1248
AZ23594	659323	WMWGORG_1248
AZ23595	659323	WMWGORG_1248
AZ23596	659323	WMWGORG_1248
AZ23597	659323	WMWGORG_1248
AZ23598	659323	WMWGORG_1248
AZ23599	659323	WMWGORG_1248
AZ23600	659324	WMWGORG_1248
AZ23601	659324	WMWGORG_1248
AZ23602	659324	WMWGORG_1248
AZ23603	659324	WMWGORG_1248
AZ23604	659324	WMWGORG_1248
AZ23605	659324	WMWGORG_1248

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

Mercury

Gorgas Gypsum

WMWGORG_1248

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ23590	659052	WMWGORG_1248
AZ23591	659052	WMWGORG_1248
AZ23592	659052	WMWGORG_1248
AZ23593	659052	WMWGORG_1248
AZ23594	659052	WMWGORG_1248
AZ23595	659052	WMWGORG_1248
AZ23596	659052	WMWGORG_1248
AZ23597	659052	WMWGORG_1248
AZ23598	659052	WMWGORG_1248
AZ23599	659052	WMWGORG_1248
AZ23600	659053	WMWGORG_1248
AZ23601	659053	WMWGORG_1248
AZ23602	659053	WMWGORG_1248
AZ23603	659053	WMWGORG_1248
AZ23604	659053	WMWGORG_1248
AZ23605	659053	WMWGORG_1248

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.

Revision 4

- 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.

TDS

Gorgas Gypsum

WMWGORG_1248

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ23590	658910	WMWGORG_1248
AZ23591	658910	WMWGORG_1248
AZ23592	658910	WMWGORG_1248
AZ23593	658910	WMWGORG_1248
AZ23594	658910	WMWGORG_1248
AZ23595	658910	WMWGORG_1248
AZ23596	658911	WMWGORG_1248
AZ23597	658911	WMWGORG_1248
AZ23598	658911	WMWGORG_1248
AZ23599	658911	WMWGORG_1248
AZ23600	658911	WMWGORG_1248
AZ23601	658911	WMWGORG_1248
AZ23602	658911	WMWGORG_1248
AZ23603	658911	WMWGORG_1248
AZ23604	658911	WMWGORG_1248
AZ23605	658911	WMWGORG_1248

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:
 - AZ23594
 - AZ23597
 - AZ23600

Anions

Gorgas Gypsum

WMWGORG_1248

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ23590	659275, 659277, & 659754	WMWGORG_1248
AZ23591	659275, 659277, & 659754	WMWGORG_1248
AZ23592	659275, 659277, & 659754	WMWGORG_1248
AZ23593	659275, 659277, & 659754	WMWGORG_1248
AZ23594	659275, 659277, & 659754	WMWGORG_1248
AZ23595	659275, 659277, & 659754	WMWGORG_1248
AZ23596	659275, 659277, & 659754	WMWGORG_1248
AZ23597	659275, 659277, & 659754	WMWGORG_1248
AZ23598	659275, 659277, & 659754	WMWGORG_1248
AZ23599	659275, 659277, & 659754	WMWGORG_1248
AZ23600	659276, 659278, & 659755	WMWGORG_1248
AZ23601	659276, 659278, & 659755	WMWGORG_1248
AZ23602	659276, 659278, & 659755	WMWGORG_1248
AZ23603	659276, 659278, & 659755	WMWGORG_1248
AZ23604	659276, 659278, & 659755	WMWGORG_1248
AZ23605	659276, 659278, & 659755	WMWGORG_1248

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 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.

- 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:
 - AZ23599 MS recovery for Fluoride did not meet acceptance criteria. Low recovery for this matrix may be due to the presence of a high concentration of polyvalent cation.
- 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:

<u>Sample</u>	<u>Analyte</u>	<u>Dilution</u>
AZ23590	Sulfate & Chloride	200 & 16
AZ23591	Sulfate & Chloride	40 & 10
AZ23592	Sulfate	80
AZ23593	Sulfate	80
AZ23595	Sulfate & Chloride	200 & 10
AZ23596	Sulfate & Chloride	100 & 10
AZ23598	Sulfate & Chloride	100 & 16
AZ23599	Sulfate & Chloride	80 & 10
AZ23601	Sulfate & Chloride	100 & 40
AZ23602	Sulfate	40
AZ23603	Sulfate	40
AZ23604	Sulfate	200
AZ23605	Sulfate	400

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

Certificate Of Analysis

Description: Gorgas Gypsum - MW-3

Location Code: WMWGORG
Collected: 10/14/19 12:17
Customer ID:
Submittal Date: 10/17/19 09:11

Laboratory ID Number: AZ23590

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 09:43		1.015	2.48	mg/L	0.03	0.1	
* Calcium, Total	10/17/19 14:45	10/18/19 10:57		20.3	552	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 09:43		1.015	0.459	mg/L	0.01	0.02	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 12:29		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 12:29		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 12:29		1.015	0.0122	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 12:29		1.015	0.00162	mg/L	0.0006	0.003	J
* Cadmium, Total	10/17/19 12:29	10/18/19 12:29		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 12:29		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 12:29		1.015	0.102	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 12:29		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 12:29		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 12:29		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 12:29		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/22/19 10:04	10/22/19 14:29		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	5110	mg/L		312.5	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 09:54	10/23/19 09:54		16	228	mg/L	8.00	16	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:16	10/23/19 11:16		1	0.619	mg/L	0.05	0.1	
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:23	11/4/19 10:23		200	3110	mg/L	100.00	200	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	10/14/19 12:13	10/14/19 12:13			4097.65	uS/cm			FA
pH	10/14/19 12:13	10/14/19 12:13			6.04	SU			FA
Temperature	10/14/19 12:13	10/14/19 12:13			20.28	C			FA
Turbidity	10/14/19 12:13	10/14/19 12:13			2.83	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/14/19 12:17
Customer ID:
Delivery Date: 10/17/19 09:11

Description: Gorgas Gypsum - MW-3

Laboratory ID Number: AZ23590

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23599	Mercury, Total by CVAA	mg/L	0.0000306	0.0005	0.004	0.00423	0.00423	0.00411	0.0034 to 0.0046	106	70 to 130	0.0544	20
AZ23599	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.105	0.0995	0.085 to 0.115	104	70 to 130	0.959	20
AZ23599	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.106	0.107	0.100	0.085 to 0.115	104	70 to 130	0.962	20
AZ23599	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.122	0.123	0.101	0.085 to 0.115	107	70 to 130	0.753	20
AZ23599	Boron, Total	mg/L	0.00358	0.0650254	1.00	4.36	4.33	0.987	0.85 to 1.15	99.2	70 to 130	0.717	20
AZ23599	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.910	20
AZ23599	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.479	0.462	0.193	0.17 to 0.23	109	70 to 130	3.59	20
AZ23599	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.101	0.100	0.0990	0.085 to 0.115	101	70 to 130	0.795	20
AZ23599	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.109	0.108	0.104	0.085 to 0.115	108	70 to 130	0.911	20
AZ23599	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.101	0.103	0.0962	0.085 to 0.115	96.5	70 to 130	2.49	20
AZ23599	Calcium, Total	mg/L	0.00774	0.1518	5.00	98.9	98.8	5.08	4.25 to 5.75	109	70 to 130	0.147	20
AZ23599	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.309	0.307	0.101	0.085 to 0.115	95.7	70 to 130	0.673	20
AZ23599	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.101	0.101	0.0927	0.085 to 0.115	101	70 to 130	0.0528	20
AZ23599	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.104	0.104	0.103	0.085 to 0.115	104	70 to 130	0.320	20
AZ23599	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.106	0.105	0.106	0.085 to 0.115	106	70 to 130	0.836	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/14/19 12:17
Customer ID:
Delivery Date: 10/17/19 09:11

Description: Gorgas Gypsum - MW-3

Laboratory ID Number: AZ23590

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ23595	Solids, Dissolved	mg/L	0.0000	25			3100	55.0	40 to 60			0.270	5
AZ23599	Fluoride	mg/L	0.00212	0.05	2.50	0.621	-0.0414	2.40	2.25 to 2.75	24.8	80 to 120	0.00	20
AZ23599	Chloride	mg/L	0.0452	0.50	100	167	58.1	10.1	9 to 11	108	80 to 120	1.71	20
AZ23599	Sulfate	mg/L	-0.295	0.50	1600	2090	617	19.5	18 to 22	90.6	80 to 120	3.82	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-4V

Location Code: WMWGORG
Collected: 10/14/19 13:30
Customer ID:
Submittal Date: 10/17/19 09:11

Laboratory ID Number: AZ23591

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA		Preparation Method: EPA 1638					
* Boron, Total	10/17/19 14:45	10/18/19 09:46		1.015	5.64	mg/L	0.03	0.1	
* Calcium, Total	10/17/19 14:45	10/18/19 11:00		20.3	173	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 09:46		1.015	0.317	mg/L	0.01	0.02	
Analytical Method: EPA 200.8		Analyst: DLJ		Preparation Method: EPA 1638					
* Antimony, Total	10/17/19 12:29	10/18/19 12:31		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 12:31		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 12:31		1.015	0.0123	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 12:31		1.015	0.00382	mg/L	0.0006	0.003	
* Cadmium, Total	10/17/19 12:29	10/18/19 12:31		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 12:31		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 12:31		1.015	0.120	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 12:31		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 12:31		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 12:31		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 12:31		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/22/19 10:04	10/22/19 14:31		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	1340	mg/L		100	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 09:52	10/23/19 09:52		10	122	mg/L	5.00	10	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:17	10/23/19 11:17		1	0.449	mg/L	0.05	0.1	
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:24	11/4/19 10:24		40	818	mg/L	20.00	40	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	10/14/19 13:27	10/14/19 13:27			1420.37	uS/cm			FA
pH	10/14/19 13:27	10/14/19 13:27			5.89	SU			FA
Temperature	10/14/19 13:27	10/14/19 13:27			20.48	C			FA
Turbidity	10/14/19 13:27	10/14/19 13:27			2.29	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/14/19 13:30
Customer ID:
Delivery Date: 10/17/19 09:11

Description: Gorgas Gypsum - MW-4V

Laboratory ID Number: AZ23591

Sample	Analysis	Units	MB		MS	MSD	Standard	Standard Limit	Rec		Prec Limit		
			MB	Limit					Rec	Limit			
AZ23599	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.106	0.107	0.100	0.085 to 0.115	104	70 to 130	0.962	20
AZ23599	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.105	0.0995	0.085 to 0.115	104	70 to 130	0.959	20
AZ23599	Mercury, Total by CVAA	mg/L	0.0000306	0.0005	0.004	0.00423	0.00423	0.00411	0.0034 to 0.0046	106	70 to 130	0.0544	20
AZ23599	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.101	0.101	0.0927	0.085 to 0.115	101	70 to 130	0.0528	20
AZ23599	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.104	0.104	0.103	0.085 to 0.115	104	70 to 130	0.320	20
AZ23599	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.106	0.105	0.106	0.085 to 0.115	106	70 to 130	0.836	20
AZ23599	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.109	0.108	0.104	0.085 to 0.115	108	70 to 130	0.911	20
AZ23599	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.101	0.103	0.0962	0.085 to 0.115	96.5	70 to 130	2.49	20
AZ23599	Calcium, Total	mg/L	0.00774	0.1518	5.00	98.9	98.8	5.08	4.25 to 5.75	109	70 to 130	0.147	20
AZ23599	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.309	0.307	0.101	0.085 to 0.115	95.7	70 to 130	0.673	20
AZ23599	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.122	0.123	0.101	0.085 to 0.115	107	70 to 130	0.753	20
AZ23599	Boron, Total	mg/L	0.00358	0.0650254	1.00	4.36	4.33	0.987	0.85 to 1.15	99.2	70 to 130	0.717	20
AZ23599	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.910	20
AZ23599	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.479	0.462	0.193	0.17 to 0.23	109	70 to 130	3.59	20
AZ23599	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.101	0.100	0.0990	0.085 to 0.115	101	70 to 130	0.795	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/14/19 13:30
Customer ID:
Delivery Date: 10/17/19 09:11

Description: Gorgas Gypsum - MW-4V

Laboratory ID Number: AZ23591

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ23595	Solids, Dissolved	mg/L	0.0000	25			3100	55.0	40 to 60			0.270	5
AZ23599	Fluoride	mg/L	0.00212	0.05	2.50	0.621	-0.0414	2.40	2.25 to 2.75	24.8	80 to 120	0.00	20
AZ23599	Chloride	mg/L	0.0452	0.50	100	167	58.1	10.1	9 to 11	108	80 to 120	1.71	20
AZ23599	Sulfate	mg/L	-0.295	0.50	1600	2090	617	19.5	18 to 22	90.6	80 to 120	3.82	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-1L

Location Code: WMWGORG
Collected: 10/16/19 11:53
Customer ID:
Submittal Date: 10/17/19 09:11

Laboratory ID Number: AZ23592

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7			Analyst: RDA		Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 09:49		1.015	0.0385	mg/L	0.03	0.1	J
* Calcium, Total	10/17/19 14:45	10/18/19 11:03		20.3	157	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 09:49		1.015	0.0263	mg/L	0.01	0.02	
Analytical Method: EPA 200.8			Analyst: DLJ		Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 12:34		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 12:34		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 12:34		1.015	0.0106	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 12:34		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/17/19 12:29	10/18/19 12:34		1.015	0.00225	mg/L	0.0003	0.001	
* Chromium, Total	10/17/19 12:29	10/18/19 12:34		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 12:34		1.015	0.0800	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 12:34		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 12:34		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 12:34		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 12:34		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1			Analyst: GAS						
* Mercury, Total by CVAA	10/22/19 10:04	10/22/19 14:33		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C			Analyst: TJW						
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	3650	mg/L		147.1	
Analytical Method: SM4500Cl E			Analyst: JCC						
* Chloride	10/23/19 09:43	10/23/19 09:43		1	2.42	mg/L	0.50	1	
Analytical Method: SM4500F G 2017			Analyst: JCC						
* Fluoride	10/23/19 11:18	10/23/19 11:18		1	0.0756	mg/L	0.05	0.1	J
Analytical Method: SM4500SO4 E			Analyst: JCC						
* Sulfate	11/4/19 10:26	11/4/19 10:26		80	1680	mg/L	40.00	80	
Analytical Method: Field Measurements			Analyst: TJD						
Conductivity	10/16/19 11:49	10/16/19 11:49			2290.08	uS/cm			FA
pH	10/16/19 11:49	10/16/19 11:49			5.16	SU			FA
Temperature	10/16/19 11:49	10/16/19 11:49			19.75	C			FA
Turbidity	10/16/19 11:49	10/16/19 11:49			1.42	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 11:53
Customer ID:
Delivery Date: 10/17/19 09:11

Description: Gorgas Gypsum - MW-1L

Laboratory ID Number: AZ23592

Sample	Analysis	Units	MB		MS	MSD	Standard	Standard Limit	Rec		Prec Limit		
			MB	Limit					Rec	Prec			
AZ23599	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.106	0.107	0.100	0.085 to 0.115	104	70 to 130	0.962	20
AZ23599	Mercury, Total by CVAA	mg/L	0.0000306	0.0005	0.004	0.00423	0.00423	0.00411	0.0034 to 0.0046	106	70 to 130	0.0544	20
AZ23599	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.105	0.0995	0.085 to 0.115	104	70 to 130	0.959	20
AZ23599	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.101	0.101	0.0927	0.085 to 0.115	101	70 to 130	0.0528	20
AZ23599	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.104	0.104	0.103	0.085 to 0.115	104	70 to 130	0.320	20
AZ23599	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.106	0.105	0.106	0.085 to 0.115	106	70 to 130	0.836	20
AZ23599	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.109	0.108	0.104	0.085 to 0.115	108	70 to 130	0.911	20
AZ23599	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.101	0.103	0.0962	0.085 to 0.115	96.5	70 to 130	2.49	20
AZ23599	Calcium, Total	mg/L	0.00774	0.1518	5.00	98.9	98.8	5.08	4.25 to 5.75	109	70 to 130	0.147	20
AZ23599	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.309	0.307	0.101	0.085 to 0.115	95.7	70 to 130	0.673	20
AZ23599	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.122	0.123	0.101	0.085 to 0.115	107	70 to 130	0.753	20
AZ23599	Boron, Total	mg/L	0.00358	0.0650254	1.00	4.36	4.33	0.987	0.85 to 1.15	99.2	70 to 130	0.717	20
AZ23599	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.910	20
AZ23599	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.479	0.462	0.193	0.17 to 0.23	109	70 to 130	3.59	20
AZ23599	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.101	0.100	0.0990	0.085 to 0.115	101	70 to 130	0.795	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 11:53
Customer ID:
Delivery Date: 10/17/19 09:11

Description: Gorgas Gypsum - MW-1L

Laboratory ID Number: AZ23592

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Limit
AZ23599	Chloride	mg/L	0.0452	0.50	100	167	58.1	10.1	9 to 11	108	80 to 120	1.71	20
AZ23595	Solids, Dissolved	mg/L	0.0000	25			3100	55.0	40 to 60			0.270	5
AZ23599	Sulfate	mg/L	-0.295	0.50	1600	2090	617	19.5	18 to 22	90.6	80 to 120	3.82	20
AZ23599	Fluoride	mg/L	0.00212	0.05	2.50	0.621	-0.0414	2.40	2.25 to 2.75	24.8	80 to 120	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-2L

Location Code: WMWGORG
Collected: 10/16/19 13:02
Customer ID:
Submittal Date: 10/17/19 09:11

Laboratory ID Number: AZ23593

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7			Analyst: RDA		Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 09:52		1.015	0.0419	mg/L	0.03	0.1	J
* Calcium, Total	10/17/19 14:45	10/18/19 11:05		20.3	194	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 09:52		1.015	0.0661	mg/L	0.01	0.02	
Analytical Method: EPA 200.8			Analyst: DLJ		Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 12:36		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 12:36		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 12:36		1.015	0.0146	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 12:36		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/17/19 12:29	10/18/19 12:36		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 12:36		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 12:36		1.015	0.0730	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 12:36		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 12:36		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 12:36		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 12:36		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1			Analyst: GAS						
* Mercury, Total by CVAA	10/22/19 10:04	10/22/19 14:36		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C			Analyst: TJW						
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	1830	mg/L		125	
Analytical Method: SM4500Cl E			Analyst: JCC						
* Chloride	10/23/19 09:44	10/23/19 09:44		1	4.04	mg/L	0.50	1	
Analytical Method: SM4500F G 2017			Analyst: JCC						
* Fluoride	10/23/19 11:19	10/23/19 11:19		1	0.114	mg/L	0.05	0.1	
Analytical Method: SM4500SO4 E			Analyst: JCC						
* Sulfate	11/4/19 10:27	11/4/19 10:27		80	1170	mg/L	40.00	80	
Analytical Method: Field Measurements			Analyst: TJD						
Conductivity	10/16/19 12:58	10/16/19 12:58			1974.56	uS/cm			FA
pH	10/16/19 12:58	10/16/19 12:58			5.98	SU			FA
Temperature	10/16/19 12:58	10/16/19 12:58			19.06	C			FA
Turbidity	10/16/19 12:58	10/16/19 12:58			2.56	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 13:02
Customer ID:
Delivery Date: 10/17/19 09:11

Description: Gorgas Gypsum - MW-2L

Laboratory ID Number: AZ23593

Sample	Analysis	Units	MB		MS	MSD	Standard	Standard Limit	Rec		Prec Limit		
			MB	Limit					Rec	Limit			
AZ23599	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.106	0.107	0.100	0.085 to 0.115	104	70 to 130	0.962	20
AZ23599	Mercury, Total by CVAA	mg/L	0.0000306	0.0005	0.004	0.00423	0.00423	0.00411	0.0034 to 0.0046	106	70 to 130	0.0544	20
AZ23599	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.105	0.0995	0.085 to 0.115	104	70 to 130	0.959	20
AZ23599	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.122	0.123	0.101	0.085 to 0.115	107	70 to 130	0.753	20
AZ23599	Boron, Total	mg/L	0.00358	0.0650254	1.00	4.36	4.33	0.987	0.85 to 1.15	99.2	70 to 130	0.717	20
AZ23599	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.910	20
AZ23599	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.479	0.462	0.193	0.17 to 0.23	109	70 to 130	3.59	20
AZ23599	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.101	0.100	0.0990	0.085 to 0.115	101	70 to 130	0.795	20
AZ23599	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.109	0.108	0.104	0.085 to 0.115	108	70 to 130	0.911	20
AZ23599	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.101	0.103	0.0962	0.085 to 0.115	96.5	70 to 130	2.49	20
AZ23599	Calcium, Total	mg/L	0.00774	0.1518	5.00	98.9	98.8	5.08	4.25 to 5.75	109	70 to 130	0.147	20
AZ23599	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.309	0.307	0.101	0.085 to 0.115	95.7	70 to 130	0.673	20
AZ23599	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.101	0.101	0.0927	0.085 to 0.115	101	70 to 130	0.0528	20
AZ23599	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.104	0.104	0.103	0.085 to 0.115	104	70 to 130	0.320	20
AZ23599	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.106	0.105	0.106	0.085 to 0.115	106	70 to 130	0.836	20

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Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 13:02
Customer ID:
Delivery Date: 10/17/19 09:11

Description: Gorgas Gypsum - MW-2L

Laboratory ID Number: AZ23593

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ23595	Solids, Dissolved	mg/L	0.0000	25			3100	55.0	40 to 60			0.270	5
AZ23599	Fluoride	mg/L	0.00212	0.05	2.50	0.621	-0.0414	2.40	2.25 to 2.75	24.8	80 to 120	0.00	20
AZ23599	Chloride	mg/L	0.0452	0.50	100	167	58.1	10.1	9 to 11	108	80 to 120	1.71	20
AZ23599	Sulfate	mg/L	-0.295	0.50	1600	2090	617	19.5	18 to 22	90.6	80 to 120	3.82	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum Field Blank

Location Code: WMWGORGFB
Collected: 10/16/19 13:20
Customer ID:
Submittal Date: 10/17/19 09:11

Laboratory ID Number: AZ23594

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 09:55		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/17/19 14:45	10/18/19 09:55		1.015	Not Detected	mg/L	0.1	0.5	U
* Lithium, Total	10/17/19 14:45	10/18/19 09:55		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.002	0.01	U
* Beryllium, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 12:39		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/22/19 10:04	10/22/19 14:38		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 09:45	10/23/19 09:45		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:20	10/23/19 11:20		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:28	11/4/19 10:28		1	Not Detected	mg/L	0.50	1	U

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

Comments:

Batch QC Summary

Customer Account: WMWGORGFB
Sample Date: 10/16/19 13:20
Customer ID:
Delivery Date: 10/17/19 09:11

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ23594

Sample	Analysis	Units	MB		MS	MSD	Standard	Standard Limit	Rec		Prec Limit		
			MB	Limit					Rec	Limit			
AZ23599	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.106	0.107	0.100	0.085 to 0.115	104	70 to 130	0.962	20
AZ23599	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.105	0.0995	0.085 to 0.115	104	70 to 130	0.959	20
AZ23599	Mercury, Total by CVAA	mg/L	0.0000306	0.0005	0.004	0.00423	0.00423	0.00411	0.0034 to 0.0046	106	70 to 130	0.0544	20
AZ23599	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.101	0.101	0.0927	0.085 to 0.115	101	70 to 130	0.0528	20
AZ23599	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.104	0.104	0.103	0.085 to 0.115	104	70 to 130	0.320	20
AZ23599	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.106	0.105	0.106	0.085 to 0.115	106	70 to 130	0.836	20
AZ23599	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.109	0.108	0.104	0.085 to 0.115	108	70 to 130	0.911	20
AZ23599	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.101	0.103	0.0962	0.085 to 0.115	96.5	70 to 130	2.49	20
AZ23599	Calcium, Total	mg/L	0.00774	0.1518	5.00	98.9	98.8	5.08	4.25 to 5.75	109	70 to 130	0.147	20
AZ23599	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.309	0.307	0.101	0.085 to 0.115	95.7	70 to 130	0.673	20
AZ23599	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.122	0.123	0.101	0.085 to 0.115	107	70 to 130	0.753	20
AZ23599	Boron, Total	mg/L	0.00358	0.0650254	1.00	4.36	4.33	0.987	0.85 to 1.15	99.2	70 to 130	0.717	20
AZ23599	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.910	20
AZ23599	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.479	0.462	0.193	0.17 to 0.23	109	70 to 130	3.59	20
AZ23599	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.101	0.100	0.0990	0.085 to 0.115	101	70 to 130	0.795	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORGFB

Sample Date: 10/16/19 13:20

Customer ID:

Delivery Date: 10/17/19 09:11

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ23594

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ23595	Solids, Dissolved	mg/L	0.0000	25			3100	55.0	40 to 60			0.270	5
AZ23599	Chloride	mg/L	0.0452	0.50	100	167	58.1	10.1	9 to 11	108	80 to 120	1.71	20
AZ23599	Sulfate	mg/L	-0.295	0.50	1600	2090	617	19.5	18 to 22	90.6	80 to 120	3.82	20
AZ23599	Fluoride	mg/L	0.00212	0.05	2.50	0.621	-0.0414	2.40	2.25 to 2.75	24.8	80 to 120	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-9H

Location Code: WMWGORG
Collected: 10/16/19 14:35
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23595

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 11:08		20.3	10.7	mg/L	0.609	2.03	
* Calcium, Total	10/17/19 14:45	10/18/19 11:08		20.3	363	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 09:58		1.015	0.184	mg/L	0.01	0.02	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 12:42		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 12:42		1.015	0.00190	mg/L	0.001	0.005	J
* Barium, Total	10/17/19 12:29	10/18/19 12:42		1.015	0.0163	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 12:42		1.015	0.000985	mg/L	0.0006	0.003	J
* Cadmium, Total	10/17/19 12:29	10/18/19 12:42		1.015	0.000362	mg/L	0.0003	0.001	J
* Chromium, Total	10/17/19 12:29	10/18/19 12:42		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 12:42		1.015	0.168	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 12:42		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 12:42		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 12:42		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 12:42		1.015	0.000262	mg/L	0.0002	0.001	J
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/22/19 10:04	10/22/19 14:41		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	3080	mg/L		208.3	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 09:55	10/23/19 09:55		10	145	mg/L	5.00	10	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:22	10/23/19 11:22		1	0.101	mg/L	0.05	0.1	
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:29	11/4/19 10:29		200	2020	mg/L	100.00	200	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	10/16/19 14:32	10/16/19 14:32			3170.12	uS/cm			FA
pH	10/16/19 14:32	10/16/19 14:32			5.43	SU			FA
Temperature	10/16/19 14:32	10/16/19 14:32			21.12	C			FA
Turbidity	10/16/19 14:32	10/16/19 14:32			2.71	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 14:35
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-9H

Laboratory ID Number: AZ23595

Sample	Analysis	Units	MB		MS	MSD	Standard	Standard Limit	Rec		Prec Limit		
			MB	Limit					Rec	Limit			
AZ23599	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.106	0.107	0.100	0.085 to 0.115	104	70 to 130	0.962	20
AZ23599	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.105	0.0995	0.085 to 0.115	104	70 to 130	0.959	20
AZ23599	Mercury, Total by CVAA	mg/L	0.0000306	0.0005	0.004	0.00423	0.00423	0.00411	0.0034 to 0.0046	106	70 to 130	0.0544	20
AZ23599	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.101	0.101	0.0927	0.085 to 0.115	101	70 to 130	0.0528	20
AZ23599	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.104	0.104	0.103	0.085 to 0.115	104	70 to 130	0.320	20
AZ23599	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.106	0.105	0.106	0.085 to 0.115	106	70 to 130	0.836	20
AZ23599	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.109	0.108	0.104	0.085 to 0.115	108	70 to 130	0.911	20
AZ23599	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.101	0.103	0.0962	0.085 to 0.115	96.5	70 to 130	2.49	20
AZ23599	Calcium, Total	mg/L	0.00774	0.1518	5.00	98.9	98.8	5.08	4.25 to 5.75	109	70 to 130	0.147	20
AZ23599	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.309	0.307	0.101	0.085 to 0.115	95.7	70 to 130	0.673	20
AZ23599	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.122	0.123	0.101	0.085 to 0.115	107	70 to 130	0.753	20
AZ23599	Boron, Total	mg/L	0.00358	0.0650254	1.00	4.36	4.33	0.987	0.85 to 1.15	99.2	70 to 130	0.717	20
AZ23599	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.910	20
AZ23599	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.479	0.462	0.193	0.17 to 0.23	109	70 to 130	3.59	20
AZ23599	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.101	0.100	0.0990	0.085 to 0.115	101	70 to 130	0.795	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 14:35
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-9H

Laboratory ID Number: AZ23595

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ23595	Solids, Dissolved	mg/L	0.0000	25			3100	55.0	40 to 60			0.270	5
AZ23599	Chloride	mg/L	0.0452	0.50	100	167	58.1	10.1	9 to 11	108	80 to 120	1.71	20
AZ23599	Fluoride	mg/L	0.00212	0.05	2.50	0.621	-0.0414	2.40	2.25 to 2.75	24.8	80 to 120	0.00	20
AZ23599	Sulfate	mg/L	-0.295	0.50	1600	2090	617	19.5	18 to 22	90.6	80 to 120	3.82	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-9H DUP

Location Code: WMWGORG
Collected: 10/16/19 14:35
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23596

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 11:11		20.3	10.4	mg/L	0.609	2.03	
* Calcium, Total	10/17/19 14:45	10/18/19 11:11		20.3	357	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 10:01		1.015	0.187	mg/L	0.01	0.02	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 12:44		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 12:44		1.015	0.00186	mg/L	0.001	0.005	J
* Barium, Total	10/17/19 12:29	10/18/19 12:44		1.015	0.0168	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 12:44		1.015	0.00104	mg/L	0.0006	0.003	J
* Cadmium, Total	10/17/19 12:29	10/18/19 12:44		1.015	0.000371	mg/L	0.0003	0.001	J
* Chromium, Total	10/17/19 12:29	10/18/19 12:44		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 12:44		1.015	0.167	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 12:44		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 12:44		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 12:44		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 12:44		1.015	0.000255	mg/L	0.0002	0.001	J
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/22/19 10:04	10/22/19 14:43		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	3120	mg/L		208.3	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 09:56	10/23/19 09:56		10	145	mg/L	5.00	10	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:23	10/23/19 11:23		1	0.104	mg/L	0.05	0.1	
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:30	11/4/19 10:30		100	1910	mg/L	50.00	100	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	10/16/19 14:32	10/16/19 14:32			3170.12	uS/cm			FA
pH	10/16/19 14:32	10/16/19 14:32			5.43	SU			FA
Temperature	10/16/19 14:32	10/16/19 14:32			21.12	C			FA
Turbidity	10/16/19 14:32	10/16/19 14:32			2.71	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 14:35
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-9H DUP

Laboratory ID Number: AZ23596

Sample	Analysis	Units	MB		MS	MSD	Standard	Standard Limit	Rec		Prec Limit		
			MB	Limit					Rec	Prec			
AZ23599	Cadmium, Total	mg/L	0.0000000	0.0001474	0.10	0.106	0.107	0.100	0.085 to 0.115	104	70 to 130	0.962	20
AZ23599	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.105	0.0995	0.085 to 0.115	104	70 to 130	0.959	20
AZ23599	Mercury, Total by CVAA	mg/L	0.0000306	0.0005	0.004	0.00423	0.00423	0.00411	0.0034 to 0.0046	106	70 to 130	0.0544	20
AZ23599	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.109	0.108	0.104	0.085 to 0.115	108	70 to 130	0.911	20
AZ23599	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.101	0.103	0.0962	0.085 to 0.115	96.5	70 to 130	2.49	20
AZ23599	Calcium, Total	mg/L	0.00774	0.1518	5.00	98.9	98.8	5.08	4.25 to 5.75	109	70 to 130	0.147	20
AZ23599	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.309	0.307	0.101	0.085 to 0.115	95.7	70 to 130	0.673	20
AZ23599	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.101	0.101	0.0927	0.085 to 0.115	101	70 to 130	0.0528	20
AZ23599	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.104	0.104	0.103	0.085 to 0.115	104	70 to 130	0.320	20
AZ23599	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.106	0.105	0.106	0.085 to 0.115	106	70 to 130	0.836	20
AZ23599	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.122	0.123	0.101	0.085 to 0.115	107	70 to 130	0.753	20
AZ23599	Boron, Total	mg/L	0.00358	0.0650254	1.00	4.36	4.33	0.987	0.85 to 1.15	99.2	70 to 130	0.717	20
AZ23599	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.910	20
AZ23599	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.479	0.462	0.193	0.17 to 0.23	109	70 to 130	3.59	20
AZ23599	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.101	0.100	0.0990	0.085 to 0.115	101	70 to 130	0.795	20

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Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 14:35
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-9H DUP

Laboratory ID Number: AZ23596

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23599	Fluoride	mg/L	0.00212	0.05	2.50	0.621	-0.0414	2.40	2.25 to 2.75	24.8	80 to 120	0.00	20
AZ23605	Solids, Dissolved	mg/L	0.0000	25			4040	55.0	40 to 60			0.247	5
AZ23599	Chloride	mg/L	0.0452	0.50	100	167	58.1	10.1	9 to 11	108	80 to 120	1.71	20
AZ23599	Sulfate	mg/L	-0.295	0.50	1600	2090	617	19.5	18 to 22	90.6	80 to 120	3.82	20

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum Equipment Blank

Location Code: WMWGORGEB
Collected: 10/16/19 15:15
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23597

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7			Analyst: RDA		Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 10:04		1.015	0.0454	mg/L	0.03	0.1	J
* Calcium, Total	10/17/19 14:45	10/18/19 10:04		1.015	Not Detected	mg/L	0.1	0.5	U
* Lithium, Total	10/17/19 14:45	10/18/19 10:04		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8			Analyst: DLJ		Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.002	0.01	U
* Beryllium, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 12:47		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1			Analyst: GAS						
* Mercury, Total by CVAA	10/22/19 10:04	10/22/19 14:45		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C			Analyst: TJW						
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	Not Detected	mg/L		25	U
Analytical Method: SM4500CI E			Analyst: JCC						
* Chloride	10/23/19 09:49	10/23/19 09:49		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017			Analyst: JCC						
* Fluoride	10/23/19 11:24	10/23/19 11:24		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E			Analyst: JCC						
* Sulfate	11/4/19 10:32	11/4/19 10:32		1	Not Detected	mg/L	0.50	1	U

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

Comments:

Batch QC Summary

Customer Account: WMWGORGEB
Sample Date: 10/16/19 15:15
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum Equipment Blank

Laboratory ID Number: AZ23597

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23599	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.106	0.107	0.100	0.085 to 0.115	104	70 to 130	0.962	20
AZ23599	Mercury, Total by CVAA	mg/L	0.0000306	0.0005	0.004	0.00423	0.00423	0.00411	0.0034 to 0.0046	106	70 to 130	0.0544	20
AZ23599	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.105	0.0995	0.085 to 0.115	104	70 to 130	0.959	20
AZ23599	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.109	0.108	0.104	0.085 to 0.115	108	70 to 130	0.911	20
AZ23599	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.101	0.103	0.0962	0.085 to 0.115	96.5	70 to 130	2.49	20
AZ23599	Calcium, Total	mg/L	0.00774	0.1518	5.00	98.9	98.8	5.08	4.25 to 5.75	109	70 to 130	0.147	20
AZ23599	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.309	0.307	0.101	0.085 to 0.115	95.7	70 to 130	0.673	20
AZ23599	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.101	0.101	0.0927	0.085 to 0.115	101	70 to 130	0.0528	20
AZ23599	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.104	0.104	0.103	0.085 to 0.115	104	70 to 130	0.320	20
AZ23599	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.106	0.105	0.106	0.085 to 0.115	106	70 to 130	0.836	20
AZ23599	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.122	0.123	0.101	0.085 to 0.115	107	70 to 130	0.753	20
AZ23599	Boron, Total	mg/L	0.00358	0.0650254	1.00	4.36	4.33	0.987	0.85 to 1.15	99.2	70 to 130	0.717	20
AZ23599	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.910	20
AZ23599	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.479	0.462	0.193	0.17 to 0.23	109	70 to 130	3.59	20
AZ23599	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.101	0.100	0.0990	0.085 to 0.115	101	70 to 130	0.795	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORGEB

Sample Date: 10/16/19 15:15

Customer ID:

Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum Equipment Blank

Laboratory ID Number: AZ23597

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ23605	Solids, Dissolved	mg/L	0.0000	25			4040	55.0	40 to 60			0.247	5
AZ23599	Chloride	mg/L	0.0452	0.50	100	167	58.1	10.1	9 to 11	108	80 to 120	1.71	20
AZ23599	Sulfate	mg/L	-0.295	0.50	1600	2090	617	19.5	18 to 22	90.6	80 to 120	3.82	20
AZ23599	Fluoride	mg/L	0.00212	0.05	2.50	0.621	-0.0414	2.40	2.25 to 2.75	24.8	80 to 120	0.00	20

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-3V

Location Code: WMWGORG
Collected: 10/14/19 13:10
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23598

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 10:07		1.015	2.38	mg/L	0.03	0.1	
* Calcium, Total	10/17/19 14:45	10/18/19 11:14		20.3	368	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 10:07		1.015	0.380	mg/L	0.01	0.02	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 12:50		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 12:50		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 12:50		1.015	0.0451	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 12:50		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/17/19 12:29	10/18/19 12:50		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 12:50		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 12:50		1.015	0.00845	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 12:50		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 12:50		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 12:50		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 12:50		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/22/19 10:04	10/22/19 14:48		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	3200	mg/L		250	
Analytical Method: SM4500CI E		Analyst: JCC							
* Chloride	10/23/19 09:57	10/23/19 09:57		16	298	mg/L	8.00	16	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:25	10/23/19 11:25		1	0.370	mg/L	0.05	0.1	
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:33	11/4/19 10:33		100	1710	mg/L	50.00	100	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/14/19 13:07	10/14/19 13:07			3620.70	uS/cm			FA
pH	10/14/19 13:07	10/14/19 13:07			6.39	SU			FA
Temperature	10/14/19 13:07	10/14/19 13:07			21.33	C			FA
Turbidity	10/14/19 13:07	10/14/19 13:07			1.31	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/14/19 13:10
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-3V

Laboratory ID Number: AZ23598

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23599	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.106	0.107	0.100	0.085 to 0.115	104	70 to 130	0.962	20
AZ23599	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.105	0.0995	0.085 to 0.115	104	70 to 130	0.959	20
AZ23599	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.122	0.123	0.101	0.085 to 0.115	107	70 to 130	0.753	20
AZ23599	Boron, Total	mg/L	0.00358	0.0650254	1.00	4.36	4.33	0.987	0.85 to 1.15	99.2	70 to 130	0.717	20
AZ23599	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.910	20
AZ23599	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.479	0.462	0.193	0.17 to 0.23	109	70 to 130	3.59	20
AZ23599	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.101	0.100	0.0990	0.085 to 0.115	101	70 to 130	0.795	20
AZ23599	Mercury, Total by CVAA	mg/L	0.0000306	0.0005	0.004	0.00423	0.00423	0.00411	0.0034 to 0.0046	106	70 to 130	0.0544	20
AZ23599	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.101	0.101	0.0927	0.085 to 0.115	101	70 to 130	0.0528	20
AZ23599	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.104	0.104	0.103	0.085 to 0.115	104	70 to 130	0.320	20
AZ23599	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.106	0.105	0.106	0.085 to 0.115	106	70 to 130	0.836	20
AZ23599	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.109	0.108	0.104	0.085 to 0.115	108	70 to 130	0.911	20
AZ23599	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.101	0.103	0.0962	0.085 to 0.115	96.5	70 to 130	2.49	20
AZ23599	Calcium, Total	mg/L	0.00774	0.1518	5.00	98.9	98.8	5.08	4.25 to 5.75	109	70 to 130	0.147	20
AZ23599	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.309	0.307	0.101	0.085 to 0.115	95.7	70 to 130	0.673	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/14/19 13:10
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-3V

Laboratory ID Number: AZ23598

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23599	Chloride	mg/L	0.0452	0.50	100	167	58.1	10.1	9 to 11	108	80 to 120	1.71	20
AZ23605	Solids, Dissolved	mg/L	0.0000	25			4040	55.0	40 to 60			0.247	5
AZ23599	Fluoride	mg/L	0.00212	0.05	2.50	0.621	-0.0414	2.40	2.25 to 2.75	24.8	80 to 120	0.00	20
AZ23599	Sulfate	mg/L	-0.295	0.50	1600	2090	617	19.5	18 to 22	90.6	80 to 120	3.82	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-4

Location Code: WMWGORG
Collected: 10/14/19 14:36
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23599

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 10:10		1.015	3.37	mg/L	0.03	0.1	
* Calcium, Total	10/17/19 14:45	10/18/19 11:17		20.3	93.5	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 10:10		1.015	0.262	mg/L	0.01	0.02	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 12:52		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 12:52		1.015	0.00120	mg/L	0.001	0.005	J
* Barium, Total	10/17/19 12:29	10/18/19 12:52		1.015	0.0147	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 12:52		1.015	0.00403	mg/L	0.0006	0.003	
* Cadmium, Total	10/17/19 12:29	10/18/19 12:52		1.015	0.00150	mg/L	0.0003	0.001	
* Chromium, Total	10/17/19 12:29	10/18/19 12:52		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 12:52		1.015	0.213	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 12:52		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 12:52		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 12:52		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 12:52		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/22/19 10:04	10/22/19 14:50		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	967	mg/L		75.8	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 10:14	10/23/19 10:14		10	59.1	mg/L	5.00	10	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:26	10/23/19 11:26		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:34	11/4/19 10:34		80	641	mg/L	40.00	80	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/14/19 14:32	10/14/19 14:32			1204.36	uS/cm			FA
pH	10/14/19 14:32	10/14/19 14:32			3.91	SU			FA
Temperature	10/14/19 14:32	10/14/19 14:32			20.74	C			FA
Turbidity	10/14/19 14:32	10/14/19 14:32			4.87	NTU			FA

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

Comments: Matrix Spike Recovery for Fluoride is out of spec. Low recovery for this matrix may be due to the presence of a high concentration of polyvalent cation. LBM 10/24/19

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/14/19 14:36
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-4

Laboratory ID Number: AZ23599

Sample	Analysis	Units	MB		MS	MSD	Standard	Standard Limit	Rec		Prec Limit		
			MB	Limit					Rec	Limit			
AZ23599	Cadmium, Total	mg/L	0.0000000	0.0001474	0.10	0.106	0.107	0.100	0.085 to 0.115	104	70 to 130	0.962	20
AZ23599	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.105	0.0995	0.085 to 0.115	104	70 to 130	0.959	20
AZ23599	Mercury, Total by CVAA	mg/L	0.0000306	0.0005	0.004	0.00423	0.00423	0.00411	0.0034 to 0.0046	106	70 to 130	0.0544	20
AZ23599	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.109	0.108	0.104	0.085 to 0.115	108	70 to 130	0.911	20
AZ23599	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.101	0.103	0.0962	0.085 to 0.115	96.5	70 to 130	2.49	20
AZ23599	Calcium, Total	mg/L	0.00774	0.1518	5.00	98.9	98.8	5.08	4.25 to 5.75	109	70 to 130	0.147	20
AZ23599	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.309	0.307	0.101	0.085 to 0.115	95.7	70 to 130	0.673	20
AZ23599	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.101	0.101	0.0927	0.085 to 0.115	101	70 to 130	0.0528	20
AZ23599	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.104	0.104	0.103	0.085 to 0.115	104	70 to 130	0.320	20
AZ23599	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.106	0.105	0.106	0.085 to 0.115	106	70 to 130	0.836	20
AZ23599	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.122	0.123	0.101	0.085 to 0.115	107	70 to 130	0.753	20
AZ23599	Boron, Total	mg/L	0.00358	0.0650254	1.00	4.36	4.33	0.987	0.85 to 1.15	99.2	70 to 130	0.717	20
AZ23599	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.106	0.105	0.105	0.085 to 0.115	106	70 to 130	0.910	20
AZ23599	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.479	0.462	0.193	0.17 to 0.23	109	70 to 130	3.59	20
AZ23599	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.101	0.100	0.0990	0.085 to 0.115	101	70 to 130	0.795	20

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments: Matrix Spike Recovery for Fluoride is out of spec. Low recovery for this matrix may be due to the presence of a high concentration of polyvalent cation. LBM 10/24/19

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/14/19 14:36
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-4

Laboratory ID Number: AZ23599

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Limit
AZ23599	Chloride	mg/L	0.0452	0.50	100	167	58.1	10.1	9 to 11	108	80 to 120	1.71	20
AZ23605	Solids, Dissolved	mg/L	0.0000	25			4040	55.0	40 to 60			0.247	5
AZ23599	Fluoride	mg/L	0.00212	0.05	2.50	0.621	-0.0414	2.40	2.25 to 2.75	24.8	80 to 120	0.00	20
AZ23599	Sulfate	mg/L	-0.295	0.50	1600	2090	617	19.5	18 to 22	90.6	80 to 120	3.82	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Matrix Spike Recovery for Fluoride is out of spec. Low recovery for this matrix may be due to the presence of a high concentration of polyvalent cation. LBM 10/24/19

Certificate Of Analysis

Description: Gorgas Gypsum Field Blank

Location Code: WMWGORGFB
Collected: 10/14/19 14:57
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23600

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/17/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.1	0.5	U
* Lithium, Total	10/17/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.002	0.01	U
* Beryllium, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 13:08		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/25/19 09:07	10/28/19 14:17		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 10:27	10/23/19 10:27		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:41	10/23/19 11:41		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:46	11/4/19 10:46		1	Not Detected	mg/L	0.50	1	U

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

Comments:

Batch QC Summary

Customer Account: WMWGORGFB
Sample Date: 10/14/19 14:57
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ23600

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec	Limit
			MB	Limit						Rec	Limit		
AZ23605	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.106	0.104	0.103	0.085 to 0.115	106	70 to 130	1.24	20
AZ23605	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.119	0.118	0.101	0.085 to 0.115	106	70 to 130	0.523	20
AZ23605	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.100	0.0990	0.0990	0.085 to 0.115	100	70 to 130	1.44	20
AZ23605	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.0995	0.0974	0.0927	0.085 to 0.115	99.5	70 to 130	2.13	20
AZ23605	Calcium, Total	mg/L	0.00774	0.1518	5.00	315	327	5.08	4.25 to 5.75	-814	70 to 130	3.70	20
AZ23605	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.307	0.303	0.193	0.17 to 0.23	127	70 to 130	1.22	20
AZ23605	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.107	0.108	0.104	0.085 to 0.115	107	70 to 130	1.04	20
AZ23605	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.104	0.0995	0.085 to 0.115	104	70 to 130	0.0717	20
AZ23605	Boron, Total	mg/L	0.00358	0.0650254	1.00	1.08	1.07	0.987	0.85 to 1.15	103	70 to 130	0.664	20
AZ23605	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.100	0.0998	0.100	0.085 to 0.115	100	70 to 130	0.383	20
AZ23605	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.0968	0.0930	0.0962	0.085 to 0.115	96.8	70 to 130	4.03	20
AZ23605	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.100	0.101	0.101	0.085 to 0.115	100	70 to 130	1.07	20
AZ23605	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.105	0.101	0.105	0.085 to 0.115	105	70 to 130	3.22	20
AZ23605	Mercury, Total by CVAA	mg/L	0.0000120	0.0005	0.004	0.00425	0.00420	0.00416	0.0034 to 0.0046	106	70 to 130	1.22	20
AZ23605	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.103	0.101	0.106	0.085 to 0.115	103	70 to 130	1.69	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORGFB

Sample Date: 10/14/19 14:57

Customer ID:

Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum Field Blank

Laboratory ID Number: AZ23600

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23605	Sulfate	mg/L	-0.486	0.50	8000	10200	2980	19.4	18 to 22	89.4	80 to 120	2.32	20
AZ23605	Solids, Dissolved	mg/L	0.0000	25			4040	55.0	40 to 60			0.247	5
AZ23605	Chloride	mg/L	0.0607	0.50	10.0	12.0	1.92	10.1	9 to 11	101	80 to 120	0.00	20
AZ23605	Fluoride	mg/L	0.0172	0.05	2.50	2.81	0.307	2.48	2.25 to 2.75	100	80 to 120	1.64	20

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-8

Location Code: WMWGORG
Collected: 10/14/19 15:34
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23601

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 10:27		1.015	2.11	mg/L	0.03	0.1	
* Calcium, Total	10/17/19 14:45	10/18/19 11:32		20.3	524	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 10:27		1.015	0.209	mg/L	0.01	0.02	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 13:11		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 13:11		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 13:11		1.015	0.0215	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 13:11		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/17/19 12:29	10/18/19 13:11		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 13:11		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 13:11		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/17/19 12:29	10/18/19 13:11		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 13:11		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 13:11		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 13:11		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/25/19 09:07	10/28/19 14:19		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	3730	mg/L		250	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 10:33	10/23/19 10:33		40	207	mg/L	20.00	40	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:42	10/23/19 11:42		1	0.118	mg/L	0.05	0.1	
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:48	11/4/19 10:48		100	2090	mg/L	50.00	100	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/14/19 15:30	10/14/19 15:30			3865.85	uS/cm			FA
pH	10/14/19 15:30	10/14/19 15:30			6.88	SU			FA
Temperature	10/14/19 15:30	10/14/19 15:30			21.28	C			FA
Turbidity	10/14/19 15:30	10/14/19 15:30			0.97	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/14/19 15:34
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-8

Laboratory ID Number: AZ23601

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec	Limit
			MB	Limit						Rec	Limit		
AZ23605	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.106	0.104	0.103	0.085 to 0.115	106	70 to 130	1.24	20
AZ23605	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.0995	0.0974	0.0927	0.085 to 0.115	99.5	70 to 130	2.13	20
AZ23605	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.119	0.118	0.101	0.085 to 0.115	106	70 to 130	0.523	20
AZ23605	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.100	0.0990	0.0990	0.085 to 0.115	100	70 to 130	1.44	20
AZ23605	Calcium, Total	mg/L	0.00774	0.1518	5.00	315	327	5.08	4.25 to 5.75	-814	70 to 130	3.70	20
AZ23605	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.307	0.303	0.193	0.17 to 0.23	127	70 to 130	1.22	20
AZ23605	Boron, Total	mg/L	0.00358	0.0650254	1.00	1.08	1.07	0.987	0.85 to 1.15	103	70 to 130	0.664	20
AZ23605	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.100	0.0998	0.100	0.085 to 0.115	100	70 to 130	0.383	20
AZ23605	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.0968	0.0930	0.0962	0.085 to 0.115	96.8	70 to 130	4.03	20
AZ23605	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.100	0.101	0.101	0.085 to 0.115	100	70 to 130	1.07	20
AZ23605	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.105	0.101	0.105	0.085 to 0.115	105	70 to 130	3.22	20
AZ23605	Mercury, Total by CVAA	mg/L	0.0000120	0.0005	0.004	0.00425	0.00420	0.00416	0.0034 to 0.0046	106	70 to 130	1.22	20
AZ23605	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.103	0.101	0.106	0.085 to 0.115	103	70 to 130	1.69	20
AZ23605	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.107	0.108	0.104	0.085 to 0.115	107	70 to 130	1.04	20
AZ23605	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.104	0.0995	0.085 to 0.115	104	70 to 130	0.0717	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/14/19 15:34
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-8

Laboratory ID Number: AZ23601

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23605	Sulfate	mg/L	-0.486	0.50	8000	10200	2980	19.4	18 to 22	89.4	80 to 120	2.32	20
AZ23605	Solids, Dissolved	mg/L	0.0000	25			4040	55.0	40 to 60			0.247	5
AZ23605	Chloride	mg/L	0.0607	0.50	10.0	12.0	1.92	10.1	9 to 11	101	80 to 120	0.00	20
AZ23605	Fluoride	mg/L	0.0172	0.05	2.50	2.81	0.307	2.48	2.25 to 2.75	100	80 to 120	1.64	20

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Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-11H

Location Code: WMWGORG
Collected: 10/16/19 11:12
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23602

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 10:30		1.015	0.0352	mg/L	0.03	0.1	J
* Calcium, Total	10/17/19 14:45	10/18/19 11:35		20.3	143	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 10:30		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 13:13		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 13:13		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 13:13		1.015	0.0192	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 13:13		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/17/19 12:29	10/18/19 13:13		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 13:13		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 13:13		1.015	0.00598	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 13:13		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 13:13		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 13:13		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 13:13		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/25/19 09:07	10/28/19 14:22		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	1150	mg/L		75.8	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 10:29	10/23/19 10:29		1	4.45	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:43	10/23/19 11:43		1	0.0875	mg/L	0.05	0.1	J
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:49	11/4/19 10:49		40	750	mg/L	20.00	40	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/16/19 11:08	10/16/19 11:08			1451.84	uS/cm			FA
pH	10/16/19 11:08	10/16/19 11:08			6.07	SU			FA
Temperature	10/16/19 11:08	10/16/19 11:08			20.15	C			FA
Turbidity	10/16/19 11:08	10/16/19 11:08			9.93	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 11:12
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-11H

Laboratory ID Number: AZ23602

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec	Limit
			MB	Limit						Rec	Limit		
AZ23605	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.106	0.104	0.103	0.085 to 0.115	106	70 to 130	1.24	20
AZ23605	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.0995	0.0974	0.0927	0.085 to 0.115	99.5	70 to 130	2.13	20
AZ23605	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.107	0.108	0.104	0.085 to 0.115	107	70 to 130	1.04	20
AZ23605	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.104	0.0995	0.085 to 0.115	104	70 to 130	0.0717	20
AZ23605	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.119	0.118	0.101	0.085 to 0.115	106	70 to 130	0.523	20
AZ23605	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.100	0.0990	0.0990	0.085 to 0.115	100	70 to 130	1.44	20
AZ23605	Calcium, Total	mg/L	0.00774	0.1518	5.00	315	327	5.08	4.25 to 5.75	-814	70 to 130	3.70	20
AZ23605	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.307	0.303	0.193	0.17 to 0.23	127	70 to 130	1.22	20
AZ23605	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.0968	0.0930	0.0962	0.085 to 0.115	96.8	70 to 130	4.03	20
AZ23605	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.100	0.101	0.101	0.085 to 0.115	100	70 to 130	1.07	20
AZ23605	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.105	0.101	0.105	0.085 to 0.115	105	70 to 130	3.22	20
AZ23605	Mercury, Total by CVAA	mg/L	0.0000120	0.0005	0.004	0.00425	0.00420	0.00416	0.0034 to 0.0046	106	70 to 130	1.22	20
AZ23605	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.103	0.101	0.106	0.085 to 0.115	103	70 to 130	1.69	20
AZ23605	Boron, Total	mg/L	0.00358	0.0650254	1.00	1.08	1.07	0.987	0.85 to 1.15	103	70 to 130	0.664	20
AZ23605	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.100	0.0998	0.100	0.085 to 0.115	100	70 to 130	0.383	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 11:12
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-11H

Laboratory ID Number: AZ23602

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23605	Sulfate	mg/L	-0.486	0.50	8000	10200	2980	19.4	18 to 22	89.4	80 to 120	2.32	20
AZ23605	Solids, Dissolved	mg/L	0.0000	25			4040	55.0	40 to 60			0.247	5
AZ23605	Chloride	mg/L	0.0607	0.50	10.0	12.0	1.92	10.1	9 to 11	101	80 to 120	0.00	20
AZ23605	Fluoride	mg/L	0.0172	0.05	2.50	2.81	0.307	2.48	2.25 to 2.75	100	80 to 120	1.64	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-11H DUP

Location Code: WMWGORG
Collected: 10/16/19 11:12
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23603

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 10:33		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/17/19 14:45	10/18/19 11:38		20.3	129	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 10:33		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 13:16		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 13:16		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 13:16		1.015	0.0196	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 13:16		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/17/19 12:29	10/18/19 13:16		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 13:16		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 13:16		1.015	0.00595	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 13:16		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 13:16		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 13:16		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 13:16		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/25/19 09:07	10/28/19 14:24		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	1160	mg/L		75.8	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 10:30	10/23/19 10:30		1	4.27	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:44	10/23/19 11:44		1	0.0852	mg/L	0.05	0.1	J
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:50	11/4/19 10:50		40	745	mg/L	20.00	40	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/16/19 11:08	10/16/19 11:08			1451.84	uS/cm			FA
pH	10/16/19 11:08	10/16/19 11:08			6.07	SU			FA
Temperature	10/16/19 11:08	10/16/19 11:08			20.15	C			FA
Turbidity	10/16/19 11:08	10/16/19 11:08			9.93	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 11:12
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-11H DUP

Laboratory ID Number: AZ23603

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec	Limit
			MB	Limit						Rec	Limit		
AZ23605	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.106	0.104	0.103	0.085 to 0.115	106	70 to 130	1.24	20
AZ23605	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.0995	0.0974	0.0927	0.085 to 0.115	99.5	70 to 130	2.13	20
AZ23605	Calcium, Total	mg/L	0.00774	0.1518	5.00	315	327	5.08	4.25 to 5.75	-814	70 to 130	3.70	20
AZ23605	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.307	0.303	0.193	0.17 to 0.23	127	70 to 130	1.22	20
AZ23605	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.119	0.118	0.101	0.085 to 0.115	106	70 to 130	0.523	20
AZ23605	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.100	0.0990	0.0990	0.085 to 0.115	100	70 to 130	1.44	20
AZ23605	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.107	0.108	0.104	0.085 to 0.115	107	70 to 130	1.04	20
AZ23605	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.104	0.0995	0.085 to 0.115	104	70 to 130	0.0717	20
AZ23605	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.0968	0.0930	0.0962	0.085 to 0.115	96.8	70 to 130	4.03	20
AZ23605	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.100	0.101	0.101	0.085 to 0.115	100	70 to 130	1.07	20
AZ23605	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.105	0.101	0.105	0.085 to 0.115	105	70 to 130	3.22	20
AZ23605	Mercury, Total by CVAA	mg/L	0.0000120	0.0005	0.004	0.00425	0.00420	0.00416	0.0034 to 0.0046	106	70 to 130	1.22	20
AZ23605	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.103	0.101	0.106	0.085 to 0.115	103	70 to 130	1.69	20
AZ23605	Boron, Total	mg/L	0.00358	0.0650254	1.00	1.08	1.07	0.987	0.85 to 1.15	103	70 to 130	0.664	20
AZ23605	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.100	0.0998	0.100	0.085 to 0.115	100	70 to 130	0.383	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 11:12
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-11H DUP

Laboratory ID Number: AZ23603

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23605	Sulfate	mg/L	-0.486	0.50	8000	10200	2980	19.4	18 to 22	89.4	80 to 120	2.32	20
AZ23605	Solids, Dissolved	mg/L	0.0000	25			4040	55.0	40 to 60			0.247	5
AZ23605	Chloride	mg/L	0.0607	0.50	10.0	12.0	1.92	10.1	9 to 11	101	80 to 120	0.00	20
AZ23605	Fluoride	mg/L	0.0172	0.05	2.50	2.81	0.307	2.48	2.25 to 2.75	100	80 to 120	1.64	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-3L

Location Code: WMWGORG
Collected: 10/16/19 12:37
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23604

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 10:36		1.015	0.0500	mg/L	0.03	0.1	J
* Calcium, Total	10/17/19 14:45	10/18/19 11:41		20.3	346	mg/L	2.03	10.15	
* Lithium, Total	10/17/19 14:45	10/18/19 10:36		1.015	0.337	mg/L	0.01	0.02	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 13:19		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 13:19		1.015	0.00389	mg/L	0.001	0.005	J
* Barium, Total	10/17/19 12:29	10/18/19 13:19		1.015	0.0128	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 13:19		1.015	0.0103	mg/L	0.0006	0.003	
* Cadmium, Total	10/17/19 12:29	10/18/19 13:19		1.015	0.00448	mg/L	0.0003	0.001	
* Chromium, Total	10/17/19 12:29	10/18/19 13:19		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 13:19		1.015	0.848	mg/L	0.002	0.005	
* Lead, Total	10/17/19 12:29	10/18/19 13:19		1.015	0.00108	mg/L	0.001	0.005	J
* Molybdenum, Total	10/17/19 12:29	10/18/19 13:19		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 13:19		1.015	0.00286	mg/L	0.002	0.01	J
* Thallium, Total	10/17/19 12:29	10/18/19 13:19		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/25/19 09:07	10/28/19 14:26		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	4210	mg/L		250	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/23/19 10:31	10/23/19 10:31		1	1.40	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:46	10/23/19 11:46		1	0.106	mg/L	0.05	0.1	
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:51	11/4/19 10:51		200	2820	mg/L	100.00	200	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/16/19 12:34	10/16/19 12:34			3934.80	uS/cm			FA
pH	10/16/19 12:34	10/16/19 12:34			4.51	SU			FA
Temperature	10/16/19 12:34	10/16/19 12:34			20.31	C			FA
Turbidity	10/16/19 12:34	10/16/19 12:34			2.26	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 12:37
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-3L

Laboratory ID Number: AZ23604

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
AZ23605	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.106	0.104	0.103	0.085 to 0.115	106	70 to 130	1.24	20
AZ23605	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.0995	0.0974	0.0927	0.085 to 0.115	99.5	70 to 130	2.13	20
AZ23605	Boron, Total	mg/L	0.00358	0.0650254	1.00	1.08	1.07	0.987	0.85 to 1.15	103	70 to 130	0.664	20
AZ23605	Cadmium, Total	mg/L	0.0000000	0.0001474	0.10	0.100	0.0998	0.100	0.085 to 0.115	100	70 to 130	0.383	20
AZ23605	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.107	0.108	0.104	0.085 to 0.115	107	70 to 130	1.04	20
AZ23605	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.104	0.0995	0.085 to 0.115	104	70 to 130	0.0717	20
AZ23605	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.119	0.118	0.101	0.085 to 0.115	106	70 to 130	0.523	20
AZ23605	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.100	0.0990	0.0990	0.085 to 0.115	100	70 to 130	1.44	20
AZ23605	Calcium, Total	mg/L	0.00774	0.1518	5.00	315	327	5.08	4.25 to 5.75	-814	70 to 130	3.70	20
AZ23605	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.307	0.303	0.193	0.17 to 0.23	127	70 to 130	1.22	20
AZ23605	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.0968	0.0930	0.0962	0.085 to 0.115	96.8	70 to 130	4.03	20
AZ23605	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.100	0.101	0.101	0.085 to 0.115	100	70 to 130	1.07	20
AZ23605	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.105	0.101	0.105	0.085 to 0.115	105	70 to 130	3.22	20
AZ23605	Mercury, Total by CVAA	mg/L	0.0000120	0.0005	0.004	0.00425	0.00420	0.00416	0.0034 to 0.0046	106	70 to 130	1.22	20
AZ23605	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.103	0.101	0.106	0.085 to 0.115	103	70 to 130	1.69	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 12:37
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-3L

Laboratory ID Number: AZ23604

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23605	Sulfate	mg/L	-0.486	0.50	8000	10200	2980	19.4	18 to 22	89.4	80 to 120	2.32	20
AZ23605	Solids, Dissolved	mg/L	0.0000	25			4040	55.0	40 to 60			0.247	5
AZ23605	Chloride	mg/L	0.0607	0.50	10.0	12.0	1.92	10.1	9 to 11	101	80 to 120	0.00	20
AZ23605	Fluoride	mg/L	0.0172	0.05	2.50	2.81	0.307	2.48	2.25 to 2.75	100	80 to 120	1.64	20

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Gorgas Gypsum - MW-4L

Location Code: WMWGORG
Collected: 10/16/19 13:47
Customer ID:
Submittal Date: 10/17/19 09:12

Laboratory ID Number: AZ23605

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/17/19 14:45	10/18/19 10:39		1.015	0.0505	mg/L	0.03	0.1	J
* Calcium, Total	10/17/19 14:45	10/18/19 11:44		20.3	356	mg/L	2.03	10.15	RA
* Lithium, Total	10/17/19 14:45	10/18/19 10:39		1.015	0.0520	mg/L	0.01	0.02	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/17/19 12:29	10/18/19 13:21		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/17/19 12:29	10/18/19 13:21		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/17/19 12:29	10/18/19 13:21		1.015	0.0125	mg/L	0.002	0.01	
* Beryllium, Total	10/17/19 12:29	10/18/19 13:21		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/17/19 12:29	10/18/19 13:21		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/17/19 12:29	10/18/19 13:21		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/17/19 12:29	10/18/19 13:21		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/17/19 12:29	10/18/19 13:21		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/17/19 12:29	10/18/19 13:21		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/17/19 12:29	10/18/19 13:21		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/17/19 12:29	10/18/19 13:21		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: GAS							
* Mercury, Total by CVAA	10/25/19 09:07	10/28/19 14:29		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/18/19 14:23	10/22/19 10:25		1	4060	mg/L		250	
Analytical Method: SM4500CI E		Analyst: JCC							
* Chloride	10/23/19 10:34	10/23/19 10:34		1	1.92	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/23/19 11:47	10/23/19 11:47		1	0.302	mg/L	0.05	0.1	
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	11/4/19 10:52	11/4/19 10:52		400	3050	mg/L	200.00	400	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/16/19 13:44	10/16/19 13:44			3765.62	uS/cm			FA
pH	10/16/19 13:44	10/16/19 13:44			6.19	SU			FA
Temperature	10/16/19 13:44	10/16/19 13:44			20.60	C			FA
Turbidity	10/16/19 13:44	10/16/19 13:44			0.27	NTU			FA

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

Comments: Recoveries for Calcium are out of spec. Spike amount is less than 30% of the sample amount. LBM 11/13/2019

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 13:47
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-4L

Laboratory ID Number: AZ23605

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec	Limit
			MB	Limit						Rec	Limit		
AZ23605	Selenium, Total	mg/L	0.0000978	0.00066	0.10	0.106	0.104	0.103	0.085 to 0.115	106	70 to 130	1.24	20
AZ23605	Antimony, Total	mg/L	0.000133	0.00066	0.10	0.0995	0.0974	0.0927	0.085 to 0.115	99.5	70 to 130	2.13	20
AZ23605	Barium, Total	mg/L	-0.00000046	0.0002	0.10	0.119	0.118	0.101	0.085 to 0.115	106	70 to 130	0.523	20
AZ23605	Lead, Total	mg/L	0.0000141	0.0001474	0.10	0.100	0.0990	0.0990	0.085 to 0.115	100	70 to 130	1.44	20
AZ23605	Arsenic, Total	mg/L	-0.0000218	0.0001474	0.10	0.107	0.108	0.104	0.085 to 0.115	107	70 to 130	1.04	20
AZ23605	Molybdenum, Total	mg/L	0.00000496	0.0001474	0.10	0.104	0.104	0.0995	0.085 to 0.115	104	70 to 130	0.0717	20
AZ23605	Boron, Total	mg/L	0.00358	0.0650254	1.00	1.08	1.07	0.987	0.85 to 1.15	103	70 to 130	0.664	20
AZ23605	Cadmium, Total	mg/L	0.00000000	0.0001474	0.10	0.100	0.0998	0.100	0.085 to 0.115	100	70 to 130	0.383	20
AZ23605	Calcium, Total	mg/L	0.00774	0.1518	5.00	315	327	5.08	4.25 to 5.75	-814	70 to 130	3.70	20
AZ23605	Lithium, Total	mg/L	-0.000251	0.0154	0.20	0.307	0.303	0.193	0.17 to 0.23	127	70 to 130	1.22	20
AZ23605	Beryllium, Total	mg/L	0.0000259	0.00088	0.10	0.0968	0.0930	0.0962	0.085 to 0.115	96.8	70 to 130	4.03	20
AZ23605	Cobalt, Total	mg/L	0.00000171	0.0001474	0.10	0.100	0.101	0.101	0.085 to 0.115	100	70 to 130	1.07	20
AZ23605	Chromium, Total	mg/L	-0.00000457	0.00044	0.10	0.105	0.101	0.105	0.085 to 0.115	105	70 to 130	3.22	20
AZ23605	Mercury, Total by CVAA	mg/L	0.0000120	0.0005	0.004	0.00425	0.00420	0.00416	0.0034 to 0.0046	106	70 to 130	1.22	20
AZ23605	Thallium, Total	mg/L	0.00000870	0.0001474	0.10	0.103	0.101	0.106	0.085 to 0.115	103	70 to 130	1.69	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments: Recoveries for Calcium are out of spec. Spike amount is less than 30% of the sample amount. LBM 11/13/2019

Batch QC Summary

Customer Account: WMWGORG
Sample Date: 10/16/19 13:47
Customer ID:
Delivery Date: 10/17/19 09:12

Description: Gorgas Gypsum - MW-4L

Laboratory ID Number: AZ23605

Sample	Analysis	Units	MB	MB			Sample		Standard		Rec		Prec
				Limit	Spike	MS	Duplicate	Standard	Limit	Rec	Limit	Prec	Limit
AZ23605	Sulfate	mg/L	-0.486	0.50	8000	10200	2980	19.4	18 to 22	89.4	80 to 120	2.32	20
AZ23605	Solids, Dissolved	mg/L	0.0000	25			4040	55.0	40 to 60			0.247	5
AZ23605	Chloride	mg/L	0.0607	0.50	10.0	12.0	1.92	10.1	9 to 11	101	80 to 120	0.00	20
AZ23605	Fluoride	mg/L	0.0172	0.05	2.50	2.81	0.307	2.48	2.25 to 2.75	100	80 to 120	1.64	20

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments: Recoveries for Calcium are out of spec. Spike amount is less than 30% of the sample amount. LBM 11/13/2019

Definitions

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.
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
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks,Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Gypsum

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

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-3	10/14/19	12:17	4	Groundwater		AZ23590
MW-4V	10/14/2019	13:30	4	Groundwater		AZ23591
MW-1L	10/16/2019	11:53	4	Groundwater		AZ23592
MW-2L	10/16/2019	13:02	4	Groundwater		AZ23593
FB-2	10/16/2019	13:20	4	Field Blank		AZ23594
MW-9H	10/16/2019	14:35	4	Groundwater		AZ23595
MW-9H Dup	10/16/2019	14:35	4	Sample Duplicate		AZ23596
EB-1	10/16/2019	15:15	4	Equipment Blank		AZ23597

Relinquished By	Received By	Date/Time
<i>HAB</i>	<i>Anna Miller</i>	10/17/2019 07:51

SmarTroll ID	7586-41445-5-4	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	Cooler Temp
Sample Event	1248	Thermometer ID
		pH Strip ID



Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA 10/17/2019 08:30

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Dallas Gentry	Location	Gorgas Gypsum

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 duplicate collected at MW-4. Correcting MW-4L date to 10/16/2019. LBM 10/17/2019

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-3V	10/14/19	13:10	1	Groundwater		AZ23614
MW-4	10/14/2019	14:36	3	Groundwater		AZ23615
FB-1	10/14/2019	14:57	1	Field Blank		AZ23616
MW-8	10/14/2019	15:34	1	Groundwater		AZ23617
MW-11H	10/16/2019	11:12	1	Groundwater		AZ23618
MW-11H dup	10/16/2019	11:12	1	Sample Duplicate		AZ23619
MW-3L	10/16/2019	12:37	1	Groundwater		AZ23620
MW-4L	10/16/2019	13:47	1	Groundwater		AZ23621

Relinquished By	Received By	Date/Time
		10/17/2019 07:37

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2	<input checked="" type="checkbox"/>
Turbidity ID	7081-38476-1-1	Cooler Temp	N/A
Sample Event	1248	Thermometer ID	N/A
		pH Strip ID	7453-40656-10-8



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	Che George	Requested By	Greg Dyer
Collector	TJ Daugherty	Location	Gorgas Gypsum

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-3	10/14/19	12:17	1	Groundwater		AZ23606
MW-4V	10/14/2019	13:30	1	Groundwater		AZ23607
MW-1L	10/16/2019	11:53	1	Groundwater		AZ23608
MW-2L	10/16/2019	13:02	1	Groundwater		AZ23609
FB-2	10/16/2019	13:20	1	Field Blank		AZ23610
MW-9H	10/16/2019	14:35	1	Groundwater		AZ23611
MW-9H Dup	10/16/2019	14:35	1	Sample Duplicate		AZ23612
EB-1	10/16/2019	15:15	1	Equipment Blank		AZ23613

Relinquished By	Received By	Date/Time
		10/17/2019 07:51

SmarTroll ID	7586-41445-5-4	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	
Sample Event	1248	
	Cooler Temp	N/A
	Thermometer ID	N/A
	pH Strip ID	7453-40656-10-8

ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-178335-1
Laboratory Sample Delivery Group: Gorgas Gypsum 1248
Client Project/Site: CCR Plant Gorgas

For:
Alabama Power General Test Laboratory
744 County Rd 87
GSC #8
Calera, Alabama 35040

Attn: Laura Midkiff



Authorized for release by:
11/22/2019 9:56:59 AM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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



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Case Narrative

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
SDG: Gorgas Gypsum 1248

Job ID: 400-178335-1

Laboratory: Eurofins TestAmerica, Pensacola

Narrative

Job Narrative 400-178335-1

RAD

Methods 9315: Radium-226 Prep Batch 160-447760. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ23609 MW-2L (400-178335-4), (LCS 160-447760/1-A), (LCSD 160-447760/2-A) and (MB 160-447760/20-A)

Method 9315: Radium-226 Prep Batch 160-447527. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ23606 MW-3 (400-178335-1), AZ23607 MW-4V (400-178335-2), AZ23608 MW-1L (400-178335-3), AZ23610 FB-2 (400-178335-5), AZ23611 MW-9H (400-178335-6), AZ23612 MW-9H DUP (400-178335-7), AZ23613 EB-1 (400-178335-8), AZ23614 MW-3V (400-178335-9), AZ23615 MW-4 (400-178335-10), AZ23615 MW-4 (400-178335-10[DU]), AZ23616 FB-1 (400-178335-11), AZ23617 MW-8 (400-178335-12), AZ23618 MW-11H (400-178335-13), AZ23619 MW-11H DUP (400-178335-14), AZ23620 MW-3L (400-178335-15), AZ23621 MW-4L (400-178335-16), (LCS 160-447527/1-A) and (MB 160-447527/20-A)

Methods 9320: Radium-228 Prep Batch 160-447768. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ23609 MW-2L (400-178335-4), (LCS 160-447768/1-A), (LCSD 160-447768/2-A) and (MB 160-447768/20-A)

Method 9320: Radium-228 Prep Batch 160-447570. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ23606 MW-3 (400-178335-1), AZ23607 MW-4V (400-178335-2), AZ23608 MW-1L (400-178335-3), AZ23610 FB-2 (400-178335-5), AZ23611 MW-9H (400-178335-6), AZ23612 MW-9H DUP (400-178335-7), AZ23613 EB-1 (400-178335-8), AZ23614 MW-3V (400-178335-9), AZ23615 MW-4 (400-178335-10), AZ23615 MW-4 (400-178335-10[DU]), AZ23616 FB-1 (400-178335-11), AZ23617 MW-8 (400-178335-12), AZ23618 MW-11H (400-178335-13), AZ23619 MW-11H DUP (400-178335-14), AZ23620 MW-3L (400-178335-15), AZ23621 MW-4L (400-178335-16), (LCS 160-447570/1-A) and (MB 160-447570/20-A)

Method PrecSep_0: Radium 228 Prep batch 160-447570. The following samples were prepared at a reduced aliquot due to limited volume: AZ23606 MW-3 (400-178335-1), AZ23607 MW-4V (400-178335-2), AZ23608 MW-1L (400-178335-3), AZ23610 FB-2 (400-178335-5), AZ23611 MW-9H (400-178335-6), AZ23612 MW-9H DUP (400-178335-7), AZ23613 EB-1 (400-178335-8), AZ23614 MW-3V (400-178335-9), AZ23615 MW-4 (400-178335-10), AZ23615 MW-4 (400-178335-10[DU]), AZ23616 FB-1 (400-178335-11), AZ23617 MW-8 (400-178335-12), AZ23618 MW-11H (400-178335-13), AZ23619 MW-11H DUP (400-178335-14), AZ23620 MW-3L (400-178335-15) and AZ23621 MW-4L (400-178335-16).

Method PrecSep_0: Radium 228 Prep Batch 160-447768. Insufficient sample volume was available to perform a sample duplicate for the following samples: AZ23609 MW-2L (400-178335-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision. Sample 400-178335-A-4 was also reduced due to insufficient volume available.

Method PrecSep-21: Radium 226 Prep Batch 160-447527. The following samples were prepared at a reduced aliquot due to limited volume: AZ23606 MW-3 (400-178335-1), AZ23607 MW-4V (400-178335-2), AZ23608 MW-1L (400-178335-3), AZ23610 FB-2 (400-178335-5), AZ23611 MW-9H (400-178335-6), AZ23612 MW-9H DUP (400-178335-7), AZ23613 EB-1 (400-178335-8), AZ23614 MW-3V (400-178335-9), AZ23615 MW-4 (400-178335-10), AZ23615 MW-4 (400-178335-10[DU]), AZ23616 FB-1 (400-178335-11), AZ23617 MW-8 (400-178335-12), AZ23618 MW-11H (400-178335-13), AZ23619 MW-11H DUP (400-178335-14), AZ23620 MW-3L (400-178335-15) and AZ23621 MW-4L (400-178335-16).

Method Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
SDG: Gorgas Gypsum 1248

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
SDG: Gorgas Gypsum 1248

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
400-178335-1	AZ23606 MW-3	Water	10/14/19 12:17	10/21/19 16:03	
400-178335-2	AZ23607 MW-4V	Water	10/14/19 13:30	10/21/19 16:03	
400-178335-3	AZ23608 MW-1L	Water	10/16/19 11:53	10/21/19 16:03	
400-178335-4	AZ23609 MW-2L	Water	10/16/19 13:02	10/21/19 16:03	
400-178335-5	AZ23610 FB-2	Water	10/16/19 13:20	10/21/19 16:03	
400-178335-6	AZ23611 MW-9H	Water	10/16/19 14:35	10/21/19 16:03	
400-178335-7	AZ23612 MW-9H DUP	Water	10/16/19 14:35	10/21/19 16:03	
400-178335-8	AZ23613 EB-1	Water	10/16/19 15:15	10/21/19 16:03	
400-178335-9	AZ23614 MW-3V	Water	10/14/19 13:10	10/21/19 16:03	
400-178335-10	AZ23615 MW-4	Water	10/14/19 14:36	10/21/19 16:03	
400-178335-11	AZ23616 FB-1	Water	10/14/19 14:57	10/21/19 16:03	
400-178335-12	AZ23617 MW-8	Water	10/14/19 15:34	10/21/19 16:03	
400-178335-13	AZ23618 MW-11H	Water	10/16/19 11:12	10/21/19 16:03	
400-178335-14	AZ23619 MW-11H DUP	Water	10/16/19 11:12	10/21/19 16:03	
400-178335-15	AZ23620 MW-3L	Water	10/16/19 12:37	10/21/19 16:03	
400-178335-16	AZ23621 MW-4L	Water	10/16/19 13:47	10/21/19 16:03	

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23606 MW-3

Lab Sample ID: 400-178335-1

Date Collected: 10/14/19 12:17

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0787	U	0.0794	0.0797	1.00	0.191	pCi/L	10/24/19 08:36	11/15/19 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.0		40 - 110					10/24/19 08:36	11/15/19 12:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.376	U	0.327	0.329	1.00	0.524	pCi/L	10/24/19 09:17	11/07/19 08:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.0		40 - 110					10/24/19 09:17	11/07/19 08:59	1
Y Carrier	86.0		40 - 110					10/24/19 09:17	11/07/19 08:59	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.297	U	0.337	0.339	5.00	0.524	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23607 MW-4V

Lab Sample ID: 400-178335-2

Date Collected: 10/14/19 13:30

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00970	U	0.0952	0.0952	1.00	0.182	pCi/L	10/24/19 08:36	11/15/19 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/24/19 08:36	11/15/19 12:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.360	U	0.313	0.315	1.00	0.501	pCi/L	10/24/19 09:17	11/07/19 09:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/24/19 09:17	11/07/19 09:00	1
Y Carrier	86.4		40 - 110					10/24/19 09:17	11/07/19 09:00	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.369	U	0.327	0.329	5.00	0.501	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23608 MW-1L

Lab Sample ID: 400-178335-3

Date Collected: 10/16/19 11:53

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00556	U	0.0892	0.0892	1.00	0.176	pCi/L	10/24/19 08:36	11/15/19 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					10/24/19 08:36	11/15/19 12:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.209	U	0.314	0.315	1.00	0.527	pCi/L	10/24/19 09:17	11/07/19 09:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					10/24/19 09:17	11/07/19 09:00	1
Y Carrier	83.7		40 - 110					10/24/19 09:17	11/07/19 09:00	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.204	U	0.326	0.327	5.00	0.527	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23609 MW-2L

Lab Sample ID: 400-178335-4

Date Collected: 10/16/19 13:02

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0794	U	0.0961	0.0963	1.00	0.158	pCi/L	10/25/19 14:07	11/18/19 07:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110					10/25/19 14:07	11/18/19 07:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0334	U	0.325	0.325	1.00	0.585	pCi/L	10/25/19 15:47	11/05/19 12:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110					10/25/19 15:47	11/05/19 12:50	1
Y Carrier	86.0		40 - 110					10/25/19 15:47	11/05/19 12:50	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0460	U	0.339	0.339	5.00	0.585	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23610 FB-2

Lab Sample ID: 400-178335-5

Date Collected: 10/16/19 13:20

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0131	U	0.0958	0.0959	1.00	0.181	pCi/L	10/24/19 08:36	11/15/19 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/24/19 08:36	11/15/19 12:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0837	U	0.310	0.310	1.00	0.537	pCi/L	10/24/19 09:17	11/07/19 09:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/24/19 09:17	11/07/19 09:00	1
Y Carrier	86.7		40 - 110					10/24/19 09:17	11/07/19 09:00	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0968	U	0.324	0.324	5.00	0.537	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23611 MW-9H

Lab Sample ID: 400-178335-6

Date Collected: 10/16/19 14:35

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0747	U	0.110	0.110	1.00	0.187	pCi/L	10/24/19 08:36	11/15/19 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.7		40 - 110					10/24/19 08:36	11/15/19 12:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.21		0.410	0.425	1.00	0.557	pCi/L	10/24/19 09:17	11/07/19 09:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.7		40 - 110					10/24/19 09:17	11/07/19 09:00	1
Y Carrier	87.1		40 - 110					10/24/19 09:17	11/07/19 09:00	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.29		0.424	0.439	5.00	0.557	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23612 MW-9H DUP

Lab Sample ID: 400-178335-7

Date Collected: 10/16/19 14:35

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0592	U	0.0774	0.0776	1.00	0.181	pCi/L	10/24/19 08:36	11/15/19 12:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					10/24/19 08:36	11/15/19 12:33	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.395	U	0.382	0.384	1.00	0.620	pCi/L	10/24/19 09:17	11/07/19 09:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					10/24/19 09:17	11/07/19 09:00	1
Y Carrier	85.6		40 - 110					10/24/19 09:17	11/07/19 09:00	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.336	U	0.390	0.392	5.00	0.620	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23613 EB-1

Lab Sample ID: 400-178335-8

Date Collected: 10/16/19 15:15

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.101	U	0.0645	0.0651	1.00	0.177	pCi/L	10/24/19 08:36	11/15/19 14:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.5		40 - 110					10/24/19 08:36	11/15/19 14:29	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0432	U	0.274	0.274	1.00	0.487	pCi/L	10/24/19 09:17	11/07/19 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.5		40 - 110					10/24/19 09:17	11/07/19 09:03	1
Y Carrier	84.9		40 - 110					10/24/19 09:17	11/07/19 09:03	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0581	U	0.281	0.282	5.00	0.487	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23614 MW-3V

Lab Sample ID: 400-178335-9

Date Collected: 10/14/19 13:10

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0256	U	0.103	0.103	1.00	0.190	pCi/L	10/24/19 08:36	11/15/19 14:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					10/24/19 08:36	11/15/19 14:29	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.158	U	0.282	0.282	1.00	0.480	pCi/L	10/24/19 09:17	11/07/19 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					10/24/19 09:17	11/07/19 09:03	1
Y Carrier	81.1		40 - 110					10/24/19 09:17	11/07/19 09:03	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.184	U	0.300	0.300	5.00	0.480	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23615 MW-4

Lab Sample ID: 400-178335-10

Date Collected: 10/14/19 14:36

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0325	U	0.0988	0.0989	1.00	0.180	pCi/L	10/24/19 08:36	11/15/19 14:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					10/24/19 08:36	11/15/19 14:29	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.284	U	0.271	0.272	1.00	0.436	pCi/L	10/24/19 09:17	11/07/19 09:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					10/24/19 09:17	11/07/19 09:04	1
Y Carrier	81.1		40 - 110					10/24/19 09:17	11/07/19 09:04	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.317	U	0.288	0.289	5.00	0.436	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23616 FB-1

Lab Sample ID: 400-178335-11

Date Collected: 10/14/19 14:57

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0139	U	0.0933	0.0933	1.00	0.188	pCi/L	10/24/19 08:36	11/15/19 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.2		40 - 110					10/24/19 08:36	11/15/19 14:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0766	U	0.253	0.253	1.00	0.444	pCi/L	10/24/19 09:17	11/07/19 09:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.2		40 - 110					10/24/19 09:17	11/07/19 09:04	1
Y Carrier	87.9		40 - 110					10/24/19 09:17	11/07/19 09:04	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0628	U	0.270	0.270	5.00	0.444	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23617 MW-8

Lab Sample ID: 400-178335-12

Date Collected: 10/14/19 15:34

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0789	U	0.0709	0.0712	1.00	0.178	pCi/L	10/24/19 08:36	11/15/19 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.5		40 - 110					10/24/19 08:36	11/15/19 14:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.304	U	0.349	0.350	1.00	0.574	pCi/L	10/24/19 09:17	11/07/19 09:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.5		40 - 110					10/24/19 09:17	11/07/19 09:04	1
Y Carrier	75.5		40 - 110					10/24/19 09:17	11/07/19 09:04	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.225	U	0.356	0.357	5.00	0.574	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23618 MW-11H

Lab Sample ID: 400-178335-13

Date Collected: 10/16/19 11:12

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00552	U	0.0884	0.0884	1.00	0.171	pCi/L	10/24/19 08:36	11/15/19 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/24/19 08:36	11/15/19 14:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.184	U	0.266	0.266	1.00	0.446	pCi/L	10/24/19 09:17	11/07/19 09:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/24/19 09:17	11/07/19 09:04	1
Y Carrier	80.0		40 - 110					10/24/19 09:17	11/07/19 09:04	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.189	U	0.280	0.280	5.00	0.446	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23619 MW-11H DUP

Lab Sample ID: 400-178335-14

Date Collected: 10/16/19 11:12

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0591	U	0.0760	0.0762	1.00	0.126	pCi/L	10/24/19 08:36	11/15/19 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					10/24/19 08:36	11/15/19 14:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0193	U	0.296	0.296	1.00	0.531	pCi/L	10/24/19 09:17	11/07/19 09:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					10/24/19 09:17	11/07/19 09:05	1
Y Carrier	84.1		40 - 110					10/24/19 09:17	11/07/19 09:05	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0398	U	0.306	0.306	5.00	0.531	pCi/L		11/20/19 07:54	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23620 MW-3L

Lab Sample ID: 400-178335-15

Date Collected: 10/16/19 12:37

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.169		0.115	0.116	1.00	0.163	pCi/L	10/24/19 08:36	11/15/19 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.0		40 - 110					10/24/19 08:36	11/15/19 14:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.141	U	0.265	0.265	1.00	0.502	pCi/L	10/24/19 09:17	11/07/19 09:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.0		40 - 110					10/24/19 09:17	11/07/19 09:05	1
Y Carrier	87.5		40 - 110					10/24/19 09:17	11/07/19 09:05	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0279	U	0.289	0.289	5.00	0.502	pCi/L		11/20/19 07:56	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23621 MW-4L

Lab Sample ID: 400-178335-16

Date Collected: 10/16/19 13:47

Matrix: Water

Date Received: 10/21/19 16:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0156	U	0.0775	0.0775	1.00	0.159	pCi/L	10/24/19 08:36	11/15/19 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/24/19 08:36	11/15/19 14:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.372	U	0.292	0.294	1.00	0.461	pCi/L	10/24/19 09:17	11/07/19 09:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/24/19 09:17	11/07/19 09:05	1
Y Carrier	83.7		40 - 110					10/24/19 09:17	11/07/19 09:05	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.356	U	0.302	0.304	5.00	0.461	pCi/L		11/20/19 07:56	1

Definitions/Glossary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
SDG: Gorgas Gypsum 1248

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23606 MW-3

Lab Sample ID: 400-178335-1

Date Collected: 10/14/19 12:17

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 12:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449487	11/07/19 08:59	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23607 MW-4V

Lab Sample ID: 400-178335-2

Date Collected: 10/14/19 13:30

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 12:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449487	11/07/19 09:00	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23608 MW-1L

Lab Sample ID: 400-178335-3

Date Collected: 10/16/19 11:53

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 12:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449487	11/07/19 09:00	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23609 MW-2L

Lab Sample ID: 400-178335-4

Date Collected: 10/16/19 13:02

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447760	10/25/19 14:07	ORM	TAL SL
Total/NA	Analysis	9315		1	450917	11/18/19 07:22	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447768	10/25/19 15:47	ORM	TAL SL
Total/NA	Analysis	9320		1	448789	11/05/19 12:50	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23610 FB-2

Lab Sample ID: 400-178335-5

Date Collected: 10/16/19 13:20

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 12:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449487	11/07/19 09:00	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23611 MW-9H

Lab Sample ID: 400-178335-6

Date Collected: 10/16/19 14:35

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 12:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449487	11/07/19 09:00	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23612 MW-9H DUP

Lab Sample ID: 400-178335-7

Date Collected: 10/16/19 14:35

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450673	11/15/19 12:33	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449487	11/07/19 09:00	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23613 EB-1

Lab Sample ID: 400-178335-8

Date Collected: 10/16/19 15:15

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 14:29	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449489	11/07/19 09:03	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23614 MW-3V

Lab Sample ID: 400-178335-9

Date Collected: 10/14/19 13:10

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 14:29	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449489	11/07/19 09:03	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23615 MW-4

Lab Sample ID: 400-178335-10

Date Collected: 10/14/19 14:36

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 14:29	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449489	11/07/19 09:04	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23616 FB-1

Lab Sample ID: 400-178335-11

Date Collected: 10/14/19 14:57

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 14:30	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449489	11/07/19 09:04	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23617 MW-8

Lab Sample ID: 400-178335-12

Date Collected: 10/14/19 15:34

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 14:30	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449489	11/07/19 09:04	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Client Sample ID: AZ23618 MW-11H

Lab Sample ID: 400-178335-13

Date Collected: 10/16/19 11:12

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 14:30	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449489	11/07/19 09:04	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23619 MW-11H DUP

Lab Sample ID: 400-178335-14

Date Collected: 10/16/19 11:12

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 14:30	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449489	11/07/19 09:05	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:54	SMP	TAL SL

Client Sample ID: AZ23620 MW-3L

Lab Sample ID: 400-178335-15

Date Collected: 10/16/19 12:37

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 14:30	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449489	11/07/19 09:05	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:56	SMP	TAL SL

Client Sample ID: AZ23621 MW-4L

Lab Sample ID: 400-178335-16

Date Collected: 10/16/19 13:47

Matrix: Water

Date Received: 10/21/19 16:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			447527	10/24/19 08:36	EJQ	TAL SL
Total/NA	Analysis	9315		1	450674	11/15/19 14:30	SCB	TAL SL
Total/NA	Prep	PrecSep_0			447570	10/24/19 09:17	EJQ	TAL SL
Total/NA	Analysis	9320		1	449489	11/07/19 09:05	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	451330	11/20/19 07:56	SMP	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Rad

Prep Batch: 447527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178335-1	AZ23606 MW-3	Total/NA	Water	PrecSep-21	
400-178335-2	AZ23607 MW-4V	Total/NA	Water	PrecSep-21	
400-178335-3	AZ23608 MW-1L	Total/NA	Water	PrecSep-21	
400-178335-5	AZ23610 FB-2	Total/NA	Water	PrecSep-21	
400-178335-6	AZ23611 MW-9H	Total/NA	Water	PrecSep-21	
400-178335-7	AZ23612 MW-9H DUP	Total/NA	Water	PrecSep-21	
400-178335-8	AZ23613 EB-1	Total/NA	Water	PrecSep-21	
400-178335-9	AZ23614 MW-3V	Total/NA	Water	PrecSep-21	
400-178335-10	AZ23615 MW-4	Total/NA	Water	PrecSep-21	
400-178335-11	AZ23616 FB-1	Total/NA	Water	PrecSep-21	
400-178335-12	AZ23617 MW-8	Total/NA	Water	PrecSep-21	
400-178335-13	AZ23618 MW-11H	Total/NA	Water	PrecSep-21	
400-178335-14	AZ23619 MW-11H DUP	Total/NA	Water	PrecSep-21	
400-178335-15	AZ23620 MW-3L	Total/NA	Water	PrecSep-21	
400-178335-16	AZ23621 MW-4L	Total/NA	Water	PrecSep-21	
MB 160-447527/20-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-447527/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-178335-10 DU	AZ23615 MW-4	Total/NA	Water	PrecSep-21	

Prep Batch: 447570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178335-1	AZ23606 MW-3	Total/NA	Water	PrecSep_0	
400-178335-2	AZ23607 MW-4V	Total/NA	Water	PrecSep_0	
400-178335-3	AZ23608 MW-1L	Total/NA	Water	PrecSep_0	
400-178335-5	AZ23610 FB-2	Total/NA	Water	PrecSep_0	
400-178335-6	AZ23611 MW-9H	Total/NA	Water	PrecSep_0	
400-178335-7	AZ23612 MW-9H DUP	Total/NA	Water	PrecSep_0	
400-178335-8	AZ23613 EB-1	Total/NA	Water	PrecSep_0	
400-178335-9	AZ23614 MW-3V	Total/NA	Water	PrecSep_0	
400-178335-10	AZ23615 MW-4	Total/NA	Water	PrecSep_0	
400-178335-11	AZ23616 FB-1	Total/NA	Water	PrecSep_0	
400-178335-12	AZ23617 MW-8	Total/NA	Water	PrecSep_0	
400-178335-13	AZ23618 MW-11H	Total/NA	Water	PrecSep_0	
400-178335-14	AZ23619 MW-11H DUP	Total/NA	Water	PrecSep_0	
400-178335-15	AZ23620 MW-3L	Total/NA	Water	PrecSep_0	
400-178335-16	AZ23621 MW-4L	Total/NA	Water	PrecSep_0	
MB 160-447570/20-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-447570/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-178335-10 DU	AZ23615 MW-4	Total/NA	Water	PrecSep_0	

Prep Batch: 447760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178335-4	AZ23609 MW-2L	Total/NA	Water	PrecSep-21	
MB 160-447760/20-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-447760/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-447760/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 447768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178335-4	AZ23609 MW-2L	Total/NA	Water	PrecSep_0	
MB 160-447768/20-A	Method Blank	Total/NA	Water	PrecSep_0	

QC Association Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
SDG: Gorgas Gypsum 1248

Rad (Continued)

Prep Batch: 447768 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-447768/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-447768/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-447527/20-A
Matrix: Water
Analysis Batch: 450674

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 447527

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.04478	U	0.0810	0.0811	1.00	0.178	pCi/L	10/24/19 08:40	11/15/19 14:30	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					10/24/19 08:40	11/15/19 14:30	1
	106									

Lab Sample ID: LCS 160-447527/1-A
Matrix: Water
Analysis Batch: 451329

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 447527

Analyte	LCS LCS		Spike	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qual	Uncert. (2σ+/-)					
Radium-226			15.1	16.89		1.76	1.00	0.225	pCi/L	112	75 - 125
Carrier	LCS LCS		Limits								
Ba Carrier	%Yield	Qualifier	40 - 110								
	108										

Lab Sample ID: 400-178335-10 DU
Matrix: Water
Analysis Batch: 450674

Client Sample ID: AZ23615 MW-4
Prep Type: Total/NA
Prep Batch: 447527

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit	
	Result	Qual	Result	Qual	Uncert. (2σ+/-)						
Radium-226	0.0325	U	-0.02495	U	0.0828	1.00	0.173	pCi/L	0.32	1	
Carrier	DU DU		Limits								
Ba Carrier	%Yield	Qualifier	40 - 110								
	102										

Lab Sample ID: MB 160-447760/20-A
Matrix: Water
Analysis Batch: 450917

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 447760

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.03534	U	0.0639	0.0640	1.00	0.141	pCi/L	10/25/19 16:22	11/18/19 09:15	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					10/25/19 16:22	11/18/19 09:15	1
	86.8									

Lab Sample ID: LCS 160-447760/1-A
Matrix: Water
Analysis Batch: 450917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 447760

Analyte	LCS LCS		Spike	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qual	Uncert. (2σ+/-)					
Radium-226			11.4	9.647		1.01	1.00	0.132	pCi/L	85	75 - 125

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-447760/1-A
 Matrix: Water
 Analysis Batch: 450917

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 447760

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	87.7		40 - 110

Lab Sample ID: LCSD 160-447760/2-A
 Matrix: Water
 Analysis Batch: 450917

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 447760

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec.		RER
									Limits	RER	Limit
Radium-226	11.4	10.84		1.12	1.00	0.126	pCi/L	96	75 - 125	0.56	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	87.4		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-447570/20-A
 Matrix: Water
 Analysis Batch: 449489

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 447570

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110	10/24/19 09:17	11/07/19 09:05	1
Y Carrier	87.9		40 - 110	10/24/19 09:17	11/07/19 09:05	1

Lab Sample ID: LCS 160-447570/1-A
 Matrix: Water
 Analysis Batch: 449487

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 447570

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec.	
									Limits	
Radium-228	12.6	10.69		1.27	1.00	0.552	pCi/L	85	75 - 125	

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	108		40 - 110
Y Carrier	86.0		40 - 110

Lab Sample ID: 400-178335-10 DU
 Matrix: Water
 Analysis Batch: 449489

Client Sample ID: AZ23615 MW-4
 Prep Type: Total/NA
 Prep Batch: 447570

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER
										Limit
Radium-228	0.284	U	0.8880		0.375	1.00	0.520	pCi/L	0.93	1

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 400-178335-10 DU
Matrix: Water
Analysis Batch: 449489

Client Sample ID: AZ23615 MW-4
Prep Type: Total/NA
Prep Batch: 447570

Carrier	DU DU		Limits
	%Yield	Qualifier	
Ba Carrier	102		40 - 110
Y Carrier	80.4		40 - 110

Lab Sample ID: MB 160-447768/20-A
Matrix: Water
Analysis Batch: 449089

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 447768

Analyte	MB MB		Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-228	0.2630	U	0.331	0.331	1.00	0.548	pCi/L	10/25/19 15:55	11/05/19 12:55	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
%Yield	Qualifier									
Ba Carrier	86.8		40 - 110			10/25/19 15:55	11/05/19 12:55	1		
Y Carrier	81.1		40 - 110			10/25/19 15:55	11/05/19 12:55	1		

Lab Sample ID: LCS 160-447768/1-A
Matrix: Water
Analysis Batch: 448789

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 447768

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Carrier	LCS LCS		Limits			Prepared	Analyzed	Dil Fac	
%Yield	Qualifier								
Ba Carrier	87.7		40 - 110						
Y Carrier	85.6		40 - 110						

Lab Sample ID: LCSD 160-447768/2-A
Matrix: Water
Analysis Batch: 448789

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 447768

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Carrier	LCSD LCSD		Limits			Prepared	Analyzed	Dil Fac			
%Yield	Qualifier										
Ba Carrier	87.4		40 - 110								
Y Carrier	84.1		40 - 110								

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-178335-10 DU
 Matrix: Water
 Analysis Batch: 451330

Client Sample ID: AZ23615 MW-4
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.317	U	0.8630		0.384	5.00	0.520	pCi/L	0.81	

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 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING



400-178335 COC

Client Information (Sub Contract Lab)		Sampler: TJ Daugherty	Lab P/N: Whitmore, Chyenne R	Carrier: Tracking No(s)	COC No: 400-56525-24537.1								
Client Contact: Laura Midkiff		Phone:	E-Mail: chyenne.whitmore@testamerica.com	State of Origin: Alabama	Page: Page 1 of 2								
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC#8		Job #:									
City: Calera		State, Zip: AL 35040		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - H2SO4 H - Ascorbic Acid I - TSP Diacidhydrate J - Distilled Water K - EDTA L - EDA Other:									
Phone: 205-664-6197		Email: lmidkiff@southernco.com		M - Hexane N - None O - AshA02 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Diacidhydrate U - Distilled Water V - MeOH W - PH 4.5 X - other (specify)									
Project Name: CCR		Project #: 40007143		Total Number of Containers: 1									
Site: Gorgas Gypsum 1248		SSOW#:		Special Instructions/Note:									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Swab, Dermal, etc)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM 4500 F.C.	SM 4500 CL.E	SM 4500 S04.E	9315, Ra228, 9320, Ra228, Ra228Ra228, Ra228Ra228, G.F.P.C.	Analysis Requested	Special Instructions/Note:
AZ23606		10/14/19	12:17	G	Water	X	X				X		1 MW-3
AZ23607		10/14/19	13:30	G	Water		X				X		1 MW-4V
AZ23608		10/16/19	11:53	G	Water		X				X		1 MW-1L
AZ23609		10/16/19	13:02	G	Water		X				X		1 MW-2L
AZ23610		10/16/19	13:20	G	Water		X				X		1 FB-2 (Field Blank)
AZ23611		10/16/19	14:35	G	Water		X				X		1 MW-9H
AZ23612		10/16/19	14:35	G	Water		X				X		1 MW-9H DUP (Sample Duplicate)
AZ23613		10/16/19	15:15	G	Water		X				X		1 EB-1 (Equipment Blank)

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal By Lab Archive For _____ Months

Empty Kit Relinquished by: Laura Midkiff
 Relinquished by: _____
 Relinquished by: _____
 Date/Time: 10/16/19 8:00
 Date/Time: _____
 Date/Time: _____
 Method of Shipment: _____
 Date/Time: 10/24/19 10:03
 Date/Time: _____
 Company: _____
 Company: _____
 Company: _____
 Custody Seal No.: _____
 Custody Seal Intact: _____
 Cooler Temperature(s) °C and Other Remarks: _____



TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler: Dallas Gentry		Lab P/N: Whitmore, Cheyenne R		Carrier Tracking Note:	
Client Contact: Laura Midkiff		Phone:		E-Mail: cheyenne.whitmore@testamericainc.com		State of Origin: Alabama	
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC#8		City: Calera		State: AL 35040	
Phone: 205-564-6197		Email: lbmidkiff@southpower.com		Project #: 40007143		SSOW#: _____	
Site: Gorgas Gypsum 1248		Due Date Requested:		Date Requested (days):		TAT Requested (days):	
Analysis Requested:		SM 4500 F.C		SM 4500 Cl.E		SM 4500 SO4.E	
9315_Ra226, 9320_Ra228, Ra228Ra228_GFPc		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C-comp, G-gab)	
Matrix (Water, Sewage, Stormwater, Other)		Preservation Code:		Matrix		Special Instructions/Note:	
AZ23614	10/14/19	13:10	G	Water	MMW-3V	1	
AZ23615	10/14/19	14:36	G	Water	MMW-4	3	
AZ23616	10/14/19	14:57	G	Water	FB-1 (Field Blank)	1	
AZ23617	10/14/19	15:34	G	Water	MMW-8	1	
AZ23618	10/16/19	11:12	G	Water	MMW-11H	1	
AZ23619	10/16/19	11:12	G	Water	MMW-11H DUP (Sample Duplicate)	1	
AZ23620	10/16/19	12:37	G	Water	MMW-3L	1	
AZ23621	10/16/19	13:47	G	Water	MMW-4L	1	
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>							
Possible Hazard Identification		Return To Client		Disposal By Lab		Active For	
Unconfirmed		435981		Social Instructions:GCC Requirements		Months	
Deliverable: Reanalysis I, II, III, IV, Other (specify)		Date:		Time:		Method of Shipment:	
Empty Kit Relinquished By:		Date/Time: 10/18/19 8:00		Date/Time: 10/19/19 1:05		Company: _____	
Relinquished by: Laura Midkiff		Date/Time:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Date/Time:		Company:	
Custody Seals Intact		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Vcr (09/20/2016)	



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-178335-1
SDG Number: Gorgas Gypsum 1248

Login Number: 178335

List Number: 1

Creator: Perez, Trina M

List Source: Eurofins TestAmerica, Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	21.8°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Laboratory: Eurofins TestAmerica, Pensacola

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

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	07-01-20
ANAB	ISO/IEC 17025	L2471	02-22-20
Arizona	State	AZ0710	01-12-20
Arkansas DEQ	State	88-0689	09-01-20
California	State	2510	07-01-20
Florida	NELAP	E81010	06-30-20
Georgia	State	E81010(FL)	06-30-20
Iowa	State	367	08-01-20
Iowa	State Program	367	08-01-20
Kansas	NELAP	E-10253	08-16-20
Kentucky (UST)	State	53	06-30-20
Kentucky (UST)	State Program	53	06-30-20
Kentucky (WW)	State	KY98030	12-30-19
Louisiana	NELAP	30976	06-30-20
Louisiana	NELAP	30976	06-30-20
Louisiana (DW)	NELAP	LA017	12-31-19
Louisiana (DW)	State	<cert No.>	12-31-19
Maryland	State	233	09-30-20
Massachusetts	State	M-FL094	06-30-20
Michigan	State	9912	05-06-20
Minnesota	NELAP	012-999-481	12-31-19
New Jersey	NELAP	FL006	07-30-20
North Carolina (WW/SW)	State	314	12-31-19
North Carolina (WW/SW)	State Program	314	12-31-19
Oklahoma	State	9810-186	08-31-20
Pennsylvania	NELAP	68-00467	01-31-20
Rhode Island	State	LAO00307	12-30-19
Rhode Island	State Program	LAO00307	12-30-19
South Carolina	State	96026002	06-30-20
South Carolina	State Program	96026	06-30-20
Tennessee	State	TN02907	06-30-20
Texas	NELAP	T104704286	09-30-20
US Fish & Wildlife	Federal	LE058448-0	07-31-20
US Fish & Wildlife	US Federal Programs	LE058448	06-07-20
USDA	Federal	P330-18-00148	05-17-21
USDA	US Federal Programs	P330-18-00148	05-17-21
Virginia	NELAP	460166	06-14-20
Washington	State	C915	05-15-20
West Virginia DEP	State	136	06-30-20

Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Gorgas

Job ID: 400-178335-1
 SDG: Gorgas Gypsum 1248

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-19
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-19
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-19
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-19
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-20
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-20
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	02-02-20
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	12-01-19

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-3	10/16/2019 12:04	Conductivity	4079.82	uS/cm
MW-3	10/16/2019 12:04	DO	4.23	mg/L
MW-3	10/16/2019 12:04	Depth to Water Detail	111.35	ft
MW-3	10/16/2019 12:04	Oxidation Reduction Potention	205.21	mv
MW-3	10/16/2019 12:04	pH	4.45	pH
MW-3	10/16/2019 12:04	Temperature	20.75	C
MW-3	10/16/2019 12:04	Turbidity	3.12	NTU
MW-3	10/16/2019 12:09	Conductivity	4051.29	uS/cm
MW-3	10/16/2019 12:09	DO	1.49	mg/L
MW-3	10/16/2019 12:09	Depth to Water Detail	111.56	ft
MW-3	10/16/2019 12:09	Oxidation Reduction Potention	216.75	mv
MW-3	10/16/2019 12:09	pH	4.63	pH
MW-3	10/16/2019 12:09	Temperature	20.66	C
MW-3	10/16/2019 12:09	Turbidity	11.9	NTU
MW-3	10/16/2019 12:14	Conductivity	3956.34	uS/cm
MW-3	10/16/2019 12:14	DO	0.96	mg/L
MW-3	10/16/2019 12:14	Depth to Water Detail	111.7	ft
MW-3	10/16/2019 12:14	Oxidation Reduction Potention	228.14	mv
MW-3	10/16/2019 12:14	pH	4.59	pH
MW-3	10/16/2019 12:14	Temperature	20.57	C
MW-3	10/16/2019 12:14	Turbidity	6.27	NTU
MW-3	10/16/2019 12:19	Conductivity	3908.77	uS/cm
MW-3	10/16/2019 12:19	DO	0.92	mg/L
MW-3	10/16/2019 12:19	Depth to Water Detail	111.84	ft
MW-3	10/16/2019 12:19	Oxidation Reduction Potention	236.74	mv
MW-3	10/16/2019 12:19	pH	4.56	pH
MW-3	10/16/2019 12:19	Temperature	20.43	C
MW-3	10/16/2019 12:19	Turbidity	3.84	NTU
MW-3	10/16/2019 12:24	Conductivity	3908.26	uS/cm
MW-3	10/16/2019 12:24	DO	1	mg/L
MW-3	10/16/2019 12:24	Depth to Water Detail	111.97	ft
MW-3	10/16/2019 12:24	Oxidation Reduction Potention	241.82	mv
MW-3	10/16/2019 12:24	pH	4.54	pH
MW-3	10/16/2019 12:24	Temperature	20.45	C
MW-3	10/16/2019 12:24	Turbidity	2.74	NTU
MW-3	10/16/2019 12:29	Conductivity	3920.27	uS/cm
MW-3	10/16/2019 12:29	DO	1.09	mg/L
MW-3	10/16/2019 12:29	Depth to Water Detail	112	ft
MW-3	10/16/2019 12:29	Oxidation Reduction Potention	245.01	mv
MW-3	10/16/2019 12:29	pH	4.52	pH
MW-3	10/16/2019 12:29	Temperature	20.44	C
MW-3	10/16/2019 12:29	Turbidity	2.14	NTU
MW-3	10/16/2019 12:34	Conductivity	3934.8	uS/cm
MW-3	10/16/2019 12:34	DO	1.11	mg/L

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-3	10/16/2019 12:34	Depth to Water Detail	112.04	ft
MW-3	10/16/2019 12:34	Oxidation Reduction Potention	249.52	mv
MW-3	10/16/2019 12:34	pH	4.51	pH
MW-3	10/16/2019 12:34	Temperature	20.31	C
MW-3	10/16/2019 12:34	Turbidity	2.26	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3V	10/14/2019 12:02	Conductivity	3889.87	uS/cm
GS-GSA-MW-3V	10/14/2019 12:02	DO	0.95	mg/L
GS-GSA-MW-3V	10/14/2019 12:02	Depth to Water Detail	131.56	ft
GS-GSA-MW-3V	10/14/2019 12:02	Oxidation Reduction Potention	-21.44	mv
GS-GSA-MW-3V	10/14/2019 12:02	pH	6.05	pH
GS-GSA-MW-3V	10/14/2019 12:02	Temperature	20.75	C
GS-GSA-MW-3V	10/14/2019 12:02	Turbidity	2.47	NTU
GS-GSA-MW-3V	10/14/2019 12:07	Conductivity	3809.07	uS/cm
GS-GSA-MW-3V	10/14/2019 12:07	DO	0.8	mg/L
GS-GSA-MW-3V	10/14/2019 12:07	Depth to Water Detail	132.04	ft
GS-GSA-MW-3V	10/14/2019 12:07	Oxidation Reduction Potention	-5.21	mv
GS-GSA-MW-3V	10/14/2019 12:07	pH	5.93	pH
GS-GSA-MW-3V	10/14/2019 12:07	Temperature	20.75	C
GS-GSA-MW-3V	10/14/2019 12:07	Turbidity	2.15	NTU
GS-GSA-MW-3V	10/14/2019 12:12	Conductivity	3776.6	uS/cm
GS-GSA-MW-3V	10/14/2019 12:12	DO	0.79	mg/L
GS-GSA-MW-3V	10/14/2019 12:12	Depth to Water Detail	132.52	ft
GS-GSA-MW-3V	10/14/2019 12:12	Oxidation Reduction Potention	2.29	mv
GS-GSA-MW-3V	10/14/2019 12:12	pH	5.9	pH
GS-GSA-MW-3V	10/14/2019 12:12	Temperature	20.85	C
GS-GSA-MW-3V	10/14/2019 12:12	Turbidity	2.22	NTU
GS-GSA-MW-3V	10/14/2019 12:17	Conductivity	3752.18	uS/cm
GS-GSA-MW-3V	10/14/2019 12:17	DO	0.83	mg/L
GS-GSA-MW-3V	10/14/2019 12:17	Depth to Water Detail	132.8	ft
GS-GSA-MW-3V	10/14/2019 12:17	Oxidation Reduction Potention	4.91	mv
GS-GSA-MW-3V	10/14/2019 12:17	pH	5.89	pH
GS-GSA-MW-3V	10/14/2019 12:17	Temperature	20.89	C
GS-GSA-MW-3V	10/14/2019 12:17	Turbidity	2.43	NTU
GS-GSA-MW-3V	10/14/2019 12:22	Conductivity	3739.73	uS/cm
GS-GSA-MW-3V	10/14/2019 12:22	DO	0.82	mg/L
GS-GSA-MW-3V	10/14/2019 12:22	Depth to Water Detail	133.31	ft
GS-GSA-MW-3V	10/14/2019 12:22	Oxidation Reduction Potention	2.69	mv
GS-GSA-MW-3V	10/14/2019 12:22	pH	5.92	pH
GS-GSA-MW-3V	10/14/2019 12:22	Temperature	21.05	C
GS-GSA-MW-3V	10/14/2019 12:22	Turbidity	2.2	NTU
GS-GSA-MW-3V	10/14/2019 12:27	Conductivity	3724.84	uS/cm
GS-GSA-MW-3V	10/14/2019 12:27	DO	0.84	mg/L
GS-GSA-MW-3V	10/14/2019 12:27	Depth to Water Detail	133.71	ft
GS-GSA-MW-3V	10/14/2019 12:27	Oxidation Reduction Potention	-14.63	mv
GS-GSA-MW-3V	10/14/2019 12:27	pH	6.05	pH
GS-GSA-MW-3V	10/14/2019 12:27	Temperature	21.06	C
GS-GSA-MW-3V	10/14/2019 12:27	Turbidity	2.15	NTU
GS-GSA-MW-3V	10/14/2019 12:32	Conductivity	3670.58	uS/cm
GS-GSA-MW-3V	10/14/2019 12:32	DO	0.81	mg/L

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3V	10/14/2019 12:32	Depth to Water Detail	134.08	ft
GS-GSA-MW-3V	10/14/2019 12:32	Oxidation Reduction Potention	-53.72	mv
GS-GSA-MW-3V	10/14/2019 12:32	pH	6.25	pH
GS-GSA-MW-3V	10/14/2019 12:32	Temperature	21.11	C
GS-GSA-MW-3V	10/14/2019 12:32	Turbidity	2.09	NTU
GS-GSA-MW-3V	10/14/2019 12:37	Conductivity	3652.48	uS/cm
GS-GSA-MW-3V	10/14/2019 12:37	DO	0.82	mg/L
GS-GSA-MW-3V	10/14/2019 12:37	Depth to Water Detail	134.32	ft
GS-GSA-MW-3V	10/14/2019 12:37	Oxidation Reduction Potention	-89.45	mv
GS-GSA-MW-3V	10/14/2019 12:37	pH	6.37	pH
GS-GSA-MW-3V	10/14/2019 12:37	Temperature	21.07	C
GS-GSA-MW-3V	10/14/2019 12:37	Turbidity	1.78	NTU
GS-GSA-MW-3V	10/14/2019 12:42	Conductivity	3632.11	uS/cm
GS-GSA-MW-3V	10/14/2019 12:42	DO	0.77	mg/L
GS-GSA-MW-3V	10/14/2019 12:42	Depth to Water Detail	134.42	ft
GS-GSA-MW-3V	10/14/2019 12:42	Oxidation Reduction Potention	-111.8	mv
GS-GSA-MW-3V	10/14/2019 12:42	pH	6.43	pH
GS-GSA-MW-3V	10/14/2019 12:42	Temperature	21.11	C
GS-GSA-MW-3V	10/14/2019 12:42	Turbidity	1.64	NTU
GS-GSA-MW-3V	10/14/2019 12:47	Conductivity	3627.87	uS/cm
GS-GSA-MW-3V	10/14/2019 12:47	DO	0.8	mg/L
GS-GSA-MW-3V	10/14/2019 12:47	Depth to Water Detail	134.74	ft
GS-GSA-MW-3V	10/14/2019 12:47	Oxidation Reduction Potention	-121.95	mv
GS-GSA-MW-3V	10/14/2019 12:47	pH	6.44	pH
GS-GSA-MW-3V	10/14/2019 12:47	Temperature	21.37	C
GS-GSA-MW-3V	10/14/2019 12:47	Turbidity	1.59	NTU
GS-GSA-MW-3V	10/14/2019 12:52	Conductivity	3622.91	uS/cm
GS-GSA-MW-3V	10/14/2019 12:52	DO	0.77	mg/L
GS-GSA-MW-3V	10/14/2019 12:52	Depth to Water Detail	135.1	ft
GS-GSA-MW-3V	10/14/2019 12:52	Oxidation Reduction Potention	-127.08	mv
GS-GSA-MW-3V	10/14/2019 12:52	pH	6.43	pH
GS-GSA-MW-3V	10/14/2019 12:52	Temperature	21.62	C
GS-GSA-MW-3V	10/14/2019 12:52	Turbidity	1.41	NTU
GS-GSA-MW-3V	10/14/2019 12:57	Conductivity	3613.8	uS/cm
GS-GSA-MW-3V	10/14/2019 12:57	DO	0.76	mg/L
GS-GSA-MW-3V	10/14/2019 12:57	Depth to Water Detail	135.32	ft
GS-GSA-MW-3V	10/14/2019 12:57	Oxidation Reduction Potention	-130.44	mv
GS-GSA-MW-3V	10/14/2019 12:57	pH	6.42	pH
GS-GSA-MW-3V	10/14/2019 12:57	Temperature	21.39	C
GS-GSA-MW-3V	10/14/2019 12:57	Turbidity	1.43	NTU
GS-GSA-MW-3V	10/14/2019 13:02	Conductivity	3616.9	uS/cm
GS-GSA-MW-3V	10/14/2019 13:02	DO	0.76	mg/L
GS-GSA-MW-3V	10/14/2019 13:02	Depth to Water Detail	135.49	ft
GS-GSA-MW-3V	10/14/2019 13:02	Oxidation Reduction Potention	-132.06	mv

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3V	10/14/2019 13:02	pH	6.4	pH
GS-GSA-MW-3V	10/14/2019 13:02	Temperature	21.31	C
GS-GSA-MW-3V	10/14/2019 13:02	Turbidity	1.34	NTU
GS-GSA-MW-3V	10/14/2019 13:07	Conductivity	3620.7	uS/cm
GS-GSA-MW-3V	10/14/2019 13:07	DO	0.79	mg/L
GS-GSA-MW-3V	10/14/2019 13:07	Depth to Water Detail	135.61	ft
GS-GSA-MW-3V	10/14/2019 13:07	Oxidation Reduction Potention	-132.51	mv
GS-GSA-MW-3V	10/14/2019 13:07	pH	6.39	pH
GS-GSA-MW-3V	10/14/2019 13:07	Temperature	21.33	C
GS-GSA-MW-3V	10/14/2019 13:07	Turbidity	1.31	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-4	10/14/2019 14:07	Conductivity	1206.25	uS/cm
GS-GSA-MW-4	10/14/2019 14:07	DO	0.26	mg/L
GS-GSA-MW-4	10/14/2019 14:07	Depth to Water Detail	93.28	ft
GS-GSA-MW-4	10/14/2019 14:07	Oxidation Reduction Potention	241.11	mv
GS-GSA-MW-4	10/14/2019 14:07	pH	3.9	pH
GS-GSA-MW-4	10/14/2019 14:07	Temperature	20.91	C
GS-GSA-MW-4	10/14/2019 14:07	Turbidity	4.25	NTU
GS-GSA-MW-4	10/14/2019 14:12	Conductivity	1198.96	uS/cm
GS-GSA-MW-4	10/14/2019 14:12	DO	0.26	mg/L
GS-GSA-MW-4	10/14/2019 14:12	Depth to Water Detail	93.28	ft
GS-GSA-MW-4	10/14/2019 14:12	Oxidation Reduction Potention	277.43	mv
GS-GSA-MW-4	10/14/2019 14:12	pH	3.9	pH
GS-GSA-MW-4	10/14/2019 14:12	Temperature	20.85	C
GS-GSA-MW-4	10/14/2019 14:12	Turbidity	7.66	NTU
GS-GSA-MW-4	10/14/2019 14:17	Conductivity	1202.46	uS/cm
GS-GSA-MW-4	10/14/2019 14:17	DO	0.21	mg/L
GS-GSA-MW-4	10/14/2019 14:17	Depth to Water Detail	93.28	ft
GS-GSA-MW-4	10/14/2019 14:17	Oxidation Reduction Potention	283.53	mv
GS-GSA-MW-4	10/14/2019 14:17	pH	3.9	pH
GS-GSA-MW-4	10/14/2019 14:17	Temperature	20.79	C
GS-GSA-MW-4	10/14/2019 14:17	Turbidity	14.4	NTU
GS-GSA-MW-4	10/14/2019 14:22	Conductivity	1203.76	uS/cm
GS-GSA-MW-4	10/14/2019 14:22	DO	0.18	mg/L
GS-GSA-MW-4	10/14/2019 14:22	Depth to Water Detail	93.28	ft
GS-GSA-MW-4	10/14/2019 14:22	Oxidation Reduction Potention	284.5	mv
GS-GSA-MW-4	10/14/2019 14:22	pH	3.91	pH
GS-GSA-MW-4	10/14/2019 14:22	Temperature	20.77	C
GS-GSA-MW-4	10/14/2019 14:22	Turbidity	10.32	NTU
GS-GSA-MW-4	10/14/2019 14:27	Conductivity	1204.81	uS/cm
GS-GSA-MW-4	10/14/2019 14:27	DO	0.17	mg/L
GS-GSA-MW-4	10/14/2019 14:27	Depth to Water Detail	93.28	ft
GS-GSA-MW-4	10/14/2019 14:27	Oxidation Reduction Potention	283.67	mv
GS-GSA-MW-4	10/14/2019 14:27	pH	3.91	pH
GS-GSA-MW-4	10/14/2019 14:27	Temperature	20.78	C
GS-GSA-MW-4	10/14/2019 14:27	Turbidity	5.1	NTU
GS-GSA-MW-4	10/14/2019 14:32	Conductivity	1204.36	uS/cm
GS-GSA-MW-4	10/14/2019 14:32	DO	0.16	mg/L
GS-GSA-MW-4	10/14/2019 14:32	Depth to Water Detail	93.28	ft
GS-GSA-MW-4	10/14/2019 14:32	Oxidation Reduction Potention	283.32	mv
GS-GSA-MW-4	10/14/2019 14:32	pH	3.91	pH
GS-GSA-MW-4	10/14/2019 14:32	Temperature	20.74	C
GS-GSA-MW-4	10/14/2019 14:32	Turbidity	4.87	NTU

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Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-4	10/16/2019 13:29	Conductivity	3754.33	uS/cm
MW-4	10/16/2019 13:29	DO	1.74	mg/L
MW-4	10/16/2019 13:29	Depth to Water Detail	118.41	ft
MW-4	10/16/2019 13:29	Oxidation Reduction Potention	173.88	mv
MW-4	10/16/2019 13:29	pH	6.19	pH
MW-4	10/16/2019 13:29	Temperature	20.76	C
MW-4	10/16/2019 13:29	Turbidity	0.36	NTU
MW-4	10/16/2019 13:34	Conductivity	3752.44	uS/cm
MW-4	10/16/2019 13:34	DO	1.6	mg/L
MW-4	10/16/2019 13:34	Depth to Water Detail	118.41	ft
MW-4	10/16/2019 13:34	Oxidation Reduction Potention	170.52	mv
MW-4	10/16/2019 13:34	pH	6.19	pH
MW-4	10/16/2019 13:34	Temperature	20.68	C
MW-4	10/16/2019 13:34	Turbidity	0.28	NTU
MW-4	10/16/2019 13:39	Conductivity	3754.29	uS/cm
MW-4	10/16/2019 13:39	DO	1.58	mg/L
MW-4	10/16/2019 13:39	Depth to Water Detail	118.41	ft
MW-4	10/16/2019 13:39	Oxidation Reduction Potention	173.26	mv
MW-4	10/16/2019 13:39	pH	6.19	pH
MW-4	10/16/2019 13:39	Temperature	20.58	C
MW-4	10/16/2019 13:39	Turbidity	0.27	NTU
MW-4	10/16/2019 13:44	Conductivity	3765.62	uS/cm
MW-4	10/16/2019 13:44	DO	1.58	mg/L
MW-4	10/16/2019 13:44	Depth to Water Detail	118.41	ft
MW-4	10/16/2019 13:44	Oxidation Reduction Potention	175.01	mv
MW-4	10/16/2019 13:44	pH	6.19	pH
MW-4	10/16/2019 13:44	Temperature	20.6	C
MW-4	10/16/2019 13:44	Turbidity	0.27	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-8	10/14/2019 15:15	Conductivity	3911.38	uS/cm
GS-GSA-MW-8	10/14/2019 15:15	DO	0.44	mg/L
GS-GSA-MW-8	10/14/2019 15:15	Depth to Water Detail	85.92	ft
GS-GSA-MW-8	10/14/2019 15:15	Oxidation Reduction Potention	-40.9	mv
GS-GSA-MW-8	10/14/2019 15:15	pH	6.78	pH
GS-GSA-MW-8	10/14/2019 15:15	Temperature	21.46	C
GS-GSA-MW-8	10/14/2019 15:15	Turbidity	1.62	NTU
GS-GSA-MW-8	10/14/2019 15:20	Conductivity	3796	uS/cm
GS-GSA-MW-8	10/14/2019 15:20	DO	0.28	mg/L
GS-GSA-MW-8	10/14/2019 15:20	Depth to Water Detail	86.06	ft
GS-GSA-MW-8	10/14/2019 15:20	Oxidation Reduction Potention	-53.86	mv
GS-GSA-MW-8	10/14/2019 15:20	pH	6.81	pH
GS-GSA-MW-8	10/14/2019 15:20	Temperature	21.41	C
GS-GSA-MW-8	10/14/2019 15:20	Turbidity	0.9	NTU
GS-GSA-MW-8	10/14/2019 15:25	Conductivity	3827.86	uS/cm
GS-GSA-MW-8	10/14/2019 15:25	DO	0.25	mg/L
GS-GSA-MW-8	10/14/2019 15:25	Depth to Water Detail	86.08	ft
GS-GSA-MW-8	10/14/2019 15:25	Oxidation Reduction Potention	-55.02	mv
GS-GSA-MW-8	10/14/2019 15:25	pH	6.82	pH
GS-GSA-MW-8	10/14/2019 15:25	Temperature	21.32	C
GS-GSA-MW-8	10/14/2019 15:25	Turbidity	0.89	NTU
GS-GSA-MW-8	10/14/2019 15:30	Conductivity	3865.85	uS/cm
GS-GSA-MW-8	10/14/2019 15:30	DO	0.24	mg/L
GS-GSA-MW-8	10/14/2019 15:30	Depth to Water Detail	86.12	ft
GS-GSA-MW-8	10/14/2019 15:30	Oxidation Reduction Potention	-53.52	mv
GS-GSA-MW-8	10/14/2019 15:30	pH	6.88	pH
GS-GSA-MW-8	10/14/2019 15:30	Temperature	21.28	C
GS-GSA-MW-8	10/14/2019 15:30	Turbidity	0.97	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-11H	10/16/2019 8:18	Conductivity	1534.8	uS/cm
GS-GSA-MW-11H	10/16/2019 8:18	DO	0.18	mg/L
GS-GSA-MW-11H	10/16/2019 8:18	Depth to Water Detail	8.56	ft
GS-GSA-MW-11H	10/16/2019 8:18	Oxidation Reduction Potention	80.81	mv
GS-GSA-MW-11H	10/16/2019 8:18	pH	6.02	pH
GS-GSA-MW-11H	10/16/2019 8:18	Temperature	20.66	C
GS-GSA-MW-11H	10/16/2019 8:18	Turbidity	31.9	NTU
GS-GSA-MW-11H	10/16/2019 8:23	Conductivity	1518.91	uS/cm
GS-GSA-MW-11H	10/16/2019 8:23	DO	0.17	mg/L
GS-GSA-MW-11H	10/16/2019 8:23	Depth to Water Detail	8.63	ft
GS-GSA-MW-11H	10/16/2019 8:23	Oxidation Reduction Potention	63.16	mv
GS-GSA-MW-11H	10/16/2019 8:23	pH	6.04	pH
GS-GSA-MW-11H	10/16/2019 8:23	Temperature	20.57	C
GS-GSA-MW-11H	10/16/2019 8:23	Turbidity	59.8	NTU
GS-GSA-MW-11H	10/16/2019 8:28	Conductivity	1509.99	uS/cm
GS-GSA-MW-11H	10/16/2019 8:28	DO	0.16	mg/L
GS-GSA-MW-11H	10/16/2019 8:28	Depth to Water Detail	8.7	ft
GS-GSA-MW-11H	10/16/2019 8:28	Oxidation Reduction Potention	60.94	mv
GS-GSA-MW-11H	10/16/2019 8:28	pH	6.07	pH
GS-GSA-MW-11H	10/16/2019 8:28	Temperature	20.48	C
GS-GSA-MW-11H	10/16/2019 8:28	Turbidity	72.7	NTU
GS-GSA-MW-11H	10/16/2019 8:33	Conductivity	1499.43	uS/cm
GS-GSA-MW-11H	10/16/2019 8:33	DO	0.16	mg/L
GS-GSA-MW-11H	10/16/2019 8:33	Depth to Water Detail	8.79	ft
GS-GSA-MW-11H	10/16/2019 8:33	Oxidation Reduction Potention	51.24	mv
GS-GSA-MW-11H	10/16/2019 8:33	pH	6.07	pH
GS-GSA-MW-11H	10/16/2019 8:33	Temperature	20.42	C
GS-GSA-MW-11H	10/16/2019 8:33	Turbidity	60.5	NTU
GS-GSA-MW-11H	10/16/2019 8:38	Conductivity	1491.45	uS/cm
GS-GSA-MW-11H	10/16/2019 8:38	DO	0.16	mg/L
GS-GSA-MW-11H	10/16/2019 8:38	Depth to Water Detail	8.8	ft
GS-GSA-MW-11H	10/16/2019 8:38	Oxidation Reduction Potention	48.91	mv
GS-GSA-MW-11H	10/16/2019 8:38	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 8:38	Temperature	20.37	C
GS-GSA-MW-11H	10/16/2019 8:38	Turbidity	57	NTU
GS-GSA-MW-11H	10/16/2019 8:43	Conductivity	1482.72	uS/cm
GS-GSA-MW-11H	10/16/2019 8:43	DO	0.16	mg/L
GS-GSA-MW-11H	10/16/2019 8:43	Depth to Water Detail	8.83	ft
GS-GSA-MW-11H	10/16/2019 8:43	Oxidation Reduction Potention	46.34	mv
GS-GSA-MW-11H	10/16/2019 8:43	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 8:43	Temperature	20.34	C
GS-GSA-MW-11H	10/16/2019 8:43	Turbidity	54.4	NTU
GS-GSA-MW-11H	10/16/2019 8:48	Conductivity	1479.29	uS/cm
GS-GSA-MW-11H	10/16/2019 8:48	DO	0.16	mg/L

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-11H	10/16/2019 8:48	Depth to Water Detail	8.85	ft
GS-GSA-MW-11H	10/16/2019 8:48	Oxidation Reduction Potention	45.3	mv
GS-GSA-MW-11H	10/16/2019 8:48	pH	6.05	pH
GS-GSA-MW-11H	10/16/2019 8:48	Temperature	20.32	C
GS-GSA-MW-11H	10/16/2019 8:48	Turbidity	49.2	NTU
GS-GSA-MW-11H	10/16/2019 8:53	Conductivity	1476.8	uS/cm
GS-GSA-MW-11H	10/16/2019 8:53	DO	0.16	mg/L
GS-GSA-MW-11H	10/16/2019 8:53	Depth to Water Detail	8.88	ft
GS-GSA-MW-11H	10/16/2019 8:53	Oxidation Reduction Potention	42.17	mv
GS-GSA-MW-11H	10/16/2019 8:53	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 8:53	Temperature	20.25	C
GS-GSA-MW-11H	10/16/2019 8:53	Turbidity	41.9	NTU
GS-GSA-MW-11H	10/16/2019 8:58	Conductivity	1474.56	uS/cm
GS-GSA-MW-11H	10/16/2019 8:58	DO	0.16	mg/L
GS-GSA-MW-11H	10/16/2019 8:58	Depth to Water Detail	8.89	ft
GS-GSA-MW-11H	10/16/2019 8:58	Oxidation Reduction Potention	40.74	mv
GS-GSA-MW-11H	10/16/2019 8:58	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 8:58	Temperature	20.22	C
GS-GSA-MW-11H	10/16/2019 8:58	Turbidity	38.5	NTU
GS-GSA-MW-11H	10/16/2019 9:03	Conductivity	1467	uS/cm
GS-GSA-MW-11H	10/16/2019 9:03	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:03	Depth to Water Detail	8.92	ft
GS-GSA-MW-11H	10/16/2019 9:03	Oxidation Reduction Potention	37.72	mv
GS-GSA-MW-11H	10/16/2019 9:03	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 9:03	Temperature	20.22	C
GS-GSA-MW-11H	10/16/2019 9:03	Turbidity	34.2	NTU
GS-GSA-MW-11H	10/16/2019 9:08	Conductivity	1464.19	uS/cm
GS-GSA-MW-11H	10/16/2019 9:08	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:08	Depth to Water Detail	8.93	ft
GS-GSA-MW-11H	10/16/2019 9:08	Oxidation Reduction Potention	36.84	mv
GS-GSA-MW-11H	10/16/2019 9:08	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 9:08	Temperature	20.21	C
GS-GSA-MW-11H	10/16/2019 9:08	Turbidity	34.6	NTU
GS-GSA-MW-11H	10/16/2019 9:13	Conductivity	1457.74	uS/cm
GS-GSA-MW-11H	10/16/2019 9:13	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:13	Depth to Water Detail	8.93	ft
GS-GSA-MW-11H	10/16/2019 9:13	Oxidation Reduction Potention	38.09	mv
GS-GSA-MW-11H	10/16/2019 9:13	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 9:13	Temperature	20.21	C
GS-GSA-MW-11H	10/16/2019 9:13	Turbidity	29.5	NTU
GS-GSA-MW-11H	10/16/2019 9:18	Conductivity	1459.64	uS/cm
GS-GSA-MW-11H	10/16/2019 9:18	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:18	Depth to Water Detail	8.93	ft
GS-GSA-MW-11H	10/16/2019 9:18	Oxidation Reduction Potention	38.58	mv

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-11H	10/16/2019 9:18	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 9:18	Temperature	20.21	C
GS-GSA-MW-11H	10/16/2019 9:18	Turbidity	28.3	NTU
GS-GSA-MW-11H	10/16/2019 9:23	Conductivity	1448.47	uS/cm
GS-GSA-MW-11H	10/16/2019 9:23	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:23	Depth to Water Detail	8.93	ft
GS-GSA-MW-11H	10/16/2019 9:23	Oxidation Reduction Potention	37.23	mv
GS-GSA-MW-11H	10/16/2019 9:23	pH	6.05	pH
GS-GSA-MW-11H	10/16/2019 9:23	Temperature	20.19	C
GS-GSA-MW-11H	10/16/2019 9:23	Turbidity	27.8	NTU
GS-GSA-MW-11H	10/16/2019 9:28	Conductivity	1449.41	uS/cm
GS-GSA-MW-11H	10/16/2019 9:28	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:28	Depth to Water Detail	8.94	ft
GS-GSA-MW-11H	10/16/2019 9:28	Oxidation Reduction Potention	36.82	mv
GS-GSA-MW-11H	10/16/2019 9:28	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 9:28	Temperature	20.14	C
GS-GSA-MW-11H	10/16/2019 9:28	Turbidity	26.2	NTU
GS-GSA-MW-11H	10/16/2019 9:33	Conductivity	1439.94	uS/cm
GS-GSA-MW-11H	10/16/2019 9:33	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:33	Depth to Water Detail	8.94	ft
GS-GSA-MW-11H	10/16/2019 9:33	Oxidation Reduction Potention	36.51	mv
GS-GSA-MW-11H	10/16/2019 9:33	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 9:33	Temperature	20.14	C
GS-GSA-MW-11H	10/16/2019 9:33	Turbidity	25.2	NTU
GS-GSA-MW-11H	10/16/2019 9:38	Conductivity	1443.94	uS/cm
GS-GSA-MW-11H	10/16/2019 9:38	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:38	Depth to Water Detail	8.95	ft
GS-GSA-MW-11H	10/16/2019 9:38	Oxidation Reduction Potention	36.45	mv
GS-GSA-MW-11H	10/16/2019 9:38	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 9:38	Temperature	20.09	C
GS-GSA-MW-11H	10/16/2019 9:38	Turbidity	23.5	NTU
GS-GSA-MW-11H	10/16/2019 9:43	Conductivity	1443.88	uS/cm
GS-GSA-MW-11H	10/16/2019 9:43	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:43	Depth to Water Detail	8.95	ft
GS-GSA-MW-11H	10/16/2019 9:43	Oxidation Reduction Potention	36.68	mv
GS-GSA-MW-11H	10/16/2019 9:43	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 9:43	Temperature	20.05	C
GS-GSA-MW-11H	10/16/2019 9:43	Turbidity	21.7	NTU
GS-GSA-MW-11H	10/16/2019 9:48	Conductivity	1445.33	uS/cm
GS-GSA-MW-11H	10/16/2019 9:48	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:48	Depth to Water Detail	8.95	ft
GS-GSA-MW-11H	10/16/2019 9:48	Oxidation Reduction Potention	37.44	mv
GS-GSA-MW-11H	10/16/2019 9:48	pH	6.05	pH
GS-GSA-MW-11H	10/16/2019 9:48	Temperature	20.06	C

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-11H	10/16/2019 9:48	Turbidity	20.3	NTU
GS-GSA-MW-11H	10/16/2019 9:53	Conductivity	1436.59	uS/cm
GS-GSA-MW-11H	10/16/2019 9:53	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:53	Depth to Water Detail	8.96	ft
GS-GSA-MW-11H	10/16/2019 9:53	Oxidation Reduction Potention	36.86	mv
GS-GSA-MW-11H	10/16/2019 9:53	pH	6.05	pH
GS-GSA-MW-11H	10/16/2019 9:53	Temperature	20.02	C
GS-GSA-MW-11H	10/16/2019 9:53	Turbidity	19.9	NTU
GS-GSA-MW-11H	10/16/2019 9:58	Conductivity	1437.07	uS/cm
GS-GSA-MW-11H	10/16/2019 9:58	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 9:58	Depth to Water Detail	8.96	ft
GS-GSA-MW-11H	10/16/2019 9:58	Oxidation Reduction Potention	36.46	mv
GS-GSA-MW-11H	10/16/2019 9:58	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 9:58	Temperature	20.01	C
GS-GSA-MW-11H	10/16/2019 9:58	Turbidity	18.7	NTU
GS-GSA-MW-11H	10/16/2019 10:03	Conductivity	1434.57	uS/cm
GS-GSA-MW-11H	10/16/2019 10:03	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:03	Depth to Water Detail	8.97	ft
GS-GSA-MW-11H	10/16/2019 10:03	Oxidation Reduction Potention	36.25	mv
GS-GSA-MW-11H	10/16/2019 10:03	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 10:03	Temperature	20.05	C
GS-GSA-MW-11H	10/16/2019 10:03	Turbidity	16.7	NTU
GS-GSA-MW-11H	10/16/2019 10:08	Conductivity	1453.04	uS/cm
GS-GSA-MW-11H	10/16/2019 10:08	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:08	Depth to Water Detail	8.99	ft
GS-GSA-MW-11H	10/16/2019 10:08	Oxidation Reduction Potention	36.33	mv
GS-GSA-MW-11H	10/16/2019 10:08	pH	6.07	pH
GS-GSA-MW-11H	10/16/2019 10:08	Temperature	20.04	C
GS-GSA-MW-11H	10/16/2019 10:08	Turbidity	16.5	NTU
GS-GSA-MW-11H	10/16/2019 10:13	Conductivity	1445.76	uS/cm
GS-GSA-MW-11H	10/16/2019 10:13	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:13	Depth to Water Detail	9.01	ft
GS-GSA-MW-11H	10/16/2019 10:13	Oxidation Reduction Potention	36.21	mv
GS-GSA-MW-11H	10/16/2019 10:13	pH	6.07	pH
GS-GSA-MW-11H	10/16/2019 10:13	Temperature	20.02	C
GS-GSA-MW-11H	10/16/2019 10:13	Turbidity	14.9	NTU
GS-GSA-MW-11H	10/16/2019 10:18	Conductivity	1447.54	uS/cm
GS-GSA-MW-11H	10/16/2019 10:18	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:18	Depth to Water Detail	9.01	ft
GS-GSA-MW-11H	10/16/2019 10:18	Oxidation Reduction Potention	36.93	mv
GS-GSA-MW-11H	10/16/2019 10:18	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 10:18	Temperature	20	C
GS-GSA-MW-11H	10/16/2019 10:18	Turbidity	14.4	NTU
GS-GSA-MW-11H	10/16/2019 10:23	Conductivity	1444.23	uS/cm

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-11H	10/16/2019 10:23	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:23	Depth to Water Detail	9.01	ft
GS-GSA-MW-11H	10/16/2019 10:23	Oxidation Reduction Potention	36.74	mv
GS-GSA-MW-11H	10/16/2019 10:23	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 10:23	Temperature	20	C
GS-GSA-MW-11H	10/16/2019 10:23	Turbidity	14.3	NTU
GS-GSA-MW-11H	10/16/2019 10:28	Conductivity	1458.47	uS/cm
GS-GSA-MW-11H	10/16/2019 10:28	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:28	Depth to Water Detail	9.01	ft
GS-GSA-MW-11H	10/16/2019 10:28	Oxidation Reduction Potention	36.42	mv
GS-GSA-MW-11H	10/16/2019 10:28	pH	6.07	pH
GS-GSA-MW-11H	10/16/2019 10:28	Temperature	19.99	C
GS-GSA-MW-11H	10/16/2019 10:28	Turbidity	13.7	NTU
GS-GSA-MW-11H	10/16/2019 10:33	Conductivity	1449.31	uS/cm
GS-GSA-MW-11H	10/16/2019 10:33	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:33	Depth to Water Detail	9.01	ft
GS-GSA-MW-11H	10/16/2019 10:33	Oxidation Reduction Potention	36.13	mv
GS-GSA-MW-11H	10/16/2019 10:33	pH	6.07	pH
GS-GSA-MW-11H	10/16/2019 10:33	Temperature	20.03	C
GS-GSA-MW-11H	10/16/2019 10:33	Turbidity	13.1	NTU
GS-GSA-MW-11H	10/16/2019 10:38	Conductivity	1451.72	uS/cm
GS-GSA-MW-11H	10/16/2019 10:38	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:38	Depth to Water Detail	9.02	ft
GS-GSA-MW-11H	10/16/2019 10:38	Oxidation Reduction Potention	36.2	mv
GS-GSA-MW-11H	10/16/2019 10:38	pH	6.07	pH
GS-GSA-MW-11H	10/16/2019 10:38	Temperature	20.02	C
GS-GSA-MW-11H	10/16/2019 10:38	Turbidity	12.8	NTU
GS-GSA-MW-11H	10/16/2019 10:43	Conductivity	1448.3	uS/cm
GS-GSA-MW-11H	10/16/2019 10:43	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:43	Depth to Water Detail	9.02	ft
GS-GSA-MW-11H	10/16/2019 10:43	Oxidation Reduction Potention	36.05	mv
GS-GSA-MW-11H	10/16/2019 10:43	pH	6.07	pH
GS-GSA-MW-11H	10/16/2019 10:43	Temperature	20.02	C
GS-GSA-MW-11H	10/16/2019 10:43	Turbidity	11.3	NTU
GS-GSA-MW-11H	10/16/2019 10:48	Conductivity	1449.57	uS/cm
GS-GSA-MW-11H	10/16/2019 10:48	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:48	Depth to Water Detail	9.02	ft
GS-GSA-MW-11H	10/16/2019 10:48	Oxidation Reduction Potention	37.15	mv
GS-GSA-MW-11H	10/16/2019 10:48	pH	6.05	pH
GS-GSA-MW-11H	10/16/2019 10:48	Temperature	20.04	C
GS-GSA-MW-11H	10/16/2019 10:48	Turbidity	11.01	NTU
GS-GSA-MW-11H	10/16/2019 10:53	Conductivity	1453.84	uS/cm
GS-GSA-MW-11H	10/16/2019 10:53	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:53	Depth to Water Detail	9.02	ft

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-11H	10/16/2019 10:53	Oxidation Reduction Potention	36.9	mv
GS-GSA-MW-11H	10/16/2019 10:53	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 10:53	Temperature	20.05	C
GS-GSA-MW-11H	10/16/2019 10:53	Turbidity	11.4	NTU
GS-GSA-MW-11H	10/16/2019 10:58	Conductivity	1449.74	uS/cm
GS-GSA-MW-11H	10/16/2019 10:58	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 10:58	Depth to Water Detail	9.02	ft
GS-GSA-MW-11H	10/16/2019 10:58	Oxidation Reduction Potention	36.61	mv
GS-GSA-MW-11H	10/16/2019 10:58	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 10:58	Temperature	19.96	C
GS-GSA-MW-11H	10/16/2019 10:58	Turbidity	10.95	NTU
GS-GSA-MW-11H	10/16/2019 11:03	Conductivity	1446.47	uS/cm
GS-GSA-MW-11H	10/16/2019 11:03	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 11:03	Depth to Water Detail	9.02	ft
GS-GSA-MW-11H	10/16/2019 11:03	Oxidation Reduction Potention	73.92	mv
GS-GSA-MW-11H	10/16/2019 11:03	pH	6.06	pH
GS-GSA-MW-11H	10/16/2019 11:03	Temperature	20.05	C
GS-GSA-MW-11H	10/16/2019 11:03	Turbidity	10.35	NTU
GS-GSA-MW-11H	10/16/2019 11:08	Conductivity	1451.84	uS/cm
GS-GSA-MW-11H	10/16/2019 11:08	DO	0.15	mg/L
GS-GSA-MW-11H	10/16/2019 11:08	Depth to Water Detail	9.02	ft
GS-GSA-MW-11H	10/16/2019 11:08	Oxidation Reduction Potention	68.95	mv
GS-GSA-MW-11H	10/16/2019 11:08	pH	6.07	pH
GS-GSA-MW-11H	10/16/2019 11:08	Temperature	20.15	C
GS-GSA-MW-11H	10/16/2019 11:08	Turbidity	9.93	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-3	10/14/2019 11:58	Conductivity	4160.01	uS/cm
GS-GSA-MW-3	10/14/2019 11:58	DO	0.5	mg/L
GS-GSA-MW-3	10/14/2019 11:58	Depth to Water Detail	110.4	ft
GS-GSA-MW-3	10/14/2019 11:58	Oxidation Reduction Potention	132.5	mv
GS-GSA-MW-3	10/14/2019 11:58	pH	5.94	pH
GS-GSA-MW-3	10/14/2019 11:58	Temperature	20.39	C
GS-GSA-MW-3	10/14/2019 11:58	Turbidity	4.87	NTU
GS-GSA-MW-3	10/14/2019 12:03	Conductivity	4128.48	uS/cm
GS-GSA-MW-3	10/14/2019 12:03	DO	0.37	mg/L
GS-GSA-MW-3	10/14/2019 12:03	Depth to Water Detail	110.4	ft
GS-GSA-MW-3	10/14/2019 12:03	Oxidation Reduction Potention	102.17	mv
GS-GSA-MW-3	10/14/2019 12:03	pH	6	pH
GS-GSA-MW-3	10/14/2019 12:03	Temperature	20.28	C
GS-GSA-MW-3	10/14/2019 12:03	Turbidity	4.53	NTU
GS-GSA-MW-3	10/14/2019 12:08	Conductivity	4106.6	uS/cm
GS-GSA-MW-3	10/14/2019 12:08	DO	0.32	mg/L
GS-GSA-MW-3	10/14/2019 12:08	Depth to Water Detail	110.4	ft
GS-GSA-MW-3	10/14/2019 12:08	Oxidation Reduction Potention	84.66	mv
GS-GSA-MW-3	10/14/2019 12:08	pH	6.02	pH
GS-GSA-MW-3	10/14/2019 12:08	Temperature	20.26	C
GS-GSA-MW-3	10/14/2019 12:08	Turbidity	3.48	NTU
GS-GSA-MW-3	10/14/2019 12:13	Conductivity	4097.65	uS/cm
GS-GSA-MW-3	10/14/2019 12:13	DO	0.3	mg/L
GS-GSA-MW-3	10/14/2019 12:13	Depth to Water Detail	110.4	ft
GS-GSA-MW-3	10/14/2019 12:13	Oxidation Reduction Potention	71.59	mv
GS-GSA-MW-3	10/14/2019 12:13	pH	6.04	pH
GS-GSA-MW-3	10/14/2019 12:13	Temperature	20.28	C
GS-GSA-MW-3	10/14/2019 12:13	Turbidity	2.83	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-4V	10/14/2019 13:12	Conductivity	1436.61	uS/cm
GS-GSA-MW-4V	10/14/2019 13:12	DO	0.4	mg/L
GS-GSA-MW-4V	10/14/2019 13:12	Depth to Water Detail	121.3	ft
GS-GSA-MW-4V	10/14/2019 13:12	Oxidation Reduction Potention	36.91	mv
GS-GSA-MW-4V	10/14/2019 13:12	pH	5.95	pH
GS-GSA-MW-4V	10/14/2019 13:12	Temperature	20.66	C
GS-GSA-MW-4V	10/14/2019 13:12	Turbidity	5.53	NTU
GS-GSA-MW-4V	10/14/2019 13:17	Conductivity	1432.01	uS/cm
GS-GSA-MW-4V	10/14/2019 13:17	DO	0.38	mg/L
GS-GSA-MW-4V	10/14/2019 13:17	Depth to Water Detail	121.3	ft
GS-GSA-MW-4V	10/14/2019 13:17	Oxidation Reduction Potention	33.58	mv
GS-GSA-MW-4V	10/14/2019 13:17	pH	5.95	pH
GS-GSA-MW-4V	10/14/2019 13:17	Temperature	20.62	C
GS-GSA-MW-4V	10/14/2019 13:17	Turbidity	3.89	NTU
GS-GSA-MW-4V	10/14/2019 13:22	Conductivity	1424.41	uS/cm
GS-GSA-MW-4V	10/14/2019 13:22	DO	0.37	mg/L
GS-GSA-MW-4V	10/14/2019 13:22	Depth to Water Detail	121.3	ft
GS-GSA-MW-4V	10/14/2019 13:22	Oxidation Reduction Potention	32.72	mv
GS-GSA-MW-4V	10/14/2019 13:22	pH	5.91	pH
GS-GSA-MW-4V	10/14/2019 13:22	Temperature	20.49	C
GS-GSA-MW-4V	10/14/2019 13:22	Turbidity	3.13	NTU
GS-GSA-MW-4V	10/14/2019 13:27	Conductivity	1420.37	uS/cm
GS-GSA-MW-4V	10/14/2019 13:27	DO	0.37	mg/L
GS-GSA-MW-4V	10/14/2019 13:27	Depth to Water Detail	121.3	ft
GS-GSA-MW-4V	10/14/2019 13:27	Oxidation Reduction Potention	31.79	mv
GS-GSA-MW-4V	10/14/2019 13:27	pH	5.89	pH
GS-GSA-MW-4V	10/14/2019 13:27	Temperature	20.48	C
GS-GSA-MW-4V	10/14/2019 13:27	Turbidity	2.29	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-1	10/16/2019 11:34	Conductivity	2317.41	uS/cm
MW-1	10/16/2019 11:34	DO	0.55	mg/L
MW-1	10/16/2019 11:34	Depth to Water Detail	92.96	ft
MW-1	10/16/2019 11:34	Oxidation Reduction Potention	125.87	mv
MW-1	10/16/2019 11:34	pH	5.15	pH
MW-1	10/16/2019 11:34	Temperature	19.82	C
MW-1	10/16/2019 11:34	Turbidity	2.64	NTU
MW-1	10/16/2019 11:39	Conductivity	2291.4	uS/cm
MW-1	10/16/2019 11:39	DO	0.67	mg/L
MW-1	10/16/2019 11:39	Depth to Water Detail	93.2	ft
MW-1	10/16/2019 11:39	Oxidation Reduction Potention	121.3	mv
MW-1	10/16/2019 11:39	pH	5.16	pH
MW-1	10/16/2019 11:39	Temperature	19.75	C
MW-1	10/16/2019 11:39	Turbidity	2.37	NTU
MW-1	10/16/2019 11:44	Conductivity	2289.97	uS/cm
MW-1	10/16/2019 11:44	DO	0.54	mg/L
MW-1	10/16/2019 11:44	Depth to Water Detail	93.2	ft
MW-1	10/16/2019 11:44	Oxidation Reduction Potention	119.36	mv
MW-1	10/16/2019 11:44	pH	5.16	pH
MW-1	10/16/2019 11:44	Temperature	19.78	C
MW-1	10/16/2019 11:44	Turbidity	2.11	NTU
MW-1	10/16/2019 11:49	Conductivity	2290.08	uS/cm
MW-1	10/16/2019 11:49	DO	0.42	mg/L
MW-1	10/16/2019 11:49	Depth to Water Detail	93.2	ft
MW-1	10/16/2019 11:49	Oxidation Reduction Potention	117.53	mv
MW-1	10/16/2019 11:49	pH	5.16	pH
MW-1	10/16/2019 11:49	Temperature	19.75	C
MW-1	10/16/2019 11:49	Turbidity	1.42	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-2	10/16/2019 12:43	Conductivity	1956.98	uS/cm
MW-2	10/16/2019 12:43	DO	0.25	mg/L
MW-2	10/16/2019 12:43	Depth to Water Detail	85.59	ft
MW-2	10/16/2019 12:43	Oxidation Reduction Potention	106.88	mv
MW-2	10/16/2019 12:43	pH	5.96	pH
MW-2	10/16/2019 12:43	Temperature	19.07	C
MW-2	10/16/2019 12:43	Turbidity	11.8	NTU
MW-2	10/16/2019 12:48	Conductivity	1960.9	uS/cm
MW-2	10/16/2019 12:48	DO	0.19	mg/L
MW-2	10/16/2019 12:48	Depth to Water Detail	85.68	ft
MW-2	10/16/2019 12:48	Oxidation Reduction Potention	103.33	mv
MW-2	10/16/2019 12:48	pH	5.97	pH
MW-2	10/16/2019 12:48	Temperature	19.04	C
MW-2	10/16/2019 12:48	Turbidity	5.12	NTU
MW-2	10/16/2019 12:53	Conductivity	1968.62	uS/cm
MW-2	10/16/2019 12:53	DO	0.17	mg/L
MW-2	10/16/2019 12:53	Depth to Water Detail	85.69	ft
MW-2	10/16/2019 12:53	Oxidation Reduction Potention	99.97	mv
MW-2	10/16/2019 12:53	pH	5.97	pH
MW-2	10/16/2019 12:53	Temperature	19.05	C
MW-2	10/16/2019 12:53	Turbidity	3.25	NTU
MW-2	10/16/2019 12:58	Conductivity	1974.56	uS/cm
MW-2	10/16/2019 12:58	DO	0.15	mg/L
MW-2	10/16/2019 12:58	Depth to Water Detail	85.69	ft
MW-2	10/16/2019 12:58	Oxidation Reduction Potention	97.89	mv
MW-2	10/16/2019 12:58	pH	5.98	pH
MW-2	10/16/2019 12:58	Temperature	19.06	C
MW-2	10/16/2019 12:58	Turbidity	2.56	NTU

**Alabama Power Company
Plant Gorgas Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
GS-GSA-MW-9H	10/16/2019 14:07	Conductivity	3165.52	uS/cm
GS-GSA-MW-9H	10/16/2019 14:07	DO	0.21	mg/L
GS-GSA-MW-9H	10/16/2019 14:07	Depth to Water Detail	50.84	ft
GS-GSA-MW-9H	10/16/2019 14:07	Oxidation Reduction Potention	129.64	mv
GS-GSA-MW-9H	10/16/2019 14:07	pH	5.19	pH
GS-GSA-MW-9H	10/16/2019 14:07	Temperature	21.28	C
GS-GSA-MW-9H	10/16/2019 14:07	Turbidity	10.81	NTU
GS-GSA-MW-9H	10/16/2019 14:12	Conductivity	3161.02	uS/cm
GS-GSA-MW-9H	10/16/2019 14:12	DO	0.37	mg/L
GS-GSA-MW-9H	10/16/2019 14:12	Depth to Water Detail	51.06	ft
GS-GSA-MW-9H	10/16/2019 14:12	Oxidation Reduction Potention	125.22	mv
GS-GSA-MW-9H	10/16/2019 14:12	pH	5.19	pH
GS-GSA-MW-9H	10/16/2019 14:12	Temperature	21.17	C
GS-GSA-MW-9H	10/16/2019 14:12	Turbidity	6.96	NTU
GS-GSA-MW-9H	10/16/2019 14:17	Conductivity	3173.64	uS/cm
GS-GSA-MW-9H	10/16/2019 14:17	DO	0.38	mg/L
GS-GSA-MW-9H	10/16/2019 14:17	Depth to Water Detail	51.34	ft
GS-GSA-MW-9H	10/16/2019 14:17	Oxidation Reduction Potention	121.12	mv
GS-GSA-MW-9H	10/16/2019 14:17	pH	5.29	pH
GS-GSA-MW-9H	10/16/2019 14:17	Temperature	21.01	C
GS-GSA-MW-9H	10/16/2019 14:17	Turbidity	3.98	NTU
GS-GSA-MW-9H	10/16/2019 14:22	Conductivity	3177.48	uS/cm
GS-GSA-MW-9H	10/16/2019 14:22	DO	0.32	mg/L
GS-GSA-MW-9H	10/16/2019 14:22	Depth to Water Detail	51.58	ft
GS-GSA-MW-9H	10/16/2019 14:22	Oxidation Reduction Potention	117.52	mv
GS-GSA-MW-9H	10/16/2019 14:22	pH	5.37	pH
GS-GSA-MW-9H	10/16/2019 14:22	Temperature	21.07	C
GS-GSA-MW-9H	10/16/2019 14:22	Turbidity	3.03	NTU
GS-GSA-MW-9H	10/16/2019 14:27	Conductivity	3175.65	uS/cm
GS-GSA-MW-9H	10/16/2019 14:27	DO	0.27	mg/L
GS-GSA-MW-9H	10/16/2019 14:27	Depth to Water Detail	51.71	ft
GS-GSA-MW-9H	10/16/2019 14:27	Oxidation Reduction Potention	115.03	mv
GS-GSA-MW-9H	10/16/2019 14:27	pH	5.41	pH
GS-GSA-MW-9H	10/16/2019 14:27	Temperature	21.08	C
GS-GSA-MW-9H	10/16/2019 14:27	Turbidity	2.86	NTU
GS-GSA-MW-9H	10/16/2019 14:32	Conductivity	3170.12	uS/cm
GS-GSA-MW-9H	10/16/2019 14:32	DO	0.24	mg/L
GS-GSA-MW-9H	10/16/2019 14:32	Depth to Water Detail	51.86	ft
GS-GSA-MW-9H	10/16/2019 14:32	Oxidation Reduction Potention	113.45	mv
GS-GSA-MW-9H	10/16/2019 14:32	pH	5.43	pH
GS-GSA-MW-9H	10/16/2019 14:32	Temperature	21.12	C
GS-GSA-MW-9H	10/16/2019 14:32	Turbidity	2.71	NTU

Appendix C

1st
Semi-Annual
Monitoring Event

Interwell Prediction Limit - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 12/17/2019, 9:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	GS-GSA-MW-3	0.1015	n/a	4/10/2019	3.35	Yes	71	14.08	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	GS-GSA-MW-4	0.1015	n/a	4/10/2019	3.74	Yes	71	14.08	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	GS-GSA-MW-8	0.1015	n/a	4/10/2019	0.944	Yes	71	14.08	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	GS-GSA-MW-3	431	n/a	4/10/2019	659	Yes	71	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	GS-GSA-MW-8	431	n/a	4/10/2019	533	Yes	71	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	GS-GSA-MW-3	3.744	n/a	4/10/2019	249	Yes	71	4.225	sqrt(x)	0.002505	Param Inter 1 of 2
Chloride (mg/L)	GS-GSA-MW-4	3.744	n/a	4/10/2019	74.3	Yes	71	4.225	sqrt(x)	0.002505	Param Inter 1 of 2
Chloride (mg/L)	GS-GSA-MW-8	3.744	n/a	4/10/2019	174	Yes	71	4.225	sqrt(x)	0.002505	Param Inter 1 of 2
Fluoride (mg/L)	GS-GSA-MW-3	0.4919	n/a	4/10/2019	0.738	Yes	75	0	sqrt(x)	0.002505	Param Inter 1 of 2

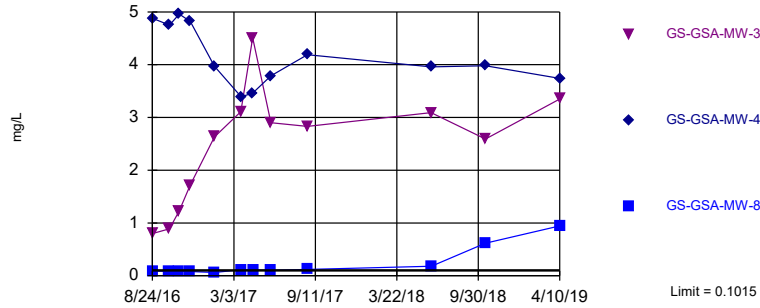
Interwell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 12/17/2019, 9:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	GS-GSA-MW-3	0.1015	n/a	4/10/2019	3.35	Yes	71	14.08	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	GS-GSA-MW-4	0.1015	n/a	4/10/2019	3.74	Yes	71	14.08	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	GS-GSA-MW-8	0.1015	n/a	4/10/2019	0.944	Yes	71	14.08	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	GS-GSA-MW-3	431	n/a	4/10/2019	659	Yes	71	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	GS-GSA-MW-4	431	n/a	4/10/2019	129	No	71	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	GS-GSA-MW-8	431	n/a	4/10/2019	533	Yes	71	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	GS-GSA-MW-3	3.744	n/a	4/10/2019	249	Yes	71	4.225	sqrt(x)	0.002505	Param Inter 1 of 2
Chloride (mg/L)	GS-GSA-MW-4	3.744	n/a	4/10/2019	74.3	Yes	71	4.225	sqrt(x)	0.002505	Param Inter 1 of 2
Chloride (mg/L)	GS-GSA-MW-8	3.744	n/a	4/10/2019	174	Yes	71	4.225	sqrt(x)	0.002505	Param Inter 1 of 2
Fluoride (mg/L)	GS-GSA-MW-3	0.4919	n/a	4/10/2019	0.738	Yes	75	0	sqrt(x)	0.002505	Param Inter 1 of 2
Fluoride (mg/L)	GS-GSA-MW-4	0.4919	n/a	4/10/2019	0.05ND	No	75	0	sqrt(x)	0.002505	Param Inter 1 of 2
Fluoride (mg/L)	GS-GSA-MW-8	0.4919	n/a	4/10/2019	0.156	No	75	0	sqrt(x)	0.002505	Param Inter 1 of 2

Exceeds Limit: GS-GSA-MW-3, GS-GSA-MW-4, GS-GSA-MW-8

Prediction Limit
Interwell Non-parametric

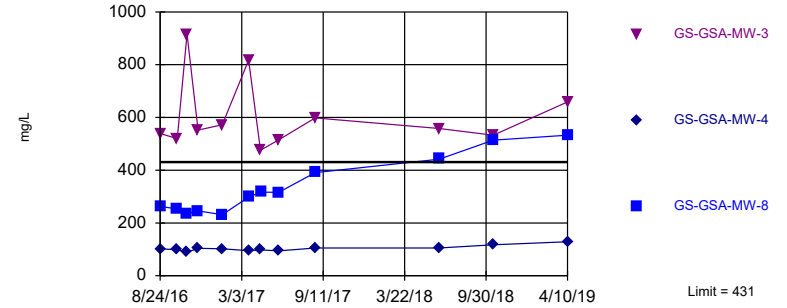


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 71 background values. 14.08% NDs. Annual per-constituent alpha = 0.00228. Individual comparison alpha = 0.0003804 (1 of 2). Comparing 3 points to limit.

Constituent: Boron Analysis Run 12/17/2019 9:27 AM View: Interwell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limit: GS-GSA-MW-3, GS-GSA-MW-8

Prediction Limit
Interwell Non-parametric

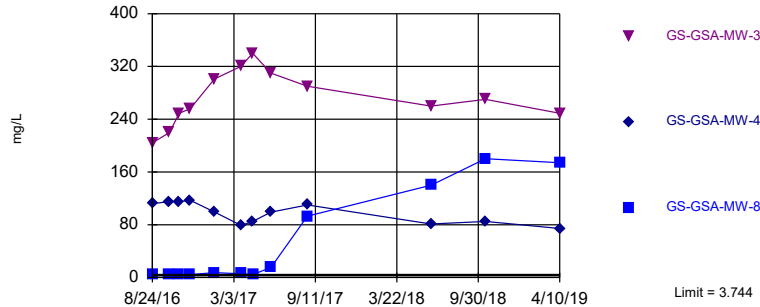


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 71 background values. Annual per-constituent alpha = 0.00228. Individual comparison alpha = 0.0003804 (1 of 2). Comparing 3 points to limit.

Constituent: Calcium Analysis Run 12/17/2019 9:27 AM View: Interwell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limit: GS-GSA-MW-3, GS-GSA-MW-4, GS-GSA-MW-8

Prediction Limit
Interwell Parametric



Background Data Summary (based on square root transformation): Mean=1.482, Std. Dev.=0.2673, n=71, 4.225% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9728, critical = 0.953. Kappa = 1.696 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.002505. Comparing 3 points to limit.

Constituent: Chloride Analysis Run 12/17/2019 9:27 AM View: Interwell PL
Plant William C Gorgas Client:

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/17/2019 9:29 AM View: Interwell PL

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-4 (bg)	MW-3 (bg)	MW-2 (bg)	MW-1 (bg)	GS-GSA-MW-4	GS-GSA-MW-3	GS-GSA-MW-8
4/25/2016	0.0414 (J)	0.028 (J)	0.0241 (J)				
4/26/2016				0.0231 (J)			
6/20/2016	0.0434 (J)		0.0284 (J)	0.0227 (J)			
6/22/2016		0.0433 (J)					
8/8/2016			0.034 (J)	0.0278 (J)			
8/9/2016	0.0453 (J)	0.0429 (J)					
8/24/2016	0.0451 (J)	0.0431 (J)	0.0316 (J)	0.0247 (J)	4.88	0.799	0.0898 (J)
10/3/2016	0.0511 (J)		0.0367 (J)	0.0307 (J)	4.75	0.889	0.0821 (J)
10/4/2016		0.04 (J)					
10/26/2016	0.0507 (J)	0.0375 (J)	0.0331 (J)	0.0241 (J)	4.96	1.23	0.0889 (J)
11/21/2016	0.0458 (J)	0.0406 (J)	0.035 (J)	0.0202 (J)	4.82	1.72	0.0788 (J)
1/17/2017			0.0259 (J)	0.0201 (J)	3.97	2.63	0.0607 (J)
1/18/2017	0.0445 (J)	0.0548 (J)					
3/20/2017						3.11	0.114
3/21/2017					3.39		
3/22/2017	0.0432 (J)	0.0344 (J)	0.0243 (J)	0.0224 (J)			
4/17/2017					3.46	4.51	
4/18/2017	0.0409 (J)	<0.203	0.0206 (J)	<0.203			0.108
5/30/2017				<0.203	3.79	2.9	0.105
5/31/2017		0.0454 (J)	0.0234 (J)				
8/23/2017	0.042 (J)	0.0425 (J)	0.0267 (J)	0.0253 (J)			
8/24/2017					4.19	2.83	0.12
5/22/2018			0.0251 (J)	0.0224 (J)			
5/23/2018	0.0433 (J)						
5/24/2018		0.0339 (J)					
6/11/2018					3.96	3.09	
6/12/2018	0.0478 (J)	0.0371 (J)	0.0275 (J)	0.0214 (J)			0.181
10/17/2018	0.0468 (J)	0.0596 (J)	0.0321 (J)	0.0216 (J)	3.98	2.59	0.616
11/19/2018	0.0526 (J)	0.0514 (J)	0.0324 (J)	0.0237 (J)			
4/10/2019	0.0438 (J)	<0.203	<0.203	<0.203	3.74	3.35	0.944
5/14/2019	<0.203	<0.203	<0.203	<0.203			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/17/2019 9:29 AM View: Interwell PL

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-4 (bg)	MW-3 (bg)	MW-2 (bg)	MW-1 (bg)	GS-GSA-MW-4	GS-GSA-MW-3	GS-GSA-MW-8
4/25/2016	261	224	123				
4/26/2016				147			
6/20/2016	295		168	152			
6/22/2016		266					
8/8/2016			180	150			
8/9/2016	318	260					
8/24/2016	319	274	180	142	102	539	263
10/3/2016	293		184	139	98.4	519.7	253
10/4/2016		243					
10/26/2016	311	254	171	133	88.7	916	235
11/21/2016	320	263	179	144	104	552	246
1/17/2017			188	131	102	572	231
1/18/2017	417	431					
3/20/2017						817	298
3/21/2017					94.7		
3/22/2017	292	318	155	141			
4/17/2017					97.9	476	
4/18/2017	302	296	156	149			317
5/30/2017				140	93.9	515	316
5/31/2017		306	151				
8/23/2017	297	298	155	152			
8/24/2017					105	598	391
5/22/2018			172	166			
5/23/2018	296						
5/24/2018		297					
6/11/2018					105	558	
6/12/2018	355	318	179	203			442
10/17/2018	342	392	200	171	117	533	514
11/19/2018	289	387	221	154			
4/10/2019	356	348	200	270	129	659	533
5/14/2019	254	254	170	167			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/17/2019 9:29 AM View: Interwell PL
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-4 (bg)	MW-3 (bg)	MW-2 (bg)	MW-1 (bg)	GS-GSA-MW-4	GS-GSA-MW-3	GS-GSA-MW-8
4/25/2016	1.53	1.32	1.9				
4/26/2016				1.94			
6/20/2016	1.85		3.43	2.09			
6/22/2016		1.46					
8/8/2016			3.31	2.18			
8/9/2016	1.95	1.35					
8/24/2016	2.07	1.47	3.23	2.22	112	204	4.03
10/3/2016	2.02		3.21	2.34	115	220	3.87
10/4/2016		1.59					
10/26/2016	2.07	1.27	3.35	2.34	115	249	4.08
11/21/2016	2.39	1.38	3.34	2.5	117	256	4.39
1/17/2017			3.58	2.68	99.3	301	7.22
1/18/2017	1.9	1.34					
3/20/2017						320	5.7
3/21/2017					79		
3/22/2017	1.5 (J)	2	3.4	3.7			
4/17/2017					85	340	
4/18/2017	1.6 (J)	2.2	2.6	2.4			4.7
5/30/2017				2.6	99	310	15
5/31/2017		1.5 (J)	4.4				
8/23/2017	2.3	1.8 (J)	4.4	2.7			
8/24/2017					110	290	93
5/22/2018			3.2	2.3			
5/23/2018	2						
5/24/2018		1.6 (J)					
6/11/2018					81	260	
6/12/2018	1.7 (J)	1.4 (J)	3.7	2.3			140
10/17/2018	1.5 (J)	<2	4.6	1.7 (J)	85	270	180
11/19/2018	<2	<2	3	1.7 (J)			
4/10/2019	1.88	2.25	1.76	2.35	74.3	249	174
5/14/2019	1.82	2.28	2.87	2.28			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/17/2019 9:29 AM View: Interwell PL
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-1 (bg)	GS-GSA-MW-8	GS-GSA-MW-3	GS-GSA-MW-4
4/25/2016	0.149 (J)	0.243 (J)	0.372				
4/26/2016				0.146 (J)			
6/20/2016	0.148 (J)		0.361	0.148 (J)			
6/22/2016		0.269 (J)					
8/8/2016	0.134 (J)			0.137 (J)			
8/9/2016		0.363	0.326				
8/24/2016	0.129 (J)	0.346	0.329	0.133 (J)	0.165 (J)	0.264 (J)	0.793
10/3/2016	0.086 (J)		0.287 (J)	0.103 (J)	0.114 (J)	0.276 (J)	0.769
10/4/2016		0.266 (J)					
10/26/2016	0.027 (J)	0.266 (J)	0.194 (J)	0.05 (J)	0.056 (J)	0.182 (J)	0.578
11/21/2016	0.027 (J)	0.244 (J)	0.192 (J)	0.047 (J)	0.059 (J)	0.238 (J)	0.562
1/17/2017	0.066 (J)			0.09 (J)	0.07 (J)	0.34	0.571
1/18/2017		0.385	0.223 (J)				
3/20/2017					0.18	0.39	
3/21/2017							0.54
3/22/2017	0.13	0.41	0.32	0.12			
4/17/2017						0.57	0.54
4/18/2017	0.16	0.29	0.32	0.12	0.17		
5/30/2017				0.13	0.16	0.38	0.49
5/31/2017	0.13	0.37					
8/23/2017	0.16	0.55	0.38	0.16			
8/24/2017					0.18	0.54	0.7
2/13/2018	0.22 (D)	0.27 (D)	0.38 (D)	0.14 (D)	0.15 (D)	0.57 (D)	0.63 (D)
5/22/2018	0.17			0.16			
5/23/2018			0.38				
5/24/2018		0.6					
6/11/2018						0.63	0.39
6/12/2018	0.16	0.53	0.39	0.16	0.15		
10/17/2018	0.16	0.63	0.39	0.18	0.16	0.78	0.44
11/19/2018	0.18	0.31	0.36	0.15			
4/10/2019	0.262	0.273	0.384	0.105	0.156	0.738	<0.1
5/14/2019	0.164	0.281	0.335	0.119			

Intrawell Prediction Limit - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 12/17/2019, 9:40 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
pH (pH)	MW-2	6.068	5.752	5/14/2019	6.07	Yes	10	0	No	0.001253	Param Intra 1 of 2
Sulfate (mg/L)	MW-1	1559	n/a	5/14/2019	1560	Yes	11	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	GS-GSA-MW-8	1564	n/a	4/10/2019	2150	Yes	8	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	MW-1	2243	n/a	5/14/2019	2340	Yes	11	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	GS-GSA-MW-8	3103	n/a	4/10/2019	3580	Yes	8	0	No	0.002505	Param Intra 1 of 2

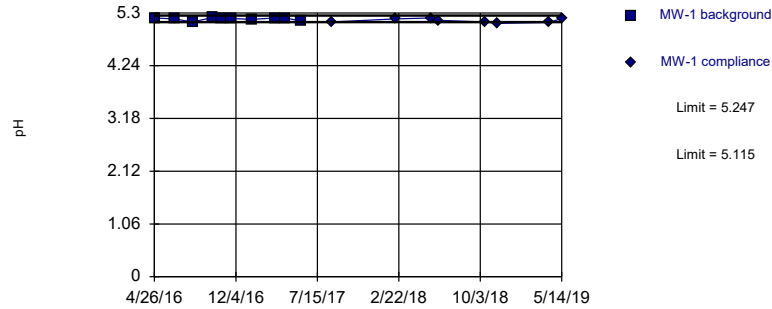
Intrawell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 12/17/2019, 9:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
pH (pH)	MW-1	5.247	5.115	5/14/2019	5.19	No	10	0	No	0.001253	Param Intra 1 of 2
pH (pH)	MW-2	6.068	5.752	5/14/2019	6.07	Yes	10	0	No	0.001253	Param Intra 1 of 2
pH (pH)	MW-3	6.259	4.358	5/14/2019	5.71	No	11	0	x^2	0.001253	Param Intra 1 of 2
pH (pH)	MW-4	6.251	6.033	5/14/2019	6.23	No	10	0	No	0.001253	Param Intra 1 of 2
pH (pH)	GS-GSA-MW-3	6.566	5.56	4/10/2019	5.83	No	8	0	x^4	0.001253	Param Intra 1 of 2
pH (pH)	GS-GSA-MW-4	3.864	3.719	4/10/2019	3.83	No	8	0	No	0.001253	Param Intra 1 of 2
pH (pH)	GS-GSA-MW-8	7.391	6.134	4/10/2019	6.71	No	8	0	No	0.001253	Param Intra 1 of 2
Sulfate (mg/L)	MW-1	1559	n/a	5/14/2019	1560	Yes	11	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-2	1318	n/a	5/14/2019	873	No	11	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	3218	n/a	5/14/2019	2460	No	11	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3139	n/a	5/14/2019	2240	No	10	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	GS-GSA-MW-3	3232	n/a	4/10/2019	2980	No	8	0	x^2	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	GS-GSA-MW-4	667.2	n/a	4/10/2019	616	No	8	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	GS-GSA-MW-8	1564	n/a	4/10/2019	2150	Yes	8	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	MW-1	2243	n/a	5/14/2019	2340	Yes	11	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	MW-2	2078	n/a	5/14/2019	1540	No	11	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	MW-3	4738	n/a	5/14/2019	3580	No	11	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	MW-4	4710	n/a	5/14/2019	3130	No	10	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	GS-GSA-MW-3	5873	n/a	4/10/2019	5090	No	8	0	x^3	0.002505	Param Intra 1 of 2
Total dissolved solids...	GS-GSA-MW-4	1120	n/a	4/10/2019	1000	No	8	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	GS-GSA-MW-8	3103	n/a	4/10/2019	3580	Yes	8	0	No	0.002505	Param Intra 1 of 2

Within Limits

Prediction Limit
Intrawell Parametric

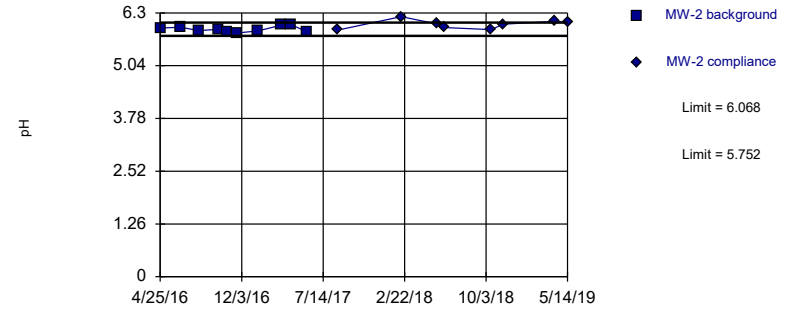


Background Data Summary: Mean=5.181, Std. Dev.=0.02961, n=10. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8247, critical = 0.781. Kappa = 2.238 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limits

Prediction Limit
Intrawell Parametric

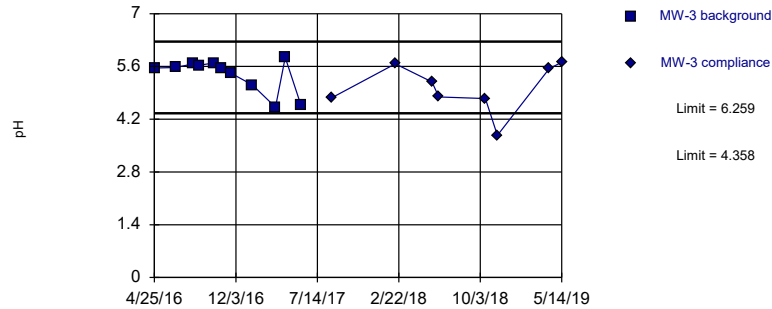


Background Data Summary: Mean=5.91, Std. Dev.=0.0704, n=10. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9335, critical = 0.781. Kappa = 2.238 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limits

Prediction Limit
Intrawell Parametric

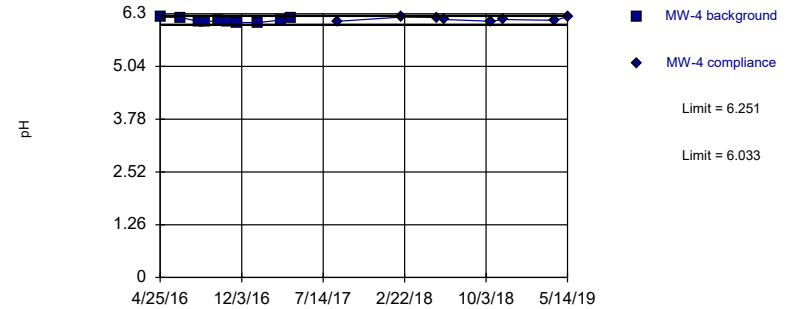


Background Data Summary (based on square transformation): Mean=29.08, Std. Dev.=4.64, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8097, critical = 0.792. Kappa = 2.175 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limits

Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=6.142, Std. Dev.=0.04849, n=10. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8808, critical = 0.781. Kappa = 2.238 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Prediction Limit

Constituent: pH (pH) Analysis Run 12/17/2019 9:40 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-1	MW-1
4/26/2016	5.2	
6/20/2016	5.18	
8/8/2016	5.12	
10/3/2016	5.21 (D)	
10/26/2016	5.2	
11/21/2016	5.19 (D)	
1/17/2017	5.17 (D)	
3/22/2017	5.2 (D)	
4/18/2017	5.2	
5/30/2017	5.14 (D)	
8/23/2017		5.12 (D)
2/13/2018		5.18
5/22/2018		5.2
6/12/2018		5.15
10/17/2018		5.12
11/19/2018		5.09 (D)
4/10/2019		5.11
5/14/2019		5.19

Prediction Limit

Constituent: pH (pH) Analysis Run 12/17/2019 9:40 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-2	MW-2
4/25/2016	5.94	
6/20/2016	5.96	
8/8/2016	5.88	
10/3/2016	5.91 (D)	
10/26/2016	5.84	
11/21/2016	5.82 (D)	
1/17/2017	5.87 (D)	
3/22/2017	6.01 (D)	
4/18/2017	6.02	
5/31/2017	5.85 (D)	
8/23/2017		5.89 (D)
2/13/2018		6.21
5/22/2018		6.04
6/12/2018		5.95
10/17/2018		5.9
11/19/2018		6.03 (D)
4/10/2019		6.1
5/14/2019		6.07

Prediction Limit

Constituent: pH (pH) Analysis Run 12/17/2019 9:40 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-3	MW-3
4/25/2016	5.56	
6/22/2016	5.57	
8/9/2016	5.67	
8/24/2016	5.63	
10/4/2016	5.69 (D)	
10/26/2016	5.56	
11/21/2016	5.42 (D)	
1/18/2017	5.11 (D)	
3/22/2017	4.52 (D)	
4/18/2017	5.84	
5/31/2017	4.56 (D)	
8/23/2017		4.77 (D)
2/13/2018		5.67
5/24/2018		5.19
6/12/2018		4.79
10/17/2018		4.75
11/19/2018		3.77 (D)
4/10/2019		5.54
5/14/2019		5.71

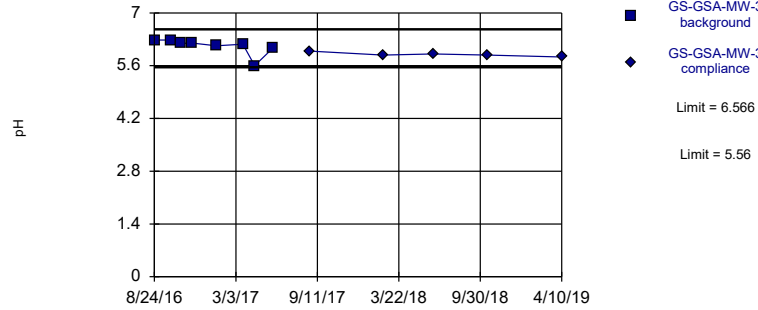
Prediction Limit

Constituent: pH (pH) Analysis Run 12/17/2019 9:40 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-4	MW-4
4/25/2016	6.22	
6/20/2016	6.21	
8/9/2016	6.11	
8/24/2016	6.11	
10/3/2016	6.13 (D)	
10/26/2016	6.12	
11/21/2016	6.09 (D)	
1/18/2017	6.09 (D)	
3/22/2017	6.15 (D)	
4/18/2017	6.19	
8/23/2017		6.12
2/13/2018		6.22
5/23/2018		6.21
6/12/2018		6.16
10/17/2018		6.12
11/19/2018		6.16 (D)
4/10/2019		6.14
5/14/2019		6.23

Within Limits

Prediction Limit
Intrawell Parametric

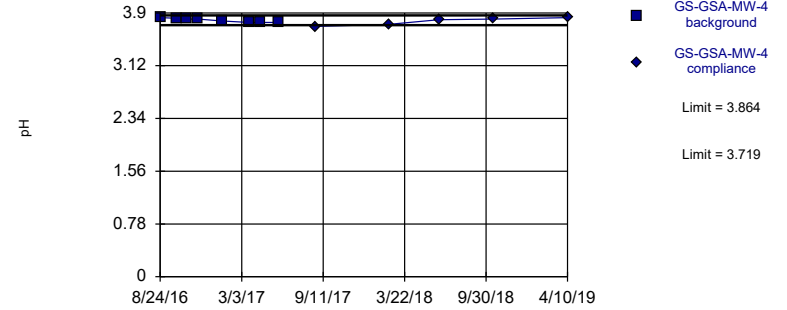


Background Data Summary (based on x^4 transformation): Mean=1407, Std. Dev.=183.8, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7505, critical = 0.749. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limits

Prediction Limit
Intrawell Parametric

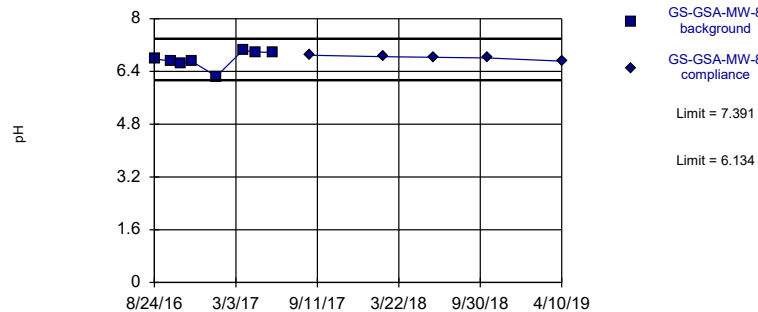


Background Data Summary: Mean=3.791, Std. Dev.=0.02949, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8456, critical = 0.749. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limits

Prediction Limit
Intrawell Parametric

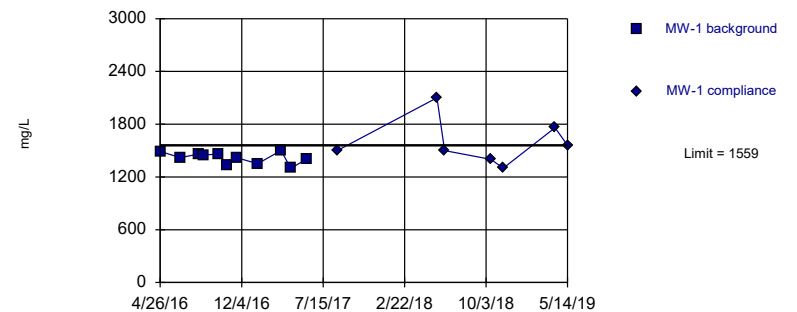


Background Data Summary: Mean=6.763, Std. Dev.=0.2559, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8892, critical = 0.749. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limit

Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=1416, Std. Dev.=65.62, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9344, critical = 0.792. Kappa = 2.175 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Prediction Limit

Constituent: pH (pH) Analysis Run 12/17/2019 9:40 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-3	GS-GSA-MW-3
8/24/2016	6.28	
10/3/2016	6.28	
10/26/2016	6.19	
11/21/2016	6.2	
1/17/2017	6.13	
3/20/2017	6.17	
4/17/2017	5.6	
5/30/2017	6.07	
8/24/2017		5.99
2/13/2018		5.88
6/11/2018		5.91
10/17/2018		5.88
4/10/2019		5.83

Prediction Limit

Constituent: pH (pH) Analysis Run 12/17/2019 9:40 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-4	GS-GSA-MW-4
8/24/2016	3.83 (E)	
10/3/2016	3.82 (E)	
10/26/2016	3.81 (E)	
11/21/2016	3.81	
1/17/2017	3.78	
3/21/2017	3.76	
4/17/2017	3.76	
5/30/2017	3.76	
8/24/2017		3.7
2/13/2018		3.73
6/11/2018		3.8
10/17/2018		3.81
4/10/2019		3.83

Prediction Limit

Constituent: pH (pH) Analysis Run 12/17/2019 9:40 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-8	GS-GSA-MW-8
8/24/2016	6.78	
10/3/2016	6.71	
10/26/2016	6.65	
11/21/2016	6.7	
1/17/2017	6.25	
3/20/2017	7.04	
4/18/2017	6.99	
5/30/2017	6.98	
8/24/2017		6.89
2/13/2018		6.85
6/12/2018		6.83
10/17/2018		6.81
4/10/2019		6.71

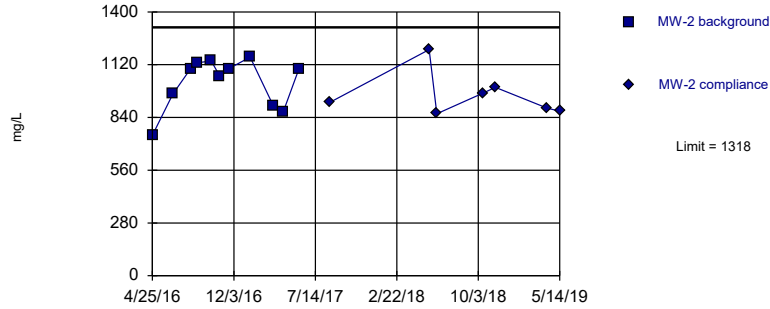
Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/17/2019 9:40 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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		1760
5/14/2019		1560

Within Limit

Prediction Limit
Intrawell Parametric

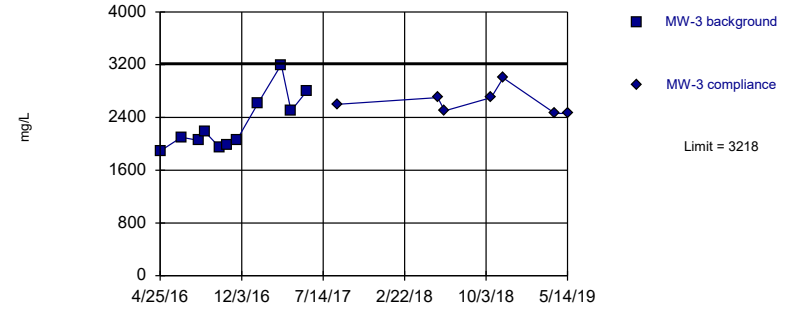


Background Data Summary: Mean=1024, Std. Dev.=135, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8606, critical = 0.792. Kappa = 2.175 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limit

Prediction Limit
Intrawell Parametric

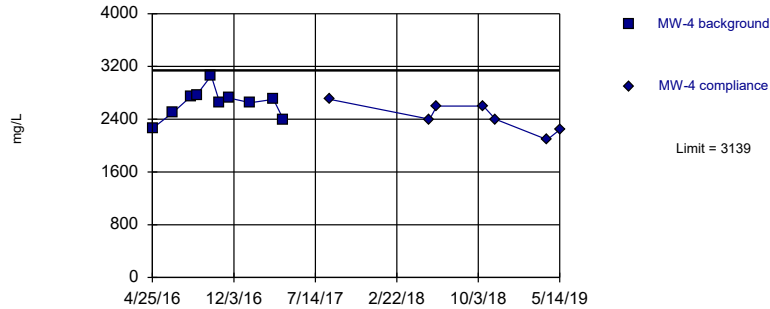


Background Data Summary: Mean=2304, Std. Dev.=420.4, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8608, critical = 0.792. Kappa = 2.175 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limit

Prediction Limit
Intrawell Parametric

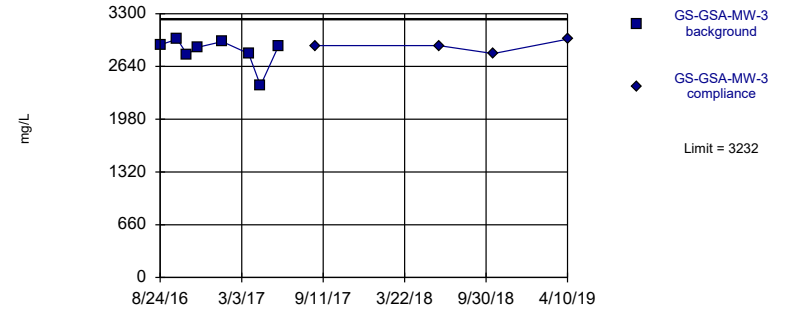


Background Data Summary: Mean=2646, Std. Dev.=220.3, n=10. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9523, critical = 0.781. Kappa = 2.238 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limit

Prediction Limit
Intrawell Parametric



Background Data Summary (based on square transformation): Mean=8017438, Std. Dev.=987774, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7712, critical = 0.749. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 12/17/2019 9:38 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/17/2019 9:40 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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		873

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/17/2019 9:40 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/17/2019 9:40 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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	
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

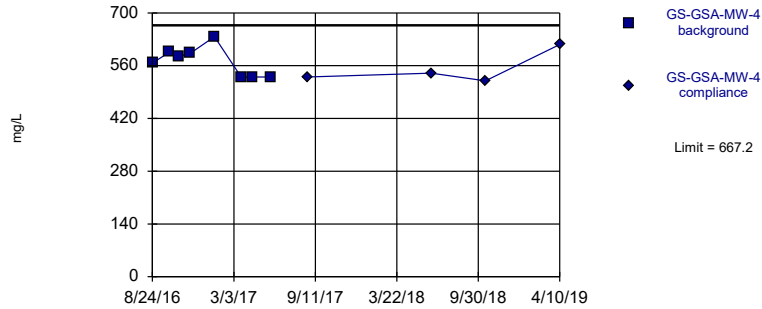
Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/17/2019 9:40 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-3	GS-GSA-MW-3
8/24/2016	2910	
10/3/2016	2980	
10/26/2016	2790	
11/21/2016	2880	
1/17/2017	2950	
3/20/2017	2800	
4/17/2017	2400	
5/30/2017	2900	
8/24/2017		2900
6/11/2018		2900
10/17/2018		2800
4/10/2019		2980

Within Limit

Prediction Limit Intrawell Parametric



Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/17/2019 9:40 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-4	GS-GSA-MW-4
8/24/2016	567	
10/3/2016	596	
10/26/2016	585	
11/21/2016	593	
1/17/2017	637	
3/21/2017	530	
4/17/2017	530	
5/30/2017	530	
8/24/2017		530
6/11/2018		540
10/17/2018		520
4/10/2019		616

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/17/2019 9:40 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-8	GS-GSA-MW-8
8/24/2016	1250	
10/3/2016	1270	
10/26/2016	1240	
11/21/2016	1210	
1/17/2017	1150	
3/20/2017	1400	
4/18/2017	1300	
5/30/2017	1500	
8/24/2017		1800
6/12/2018		1800
10/17/2018		1600
4/10/2019		2150

Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 12/17/2019 9:40 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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		2600
5/14/2019		2340 (D)

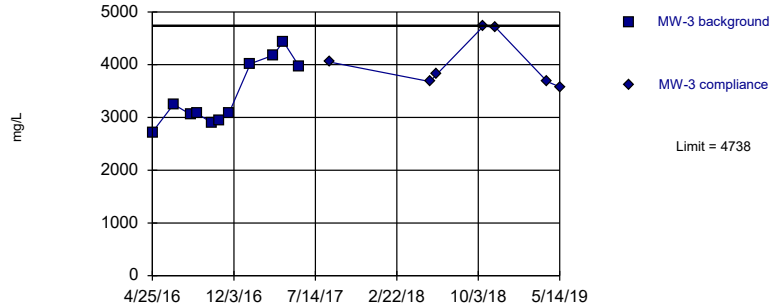
Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 12/17/2019 9:40 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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		1540 (D)

Within Limit

Prediction Limit
Intrawell Parametric

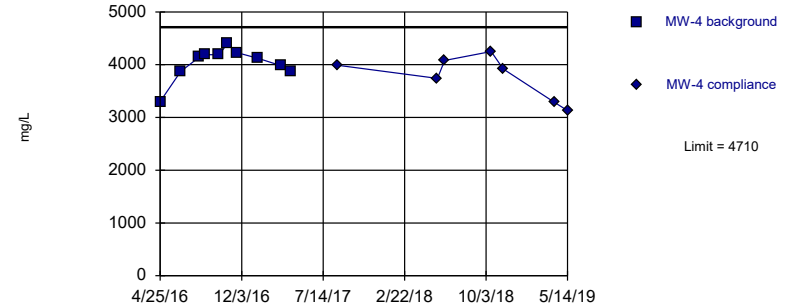


Background Data Summary: Mean=3422, Std. Dev.=605.1, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8605, critical = 0.792. Kappa = 2.175 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Total dissolved solids Analysis Run 12/17/2019 9:39 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limit

Prediction Limit
Intrawell Parametric

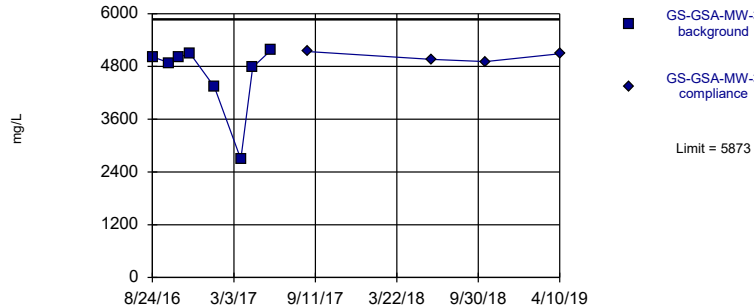


Background Data Summary: Mean=4030, Std. Dev.=304, n=10. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8536, critical = 0.781. Kappa = 2.238 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Total dissolved solids Analysis Run 12/17/2019 9:39 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limit

Prediction Limit
Intrawell Parametric

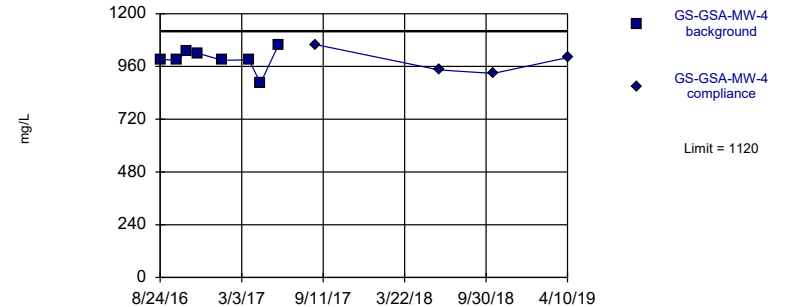


Background Data Summary (based on cube transformation): Mean=1.1e11, Std. Dev.=3.9e10, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7774, critical = 0.749. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Total dissolved solids Analysis Run 12/17/2019 9:39 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limit

Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=994, Std. Dev.=51.44, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8504, critical = 0.749. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Total dissolved solids Analysis Run 12/17/2019 9:39 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 12/17/2019 9:40 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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 (D)

Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 12/17/2019 9:40 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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	
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 (D)

Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 12/17/2019 9:40 AM View: Inrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-3	GS-GSA-MW-3
8/24/2016	5020	
10/3/2016	4880	
10/26/2016	5020	
11/21/2016	5090	
1/17/2017	4330	
3/20/2017	2690	
4/17/2017	4780	
5/30/2017	5170	
8/24/2017		5140
6/11/2018		4960
10/17/2018		4910
4/10/2019		5090

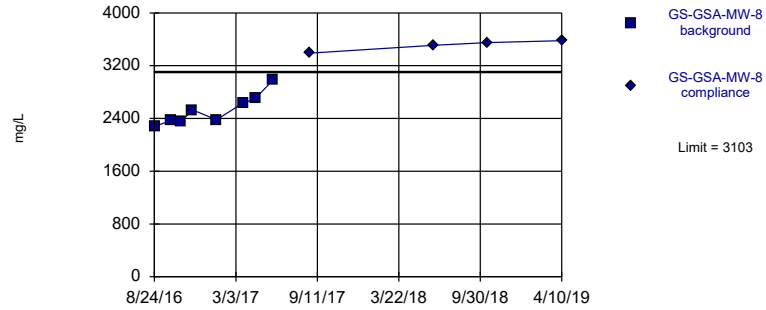
Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 12/17/2019 9:40 AM View: Inrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-4	GS-GSA-MW-4
8/24/2016	992	
10/3/2016	988	
10/26/2016	1030	
11/21/2016	1020	
1/17/2017	988	
3/21/2017	990	
4/17/2017	884	
5/30/2017	1060	
8/24/2017		1060
6/11/2018		944
10/17/2018		928
4/10/2019		1000

Exceeds Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=2528, Std. Dev.=234.3, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8999, critical = 0.749. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

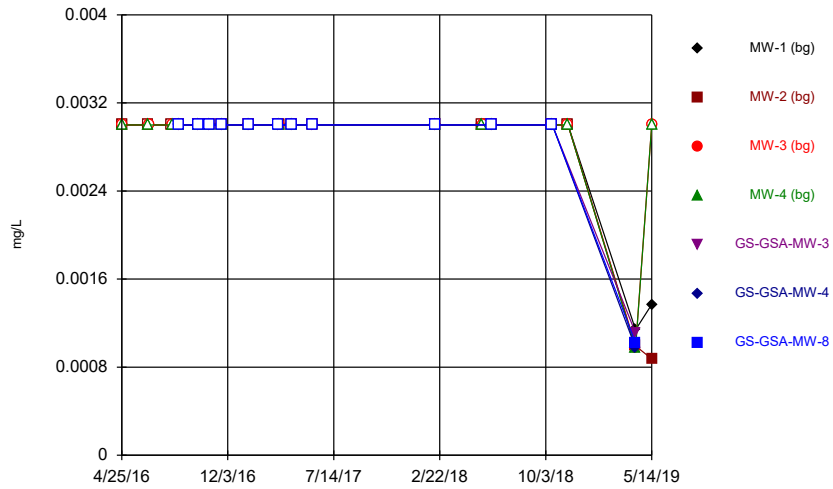
Constituent: Total dissolved solids Analysis Run 12/17/2019 9:39 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 12/17/2019 9:40 AM View: Inrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

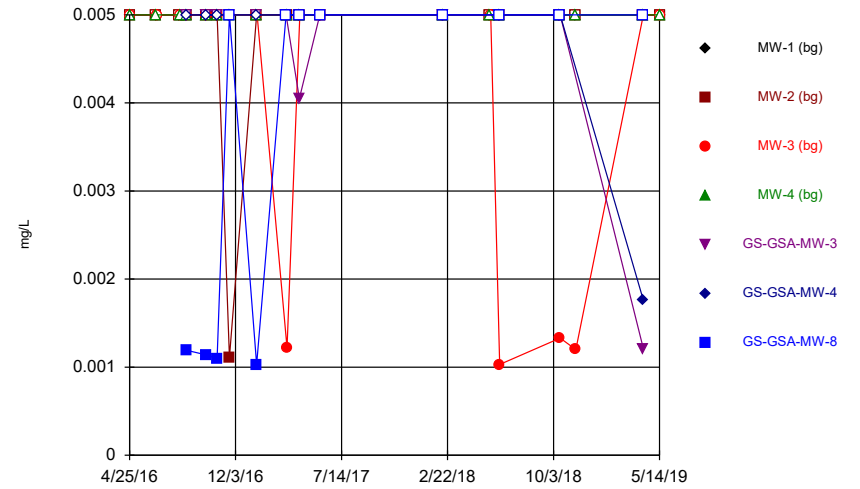
	GS-GSA-MW-8	GS-GSA-MW-8
8/24/2016	2280	
10/3/2016	2370	
10/26/2016	2350	
11/21/2016	2530	
1/17/2017	2380	
3/20/2017	2630	
4/18/2017	2700	
5/30/2017	2980	
8/24/2017		3390
6/12/2018		3510
10/17/2018		3550
4/10/2019		3580

Time Series



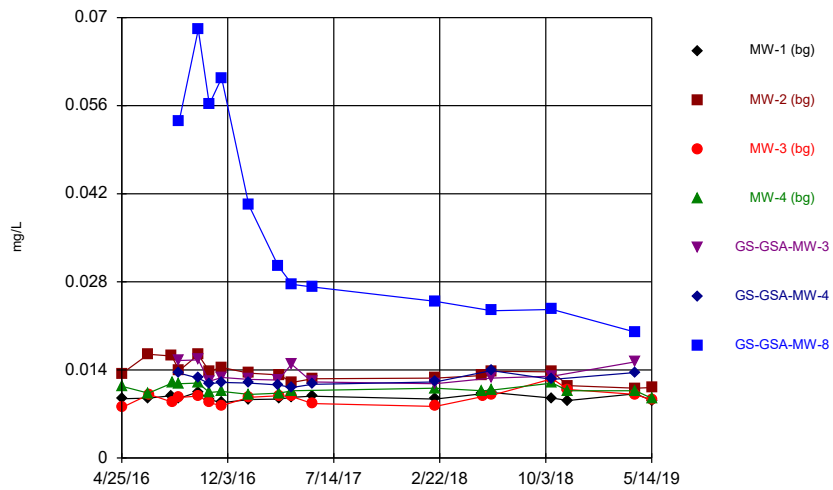
Constituent: Antimony Analysis Run 12/17/2019 9:42 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



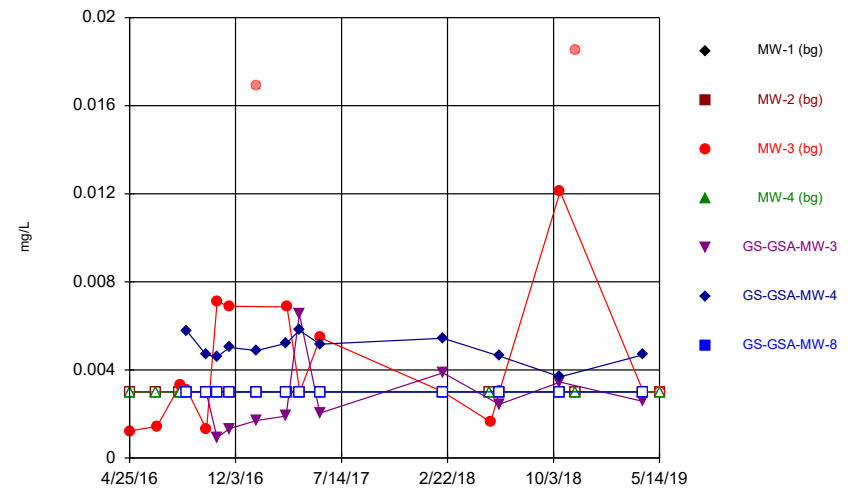
Constituent: Arsenic Analysis Run 12/17/2019 9:42 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



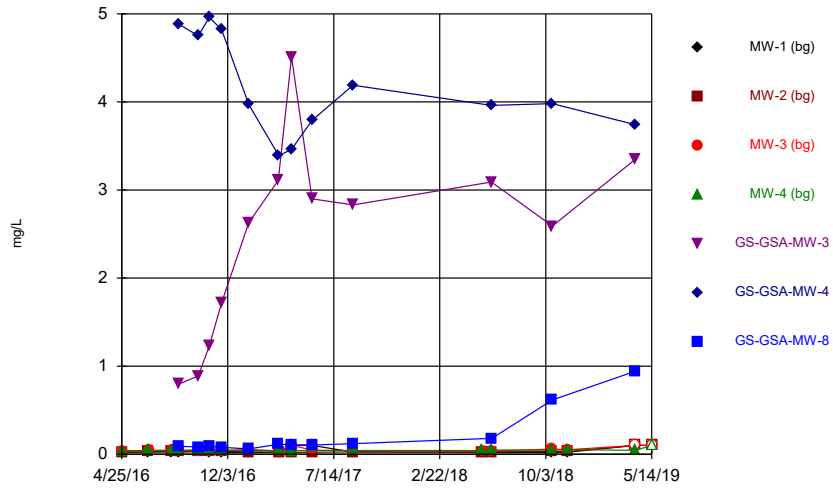
Constituent: Barium Analysis Run 12/17/2019 9:42 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



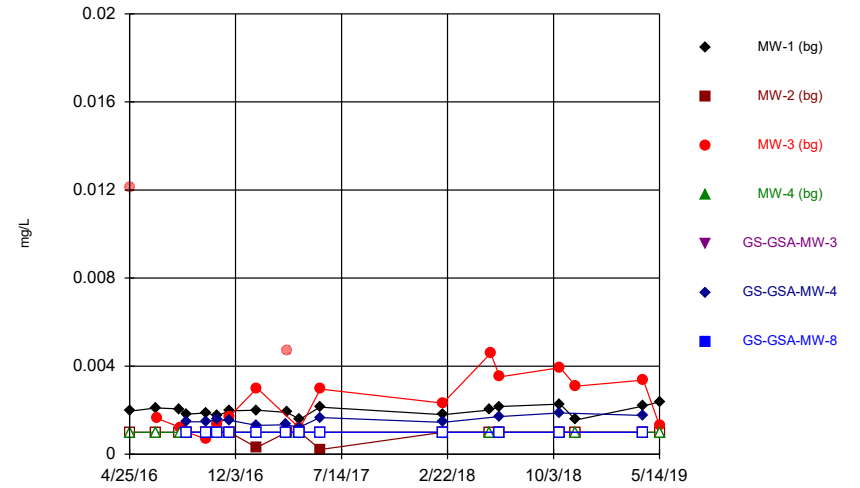
Constituent: Beryllium Analysis Run 12/17/2019 9:42 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



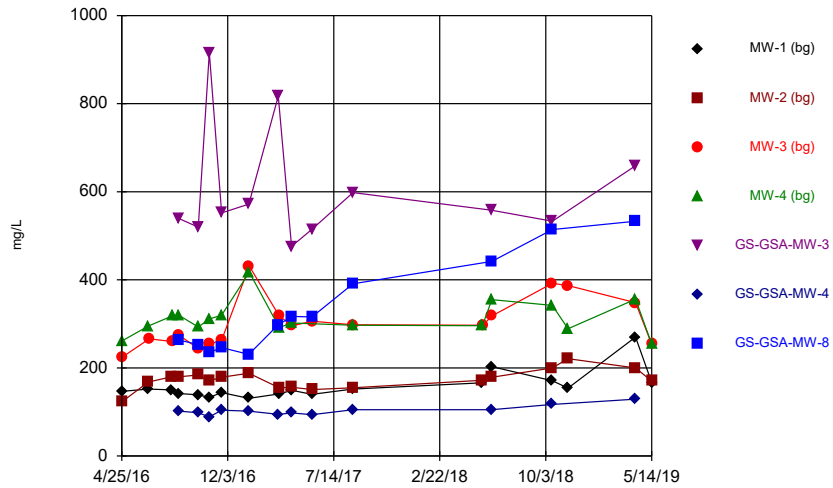
Constituent: Boron Analysis Run 12/17/2019 9:42 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



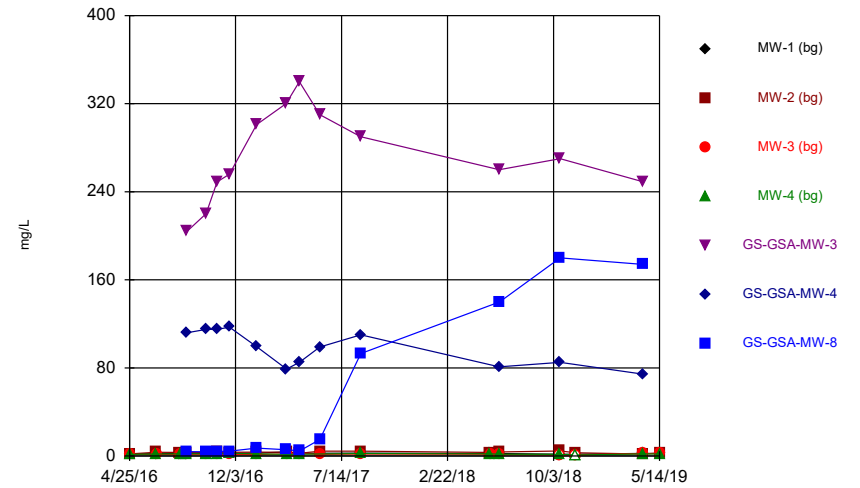
Constituent: Cadmium Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



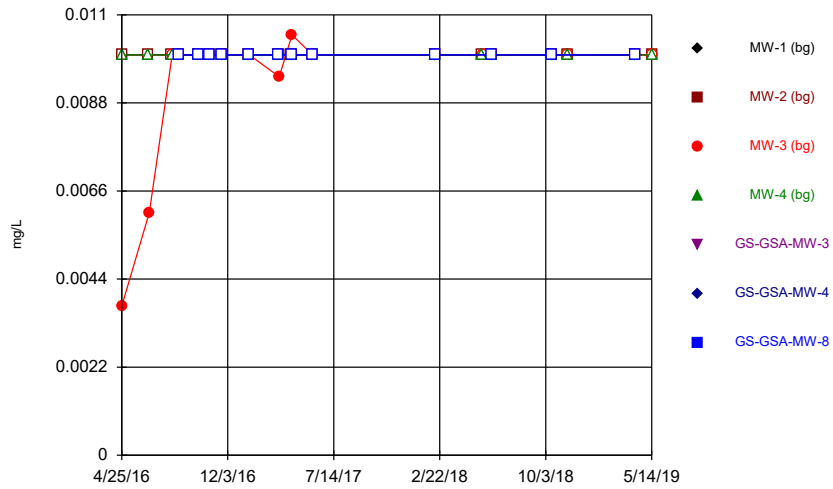
Constituent: Calcium Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



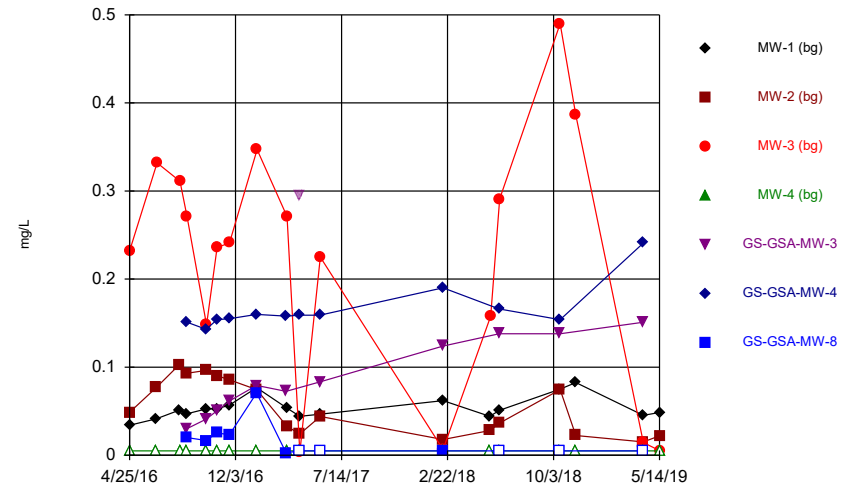
Constituent: Chloride Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



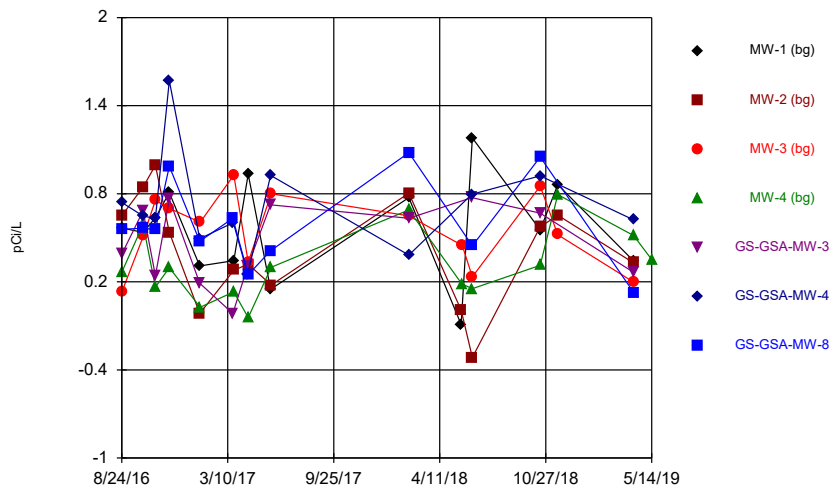
Constituent: Chromium Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



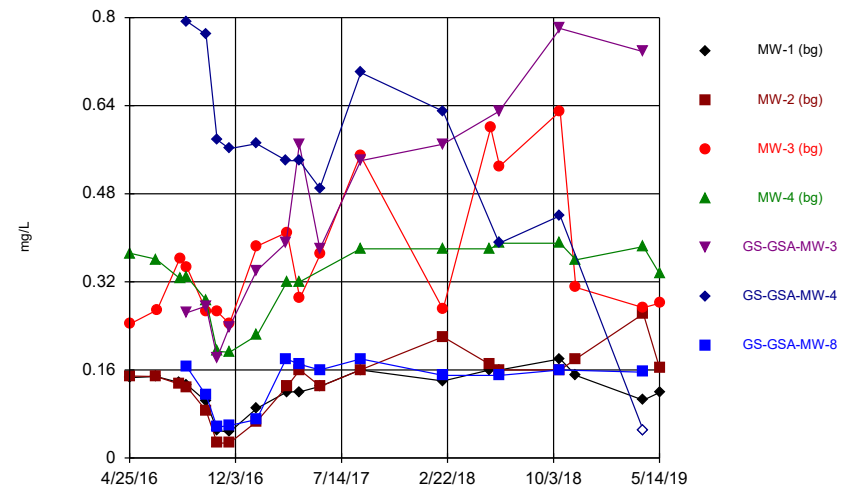
Constituent: Cobalt Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



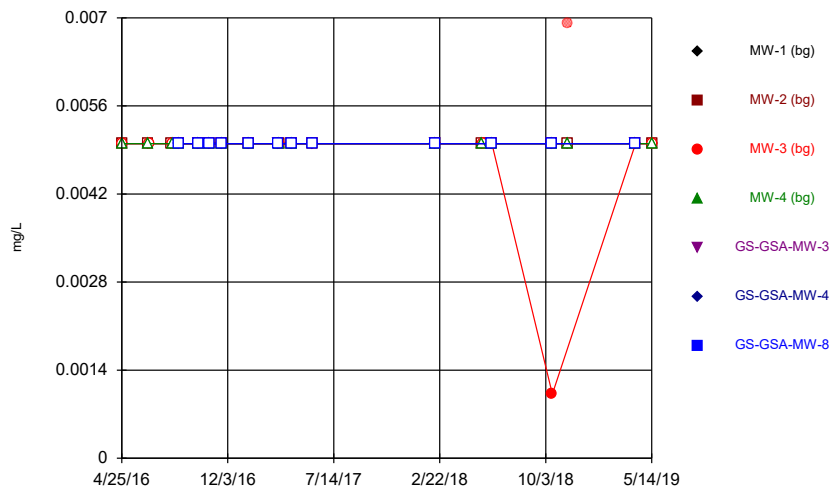
Constituent: Combined Radium 226 + 228 Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



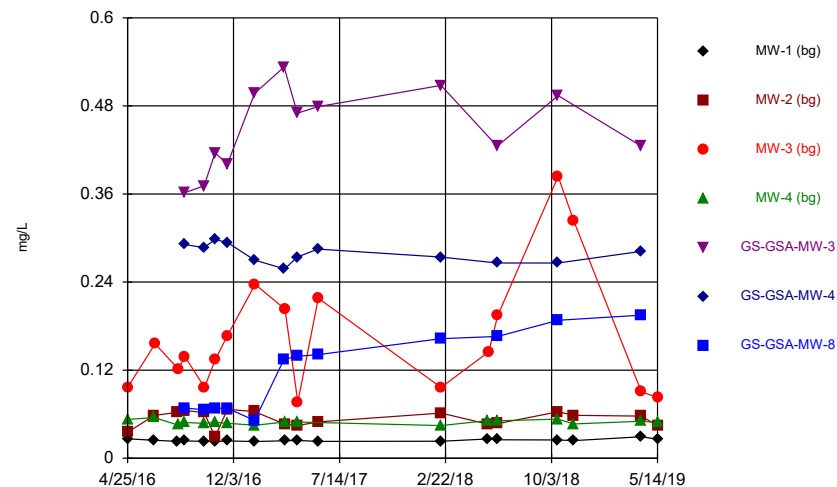
Constituent: Fluoride Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



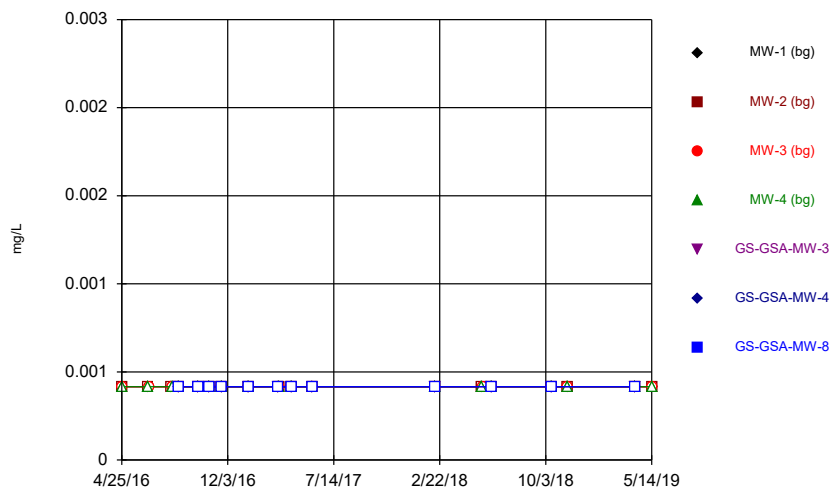
Constituent: Lead Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



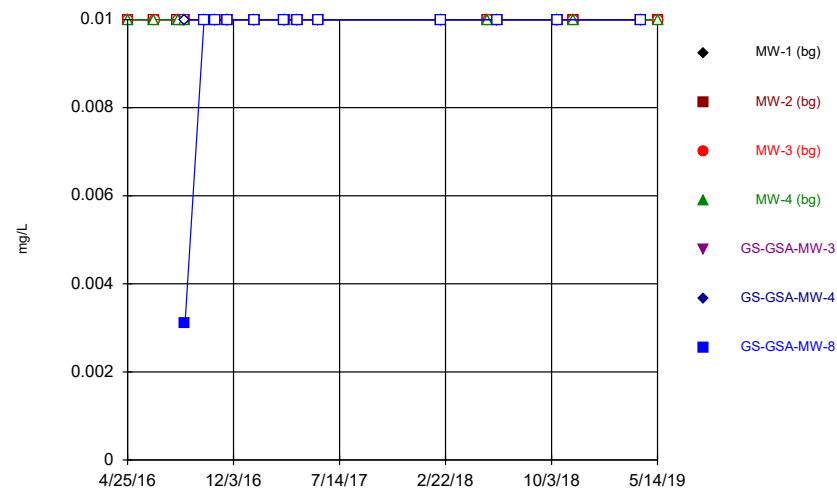
Constituent: Lithium Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



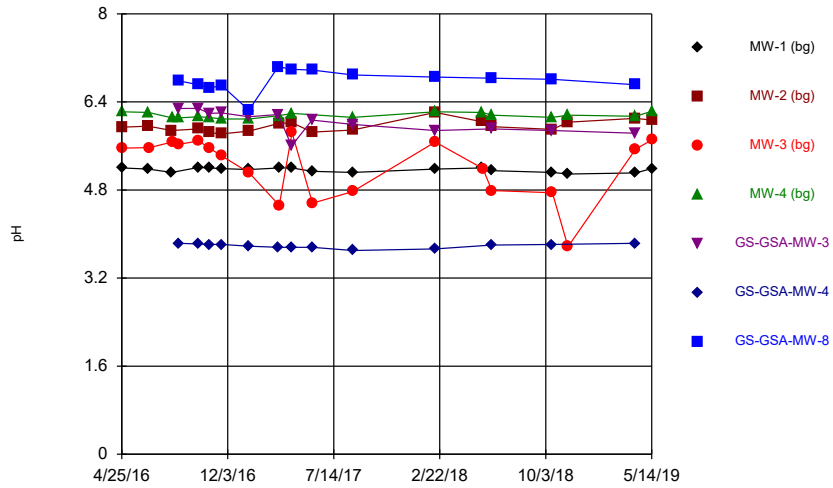
Constituent: Mercury Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



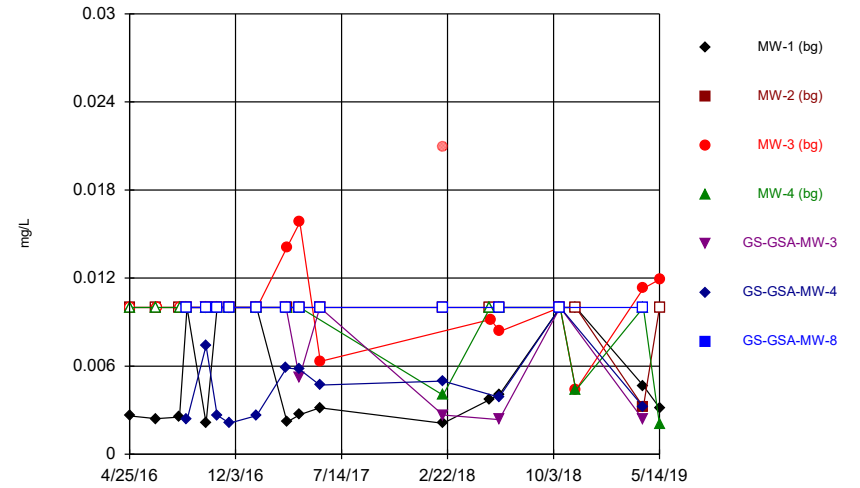
Constituent: Molybdenum Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



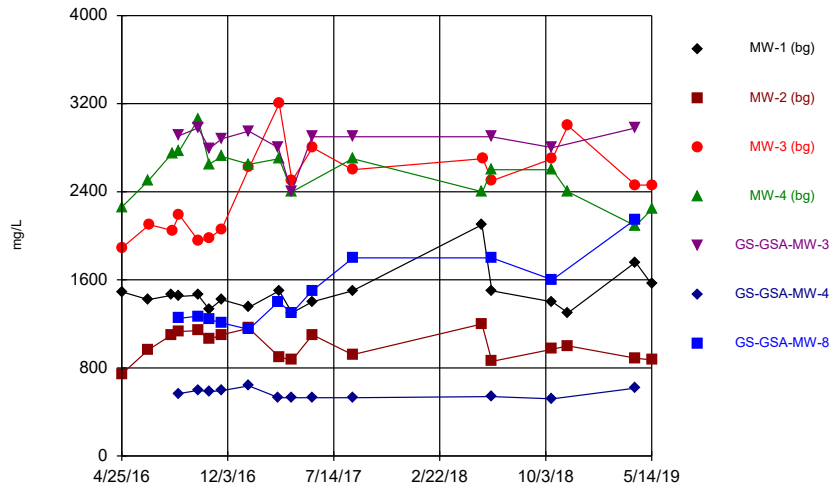
Constituent: pH Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



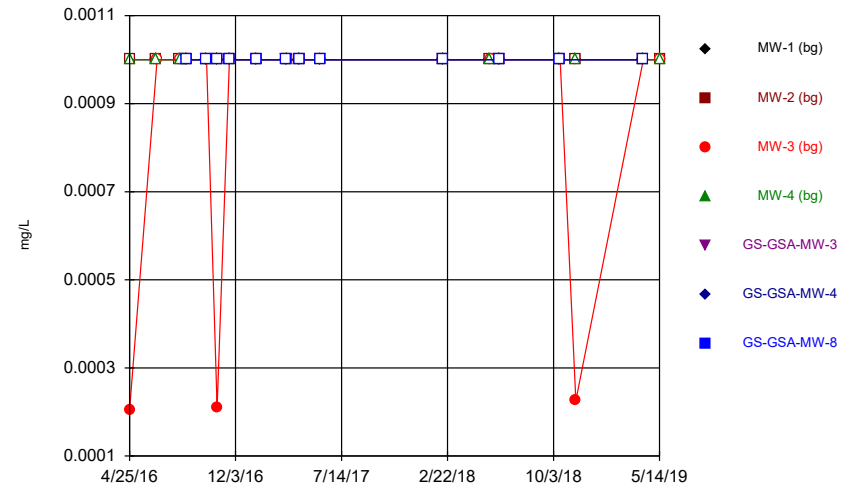
Constituent: Selenium Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



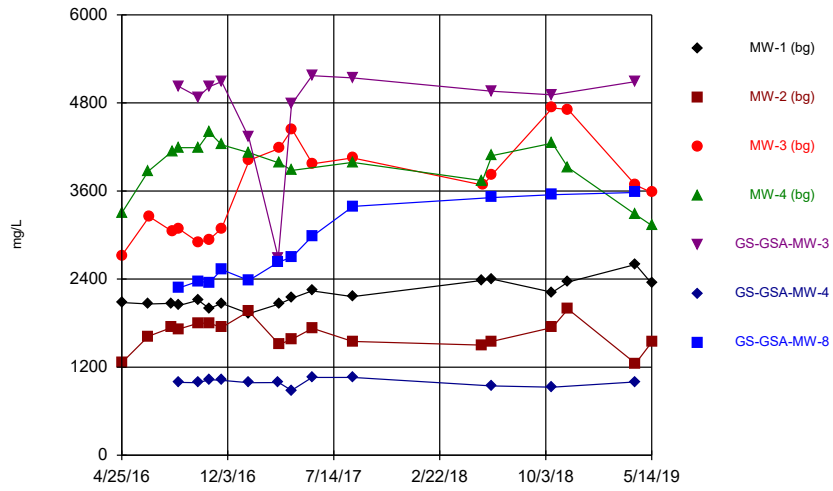
Constituent: Sulfate Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



Constituent: Thallium Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



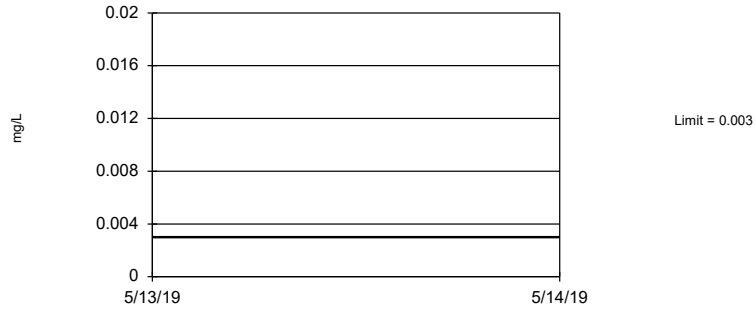
Constituent: Total dissolved solids Analysis Run 12/17/2019 9:43 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Upper Tolerance Limits - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 12/17/2019, 9:46 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	71	n/a	n/a	91.55	n/a	n/a	0.0262	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	71	n/a	n/a	92.96	n/a	n/a	0.0262	NP Inter(NDs)
Barium (mg/L)	0.0165	n/a	71	n/a	n/a	0	n/a	n/a	0.0262	NP Inter(normal...
Beryllium (mg/L)	0.0121	n/a	69	n/a	n/a	82.61	n/a	n/a	0.02904	NP Inter(NDs)
Cadmium (mg/L)	0.00459	n/a	69	n/a	n/a	49.28	n/a	n/a	0.02904	NP Inter(normal...
Chromium (mg/L)	0.0105	n/a	71	n/a	n/a	94.37	n/a	n/a	0.0262	NP Inter(NDs)
Cobalt (mg/L)	0.49	n/a	71	n/a	n/a	23.94	n/a	n/a	0.0262	NP Inter(normal...
Combined Radium 226 + 228 (pCi/L)	1.095	n/a	57	0.4587	0.3137	0	None	No	0.05	Inter
Fluoride (mg/L)	0.5469	n/a	75	0.4688	0.1373	0	None	sqrt(x)	0.05	Inter
Lead (mg/L)	0.005	n/a	70	n/a	n/a	98.57	n/a	n/a	0.02758	NP Inter(NDs)
Lithium (mg/L)	0.384	n/a	71	n/a	n/a	0	n/a	n/a	0.0262	NP Inter(normal...
Mercury (mg/L)	0.0005	n/a	71	n/a	n/a	100	n/a	n/a	0.0262	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	71	n/a	n/a	100	n/a	n/a	0.0262	NP Inter(NDs)
Selenium (mg/L)	0.0158	n/a	70	n/a	n/a	65.71	n/a	n/a	0.02758	NP Inter(normal...
Thallium (mg/L)	0.001	n/a	71	n/a	n/a	95.77	n/a	n/a	0.0262	NP Inter(NDs)

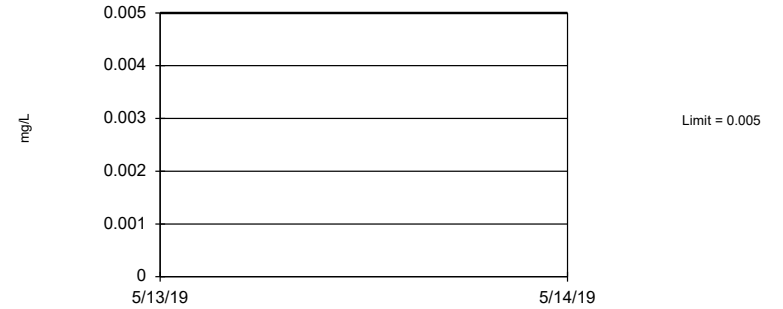
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 71 background values. 91.55% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0262.

Constituent: Antimony Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 71 background values. 92.96% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0262.

Constituent: Arsenic Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

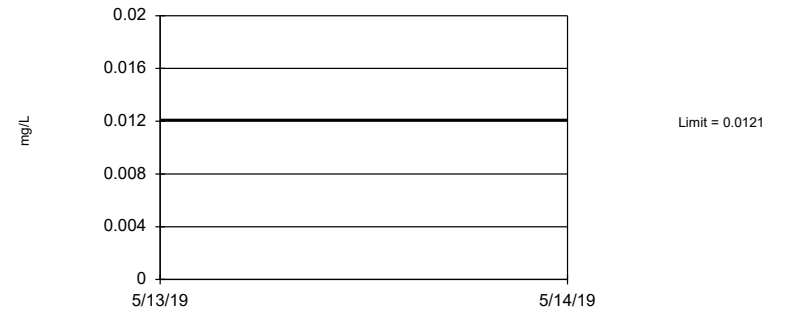
Tolerance Limit Interwell Non-parametric



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 71 background values. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0262.

Constituent: Barium Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

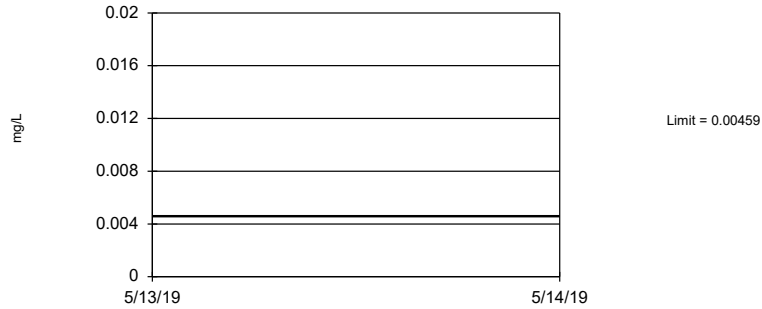
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 69 background values. 82.61% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02904.

Constituent: Beryllium Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

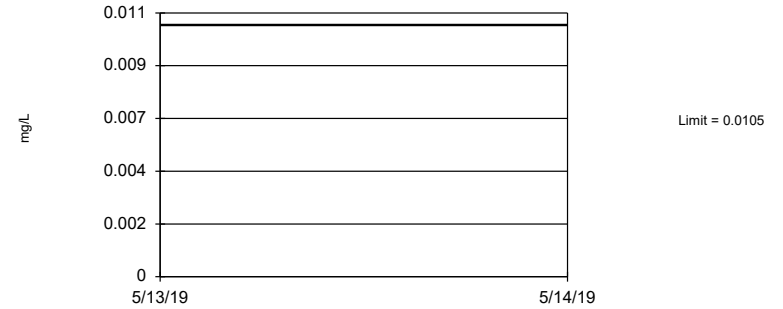
Tolerance Limit
Interwell Non-parametric



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 69 background values. 49.28% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02904.

Constituent: Cadmium Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

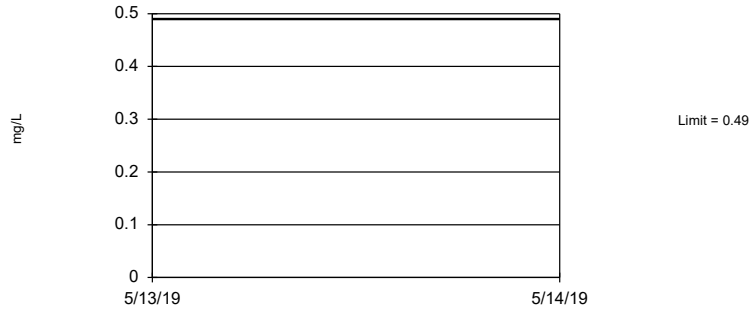
Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 71 background values. 94.37% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0262.

Constituent: Chromium Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

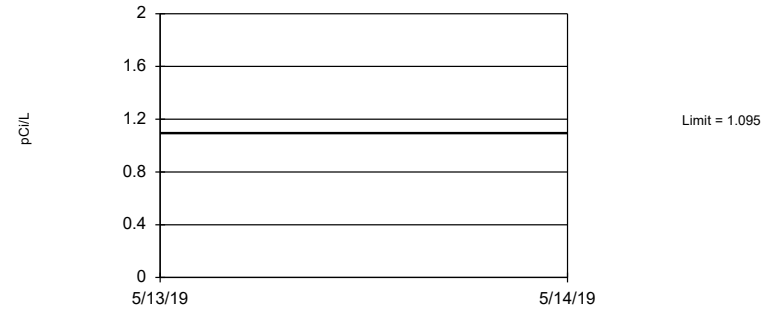
Tolerance Limit
Interwell Non-parametric



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 71 background values. 23.94% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0262.

Constituent: Cobalt Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

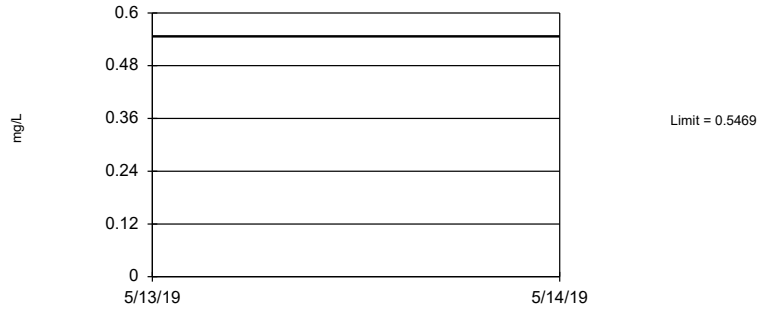
Tolerance Limit
Interwell Parametric



95% coverage. Background Data Summary: Mean=0.4587, Std. Dev.=0.3137, n=57. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9875, critical = 0.944. Report alpha = 0.05.

Constituent: Combined Radium 226 + 228 Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary (based on square root transformation): Mean=0.4688, Std. Dev.=0.1373, n=75. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9759, critical = 0.956. Report alpha = 0.05.

Constituent: Fluoride Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 70 background values. 98.57% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02758.

Constituent: Lead Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

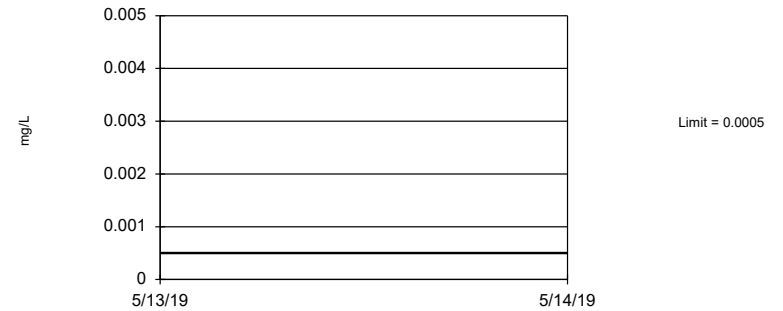
Tolerance Limit Interwell Non-parametric



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 71 background values. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0262.

Constituent: Lithium Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

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. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0262.

Constituent: Mercury Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

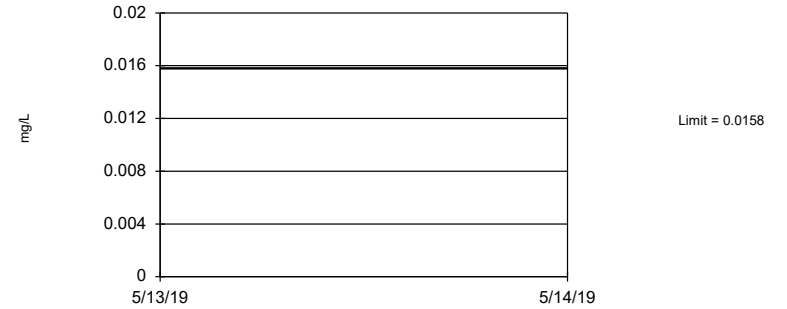
Tolerance Limit
Interwell Non-parametric



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. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0262.

Constituent: Molybdenum Analysis Run 12/17/2019 9:45 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

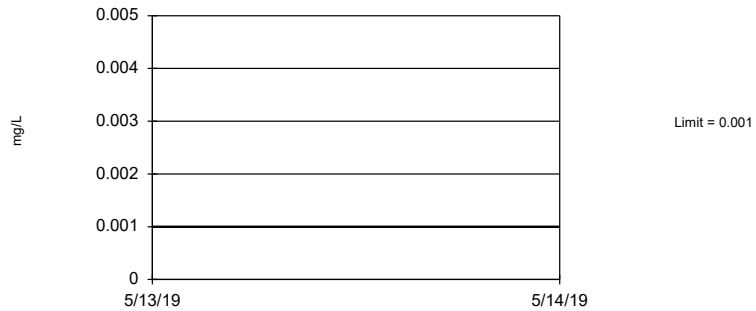
Tolerance Limit
Interwell Non-parametric



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 70 background values. 65.71% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02758.

Constituent: Selenium Analysis Run 12/17/2019 9:46 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 71 background values. 95.77% NDs. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0262.

Constituent: Thallium Analysis Run 12/17/2019 9:46 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Confidence Intervals - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 12/17/2019, 9:52 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Lithium (mg/L)	GS-GSA-MW-3	0.4923	0.4045	0.384	Yes	12	0	No	0.01	Param.

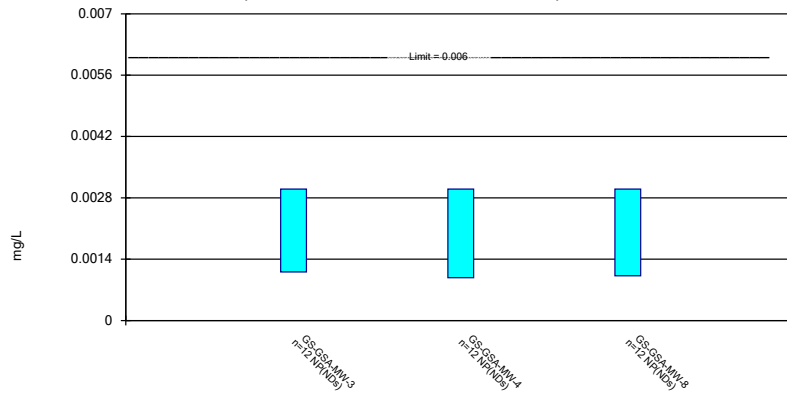
Confidence Intervals - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 12/17/2019, 9:52 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	GS-GSA-MW-3	0.003	0.00111	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	GS-GSA-MW-4	0.003	0.000976	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	GS-GSA-MW-8	0.003	0.00102	0.006	No	12	91.67	No	0.01	NP (NDs)
Arsenic (mg/L)	GS-GSA-MW-3	0.005	0.00405	0.01	No	12	83.33	No	0.01	NP (NDs)
Arsenic (mg/L)	GS-GSA-MW-4	0.005	0.00176	0.01	No	12	91.67	No	0.01	NP (NDs)
Arsenic (mg/L)	GS-GSA-MW-8	0.005	0.0011	0.01	No	12	66.67	No	0.01	NP (normality)
Barium (mg/L)	GS-GSA-MW-3	0.0155	0.0121	2	No	12	0	No	0.01	NP (normality)
Barium (mg/L)	GS-GSA-MW-4	0.01306	0.01169	2	No	12	0	No	0.01	Param.
Barium (mg/L)	GS-GSA-MW-8	0.0501	0.02477	2	No	12	0	sqrt(x)	0.01	Param.
Beryllium (mg/L)	GS-GSA-MW-3	0.003893	0.00157	0.0121	No	12	16.67	No	0.01	Param.
Beryllium (mg/L)	GS-GSA-MW-4	0.005419	0.004509	0.0121	No	12	0	No	0.01	Param.
Beryllium (mg/L)	GS-GSA-MW-8	0.003	0.003	0.0121	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	GS-GSA-MW-3	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	GS-GSA-MW-4	0.001687	0.00138	0.005	No	12	0	No	0.01	Param.
Cadmium (mg/L)	GS-GSA-MW-8	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	GS-GSA-MW-3	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	GS-GSA-MW-4	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	GS-GSA-MW-8	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Cobalt (mg/L)	GS-GSA-MW-3	0.1237	0.05256	0.49	No	11	0	No	0.01	Param.
Cobalt (mg/L)	GS-GSA-MW-4	0.19	0.151	0.49	No	12	0	No	0.01	NP (normality)
Cobalt (mg/L)	GS-GSA-MW-8	0.0253	0.0025	0.49	No	12	41.67	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GS-GSA-MW-3	0.6795	0.2577	5	No	12	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GS-GSA-MW-4	0.9782	0.453	5	No	12	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GS-GSA-MW-8	0.8325	0.3571	5	No	12	0	No	0.01	Param.
Fluoride (mg/L)	GS-GSA-MW-3	0.5998	0.3076	4	No	13	0	No	0.01	Param.
Fluoride (mg/L)	GS-GSA-MW-4	0.683	0.4021	4	No	13	7.692	No	0.01	Param.
Fluoride (mg/L)	GS-GSA-MW-8	0.168	0.1198	4	No	13	0	x ³	0.01	Param.
Lead (mg/L)	GS-GSA-MW-3	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	GS-GSA-MW-4	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	GS-GSA-MW-8	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lithium (mg/L)	GS-GSA-MW-3	0.4923	0.4045	0.384	Yes	12	0	No	0.01	Param.
Lithium (mg/L)	GS-GSA-MW-4	0.2886	0.2689	0.384	No	12	0	No	0.01	Param.
Lithium (mg/L)	GS-GSA-MW-8	0.1623	0.07921	0.384	No	12	0	No	0.01	Param.
Mercury (mg/L)	GS-GSA-MW-3	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Mercury (mg/L)	GS-GSA-MW-4	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Mercury (mg/L)	GS-GSA-MW-8	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	GS-GSA-MW-3	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	GS-GSA-MW-4	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	GS-GSA-MW-8	0.01	0.0031	0.1	No	12	91.67	No	0.01	NP (NDs)
Selenium (mg/L)	GS-GSA-MW-3	0.01	0.00236	0.05	No	12	66.67	No	0.01	NP (normality)
Selenium (mg/L)	GS-GSA-MW-4	0.006488	0.002779	0.05	No	12	8.333	No	0.01	Param.
Selenium (mg/L)	GS-GSA-MW-8	0.01	0.01	0.05	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	GS-GSA-MW-3	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	GS-GSA-MW-4	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	GS-GSA-MW-8	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

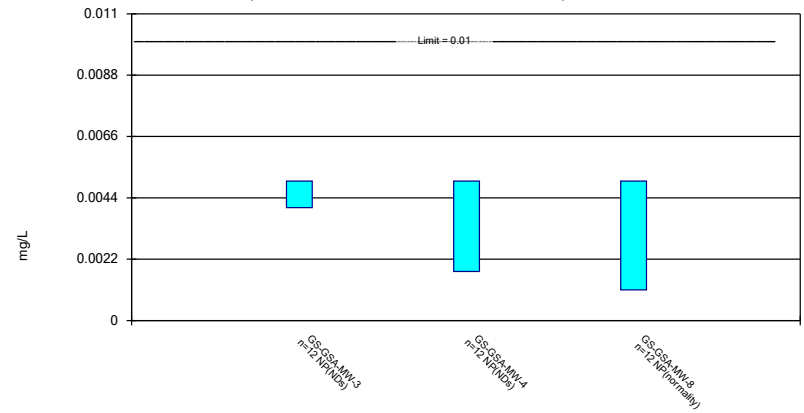
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Non-Parametric Confidence Interval

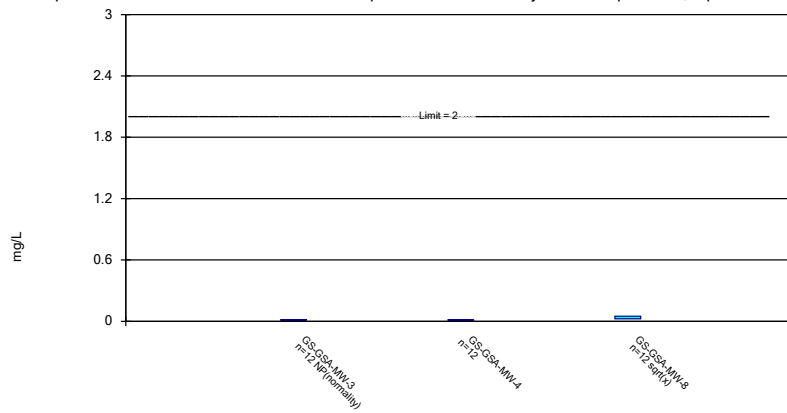
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Arsenic Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric and Non-Parametric (NP) Confidence Interval

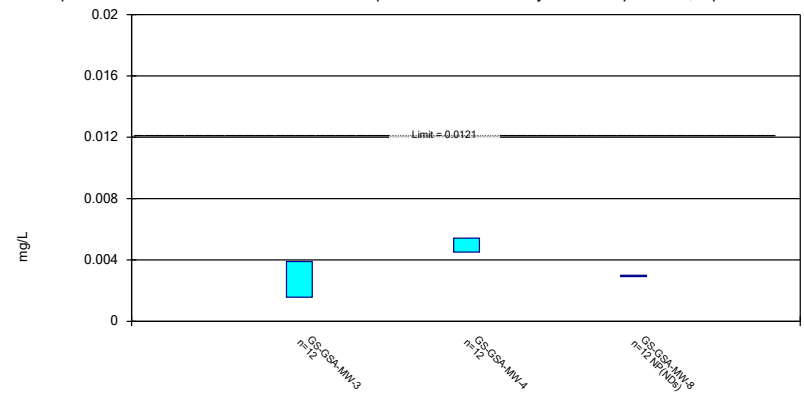
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric and Non-Parametric (NP) Confidence Interval

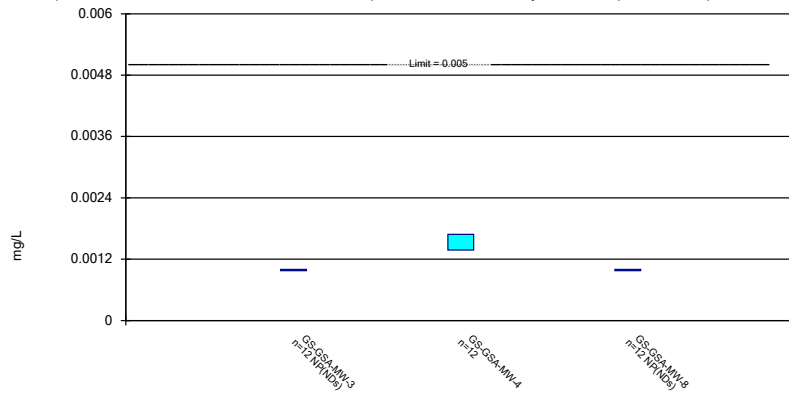
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric and Non-Parametric (NP) Confidence Interval

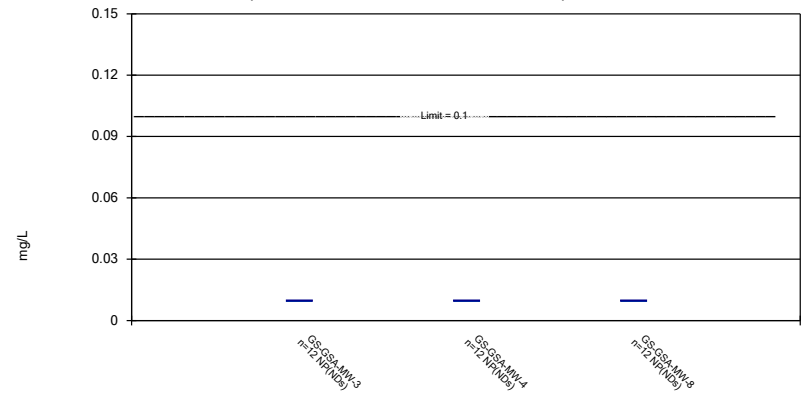
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Non-Parametric Confidence Interval

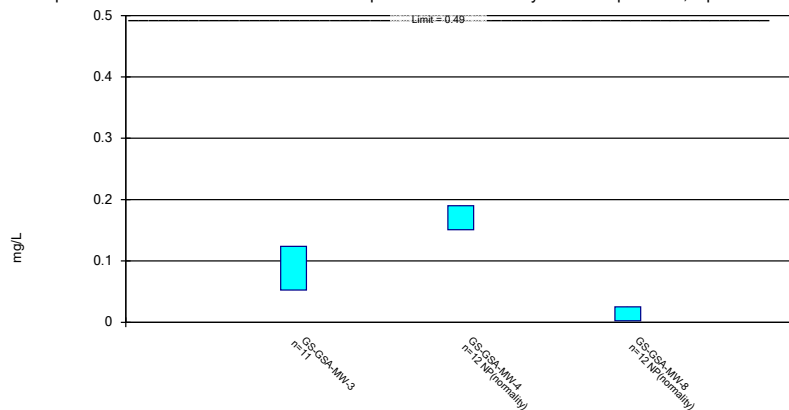
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric and Non-Parametric (NP) Confidence Interval

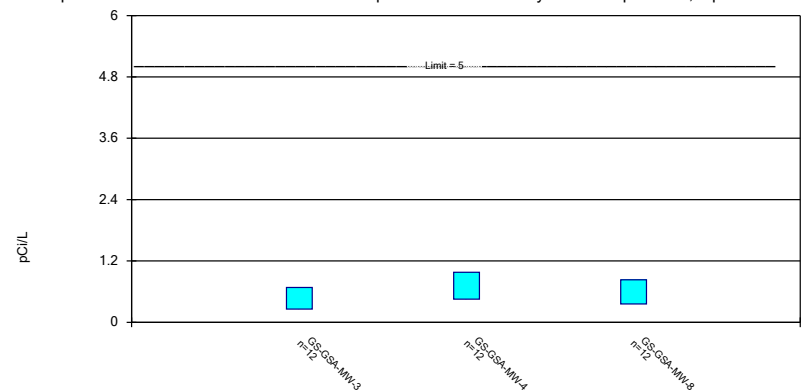
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric Confidence Interval

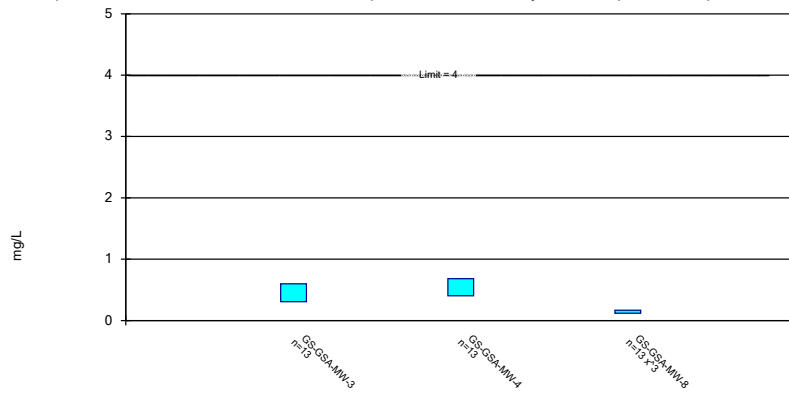
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals -
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric Confidence Interval

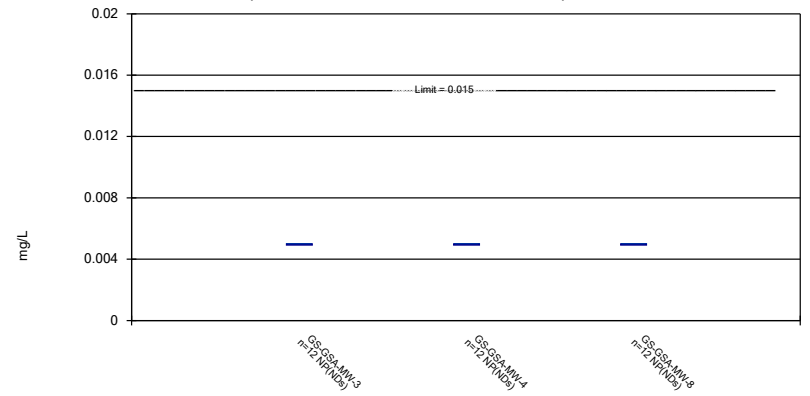
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Non-Parametric Confidence Interval

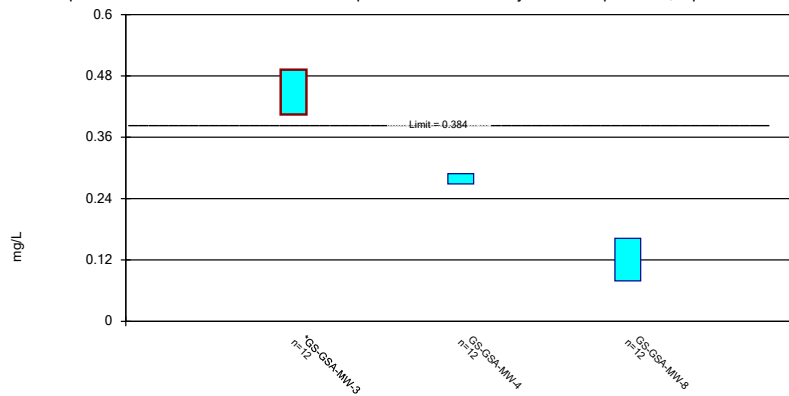
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric Confidence Interval

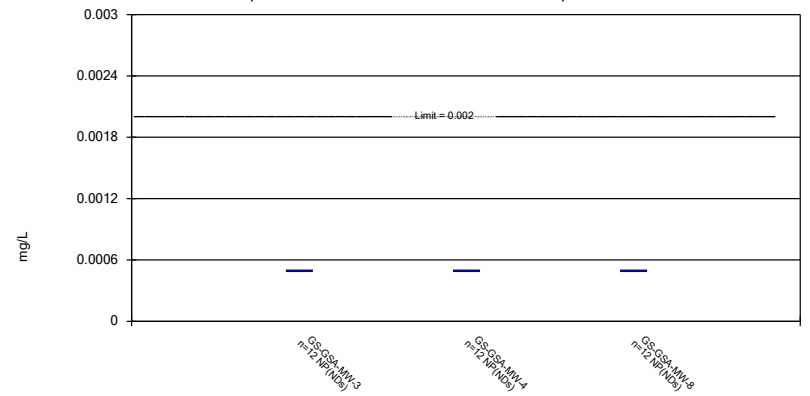
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



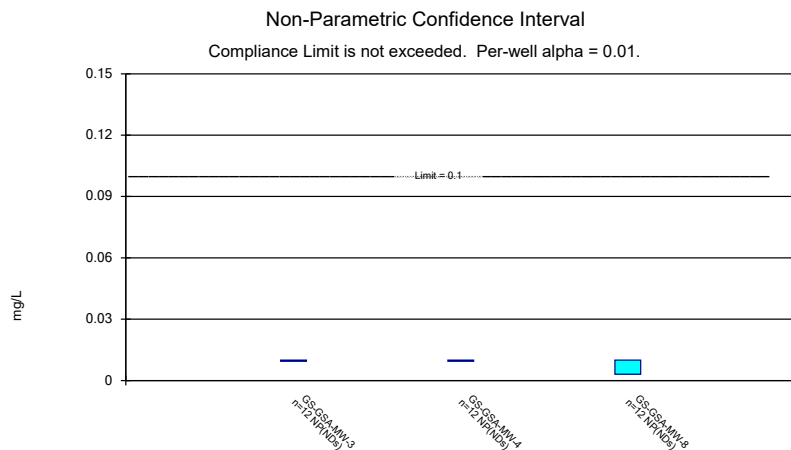
Constituent: Lithium Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Non-Parametric Confidence Interval

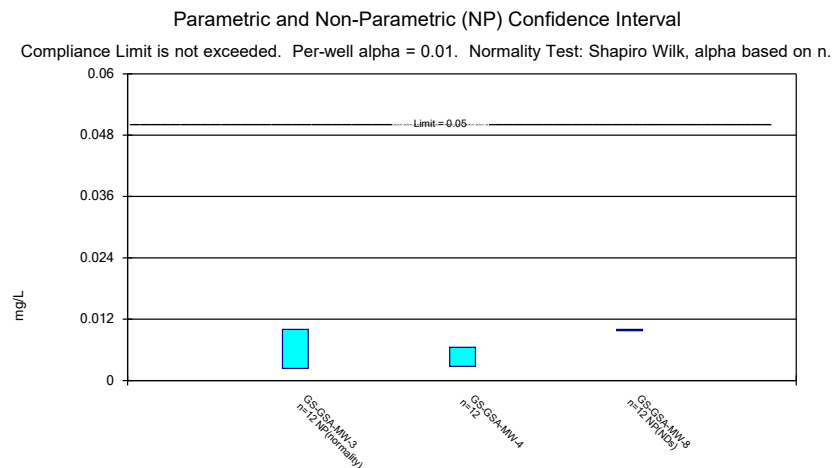
Compliance Limit is not exceeded. Per-well alpha = 0.01.



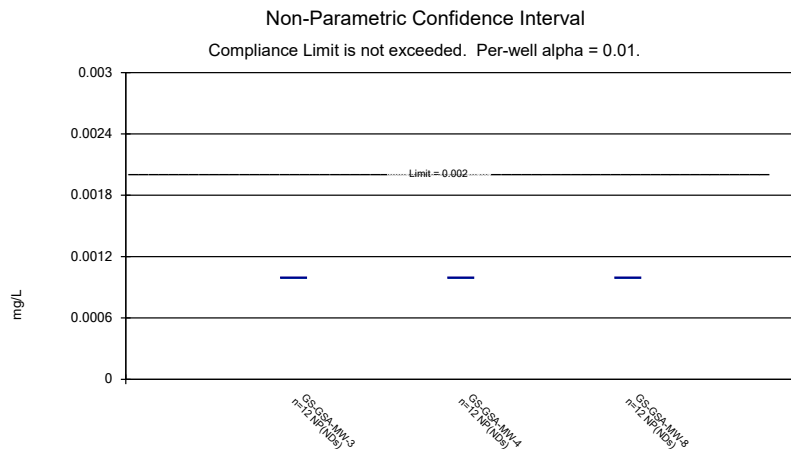
Constituent: Mercury Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA



Constituent: Molybdenum Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA



Constituent: Selenium Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA



Constituent: Thallium Analysis Run 12/17/2019 9:49 AM View: Confidence Intervals - Appendix IV
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

2nd
Semi-Annual
Monitoring Event

Interwell Prediction Limit - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 1/21/2020, 7:51 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	GS-GSA-MW-3	0.0596	n/a	10/14/2019	2.48	Yes	79	12.66	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	GS-GSA-MW-4	0.0596	n/a	10/14/2019	3.37	Yes	79	12.66	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	GS-GSA-MW-8	0.0596	n/a	10/14/2019	2.11	Yes	79	12.66	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	GS-GSA-MW-3	431	n/a	10/14/2019	552	Yes	79	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	GS-GSA-MW-8	431	n/a	10/14/2019	524	Yes	79	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	GS-GSA-MW-3	3.806	n/a	10/14/2019	228	Yes	79	3.797	sqrt(x)	0.002505	Param Inter 1 of 2
Chloride (mg/L)	GS-GSA-MW-4	3.806	n/a	10/14/2019	59.1	Yes	79	3.797	sqrt(x)	0.002505	Param Inter 1 of 2
Chloride (mg/L)	GS-GSA-MW-8	3.806	n/a	10/14/2019	207	Yes	79	3.797	sqrt(x)	0.002505	Param Inter 1 of 2
Fluoride (mg/L)	GS-GSA-MW-3	0.4786	n/a	10/14/2019	0.619	Yes	83	0	sqrt(x)	0.002505	Param Inter 1 of 2

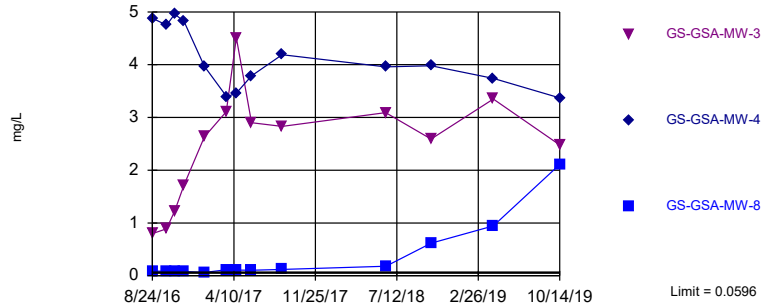
Interwell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 1/21/2020, 7:51 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	GS-GSA-MW-3	0.0596	n/a	10/14/2019	2.48	Yes	79	12.66	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	GS-GSA-MW-4	0.0596	n/a	10/14/2019	3.37	Yes	79	12.66	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	GS-GSA-MW-8	0.0596	n/a	10/14/2019	2.11	Yes	79	12.66	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	GS-GSA-MW-3	431	n/a	10/14/2019	552	Yes	79	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	GS-GSA-MW-4	431	n/a	10/14/2019	93.5	No	79	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	GS-GSA-MW-8	431	n/a	10/14/2019	524	Yes	79	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	GS-GSA-MW-3	3.806	n/a	10/14/2019	228	Yes	79	3.797	sqrt(x)	0.002505	Param Inter 1 of 2
Chloride (mg/L)	GS-GSA-MW-4	3.806	n/a	10/14/2019	59.1	Yes	79	3.797	sqrt(x)	0.002505	Param Inter 1 of 2
Chloride (mg/L)	GS-GSA-MW-8	3.806	n/a	10/14/2019	207	Yes	79	3.797	sqrt(x)	0.002505	Param Inter 1 of 2
Fluoride (mg/L)	GS-GSA-MW-3	0.4786	n/a	10/14/2019	0.619	Yes	83	0	sqrt(x)	0.002505	Param Inter 1 of 2
Fluoride (mg/L)	GS-GSA-MW-4	0.4786	n/a	10/14/2019	0.05ND	No	83	0	sqrt(x)	0.002505	Param Inter 1 of 2
Fluoride (mg/L)	GS-GSA-MW-8	0.4786	n/a	10/14/2019	0.118	No	83	0	sqrt(x)	0.002505	Param Inter 1 of 2

Exceeds Limit: GS-GSA-MW-3, GS-GSA-MW-4, GS-GSA-MW-8

Prediction Limit
Interwell Non-parametric

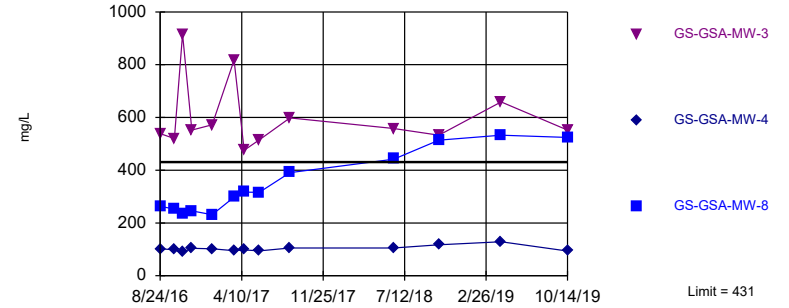


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 79 background values. 12.66% NDs. Annual per-constituent alpha = 0.001852. Individual comparison alpha = 0.0003089 (1 of 2). Comparing 3 points to limit.

Constituent: Boron Analysis Run 1/21/2020 7:49 AM View: Interwell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limit: GS-GSA-MW-3, GS-GSA-MW-8

Prediction Limit
Interwell Non-parametric

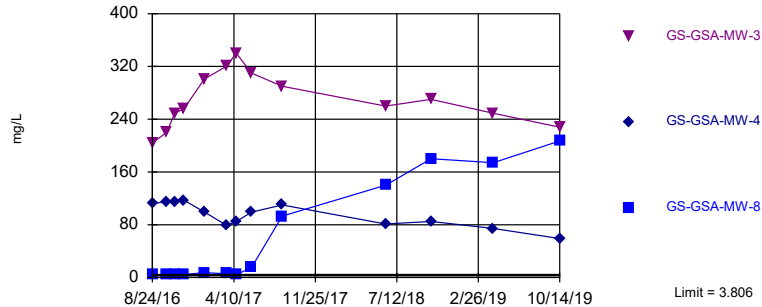


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 79 background values. Annual per-constituent alpha = 0.001852. Individual comparison alpha = 0.0003089 (1 of 2). Comparing 3 points to limit.

Constituent: Calcium Analysis Run 1/21/2020 7:50 AM View: Interwell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limit: GS-GSA-MW-3, GS-GSA-MW-4, GS-GSA-MW-8

Prediction Limit
Interwell Parametric

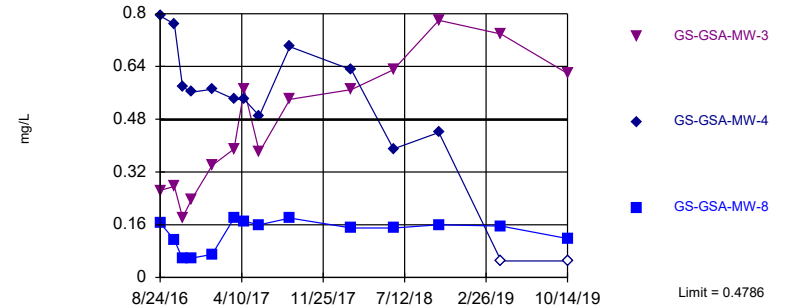


Background Data Summary (based on square root transformation): Mean=1.488, Std. Dev.=0.2738, n=79, 3.797% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9676, critical = 0.957. Kappa = 1.692 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.002505. Comparing 3 points to limit.

Constituent: Chloride Analysis Run 1/21/2020 7:50 AM View: Interwell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limit: GS-GSA-MW-3

Prediction Limit
Interwell Parametric



Background Data Summary (based on square root transformation): Mean=0.4625, Std. Dev.=0.1358, n=83. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9794, critical = 0.96. Kappa = 1.689 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.002505. Comparing 3 points to limit.

Constituent: Fluoride Analysis Run 1/21/2020 7:50 AM View: Interwell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/21/2020 7:51 AM View: Interwell PL

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-1 (bg)	GS-GSA-MW-4	GS-GSA-MW-3	GS-GSA-MW-8
4/25/2016	0.0241 (J)	0.028 (J)	0.0414 (J)				
4/26/2016				0.0231 (J)			
6/20/2016	0.0284 (J)		0.0434 (J)	0.0227 (J)			
6/22/2016		0.0433 (J)					
8/8/2016	0.034 (J)			0.0278 (J)			
8/9/2016		0.0429 (J)	0.0453 (J)				
8/24/2016	0.0316 (J)	0.0431 (J)	0.0451 (J)	0.0247 (J)	4.88	0.799	0.0898 (J)
10/3/2016	0.0367 (J)		0.0511 (J)	0.0307 (J)	4.75	0.889	0.0821 (J)
10/4/2016		0.04 (J)					
10/26/2016	0.0331 (J)	0.0375 (J)	0.0507 (J)	0.0241 (J)	4.96	1.23	0.0889 (J)
11/21/2016	0.035 (J)	0.0406 (J)	0.0458 (J)	0.0202 (J)	4.82	1.72	0.0788 (J)
1/17/2017	0.0259 (J)			0.0201 (J)	3.97	2.63	0.0607 (J)
1/18/2017		0.0548 (J)	0.0445 (J)				
3/20/2017						3.11	0.114
3/21/2017					3.39		
3/22/2017	0.0243 (J)	0.0344 (J)	0.0432 (J)	0.0224 (J)			
4/17/2017					3.46	4.51	
4/18/2017	0.0206 (J)	<0.1	0.0409 (J)	<0.1			0.108
5/30/2017				<0.1	3.79	2.9	0.105
5/31/2017	0.0234 (J)	0.0454 (J)					
8/23/2017	0.0267 (J)	0.0425 (J)	0.042 (J)	0.0253 (J)			
8/24/2017					4.19	2.83	0.12
5/22/2018	0.0251 (J)			0.0224 (J)			
5/23/2018			0.0433 (J)				
5/24/2018		0.0339 (J)					
6/11/2018					3.96	3.09	
6/12/2018	0.0275 (J)	0.0371 (J)	0.0478 (J)	0.0214 (J)			0.181
10/17/2018	0.0321 (J)	0.0596 (J)	0.0468 (J)	0.0216 (J)	3.98	2.59	0.616
11/19/2018	0.0324 (J)	0.0514 (J)	0.0526 (J)	0.0237 (J)			
4/10/2019	<0.1	<0.1	0.0438 (J)	0.0304 (J)	3.74	3.35	0.944
5/14/2019	<0.1	<0.1	<0.1	<0.1			
10/8/2019	0.0371 (J)	0.0537 (J)		<0.1			
10/10/2019			0.0487 (J)				
10/14/2019					3.37	2.48	2.11
10/16/2019	0.0419 (J)	0.05 (J)	0.0505 (J)	0.0385 (J)			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/21/2020 7:51 AM View: Interwell PL
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-1 (bg)	GS-GSA-MW-4	GS-GSA-MW-3	GS-GSA-MW-8
4/25/2016	123	224	261				
4/26/2016				147			
6/20/2016	168		295	152			
6/22/2016		266					
8/8/2016	180			150			
8/9/2016		260	318				
8/24/2016	180	274	319	142	102	539	263
10/3/2016	184		293	139	98.4	519.7	253
10/4/2016		243					
10/26/2016	171	254	311	133	88.7	916	235
11/21/2016	179	263	320	144	104	552	246
1/17/2017	188			131	102	572	231
1/18/2017		431	417				
3/20/2017						817	298
3/21/2017					94.7		
3/22/2017	155	318	292	141			
4/17/2017					97.9	476	
4/18/2017	156	296	302	149			317
5/30/2017				140	93.9	515	316
5/31/2017	151	306					
8/23/2017	155	298	297	152			
8/24/2017					105	598	391
5/22/2018	172			166			
5/23/2018			296				
5/24/2018		297					
6/11/2018					105	558	
6/12/2018	179	318	355	203			442
10/17/2018	200	392	342	171	117	533	514
11/19/2018	221	387	289	154			
4/10/2019	200	348	356	243	129	659	533
5/14/2019	168	254	254	167			
10/8/2019	190	371		157			
10/10/2019			302				
10/14/2019					93.5	552	524
10/16/2019	194	346	356	157			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/21/2020 7:51 AM View: Interwell PL
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-2 (bg)	MW-3 (bg)	MW-4 (bg)	MW-1 (bg)	GS-GSA-MW-4	GS-GSA-MW-3	GS-GSA-MW-8
4/25/2016	1.9	1.32	1.53				
4/26/2016				1.94			
6/20/2016	3.43		1.85	2.09			
6/22/2016		1.46					
8/8/2016	3.31			2.18			
8/9/2016		1.35	1.95				
8/24/2016	3.23	1.47	2.07	2.22	112	204	4.03
10/3/2016	3.21		2.02	2.34	115	220	3.87
10/4/2016		1.59					
10/26/2016	3.35	1.27	2.07	2.34	115	249	4.08
11/21/2016	3.34	1.38	2.39	2.5	117	256	4.39
1/17/2017	3.58			2.68	99.3	301	7.22
1/18/2017		1.34	1.9				
3/20/2017						320	5.7
3/21/2017					79		
3/22/2017	3.4	2	1.5 (J)	3.7			
4/17/2017					85	340	
4/18/2017	2.6	2.2	1.6 (J)	2.4			4.7
5/30/2017				2.6	99	310	15
5/31/2017	4.4	1.5 (J)					
8/23/2017	4.4	1.8 (J)	2.3	2.7			
8/24/2017					110	290	93
5/22/2018	3.2			2.3			
5/23/2018			2				
5/24/2018		1.6 (J)					
6/11/2018					81	260	
6/12/2018	3.7	1.4 (J)	1.7 (J)	2.3			140
10/17/2018	4.6	<2	1.5 (J)	1.7 (J)	85	270	180
11/19/2018	3	<2	<2	1.7 (J)			
4/10/2019	1.76	2.25	1.88	2.36	74.3	249	174
5/14/2019	2.98	2.28	1.82	2.28			
10/8/2019	4.26	1.36		2.31			
10/10/2019			1.93				
10/14/2019					59.1	228	207
10/16/2019	4.04	1.4	1.92	2.42			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/21/2020 7:51 AM View: Interwell PL

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-4 (bg)	MW-3 (bg)	MW-2 (bg)	MW-1 (bg)	GS-GSA-MW-3	GS-GSA-MW-8	GS-GSA-MW-4
4/25/2016	0.372	0.243 (J)	0.149 (J)				
4/26/2016				0.146 (J)			
6/20/2016	0.361		0.148 (J)	0.148 (J)			
6/22/2016		0.269 (J)					
8/8/2016			0.134 (J)	0.137 (J)			
8/9/2016	0.326	0.363					
8/24/2016	0.329	0.346	0.129 (J)	0.133 (J)	0.264 (J)	0.165 (J)	0.793
10/3/2016	0.287 (J)		0.086 (J)	0.103 (J)	0.276 (J)	0.114 (J)	0.769
10/4/2016		0.266 (J)					
10/26/2016	0.194 (J)	0.266 (J)	0.027 (J)	0.05 (J)	0.182 (J)	0.056 (J)	0.578
11/21/2016	0.192 (J)	0.244 (J)	0.027 (J)	0.047 (J)	0.238 (J)	0.059 (J)	0.562
1/17/2017			0.066 (J)	0.09 (J)	0.34	0.07 (J)	0.571
1/18/2017	0.223 (J)	0.385					
3/20/2017					0.39	0.18	
3/21/2017							0.54
3/22/2017	0.32	0.41	0.13	0.12			
4/17/2017					0.57		0.54
4/18/2017	0.32	0.29	0.16	0.12		0.17	
5/30/2017				0.13	0.38	0.16	0.49
5/31/2017		0.37	0.13				
8/23/2017	0.38	0.55	0.16	0.16			
8/24/2017					0.54	0.18	0.7
2/13/2018	0.38 (D)	0.27 (D)	0.22 (D)	0.14 (D)	0.57 (D)	0.15 (D)	0.63 (D)
5/22/2018			0.17	0.16			
5/23/2018	0.38						
5/24/2018		0.6					
6/11/2018					0.63		0.39
6/12/2018	0.39	0.53	0.16	0.16		0.15	
10/17/2018	0.39	0.63	0.16	0.18	0.78	0.16	0.44
11/19/2018	0.36	0.31	0.18	0.15			
4/10/2019	0.384	0.273	0.262	0.102	0.738	0.156	<0.1
5/14/2019	0.335	0.281	0.17	0.119			
10/8/2019		0.225	0.164	0.0924 (J)			
10/10/2019	0.304						
10/14/2019					0.619	0.118	<0.1
10/16/2019	0.302	0.106	0.114	0.0756 (J)			

Intrawell Prediction Limit - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 1/21/2020, 7:58 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
pH (pH)	GS-GSA-MW-4	3.868	3.701	10/14/2019	3.91	Yes	13	0	No	0.001253	Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3023	n/a	10/16/2019	3050	Yes	17	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	GS-GSA-MW-3	3089	n/a	10/14/2019	3110	Yes	12	0	x^5	0.002505	Param Intra 1 of 2
Total dissolved solids...	MW-1	2526	n/a	10/16/2019	3650	Yes	18	0	No	0.002505	Param Intra 1 of 2

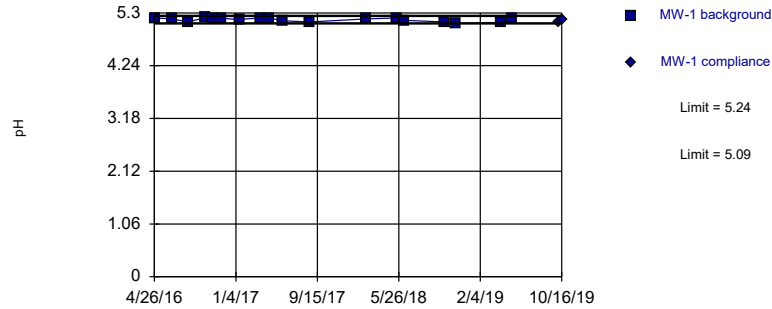
Intrawell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 1/21/2020, 7:58 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
pH (pH)	MW-1	5.24	5.09	10/16/2019	5.16	No	18	0	No	0.001253	Param Intra 1 of 2
pH (pH)	MW-2	6.161	5.76	10/16/2019	5.98	No	18	0	No	0.001253	Param Intra 1 of 2
pH (pH)	MW-3	6.175	4.135	10/16/2019	4.51	No	19	0	x^2	0.001253	Param Intra 1 of 2
pH (pH)	MW-4	6.246	6.063	10/16/2019	6.19	No	18	0	No	0.001253	Param Intra 1 of 2
pH (pH)	GS-GSA-MW-3	6.454	5.609	10/14/2019	6.04	No	13	0	No	0.001253	Param Intra 1 of 2
pH (pH)	GS-GSA-MW-4	3.868	3.701	10/14/2019	3.91	Yes	13	0	No	0.001253	Param Intra 1 of 2
pH (pH)	GS-GSA-MW-8	7.202	6.366	10/14/2019	6.88	No	13	0	No	0.001253	Param Intra 1 of 2
Sulfate (mg/L)	MW-1	2100	n/a	10/16/2019	1680	No	18	0	n/a	0.005373	NP Intra (normality) ...
Sulfate (mg/L)	MW-2	1247	n/a	10/16/2019	1170	No	18	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	3164	n/a	10/16/2019	2820	No	18	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3023	n/a	10/16/2019	3050	Yes	17	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	GS-GSA-MW-3	3089	n/a	10/14/2019	3110	Yes	12	0	x^5	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	GS-GSA-MW-4	648.7	n/a	10/14/2019	641	No	12	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	GS-GSA-MW-8	2123	n/a	10/14/2019	2090	No	12	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	MW-1	2526	n/a	10/16/2019	3650	Yes	18	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	MW-2	2032	n/a	10/16/2019	1830	No	18	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	MW-3	4874	n/a	10/16/2019	4210	No	18	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	MW-4	4639	n/a	10/16/2019	4060	No	17	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	GS-GSA-MW-3	5416	n/a	10/14/2019	5110	No	12	0	x^6	0.002505	Param Intra 1 of 2
Total dissolved solids...	GS-GSA-MW-4	1100	n/a	10/14/2019	967	No	12	0	No	0.002505	Param Intra 1 of 2
Total dissolved solids...	GS-GSA-MW-8	4264	n/a	10/14/2019	3730	No	8	0	No	0.002505	Param Intra 1 of 2

Within Limits

Prediction Limit
Intrawell Parametric

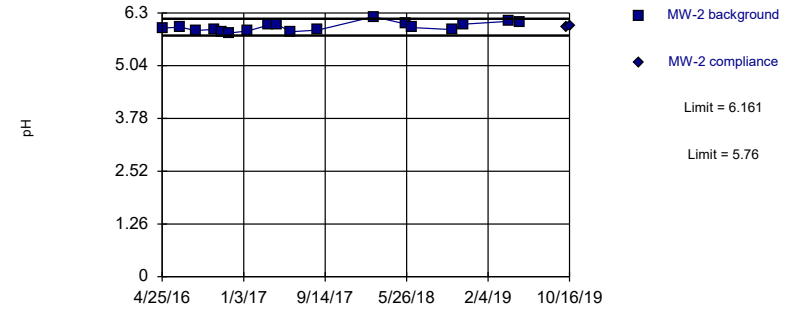


Background Data Summary: Mean=5.165, Std. Dev.=0.03869, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8696, critical = 0.858. Kappa = 1.931 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limits

Prediction Limit
Intrawell Parametric

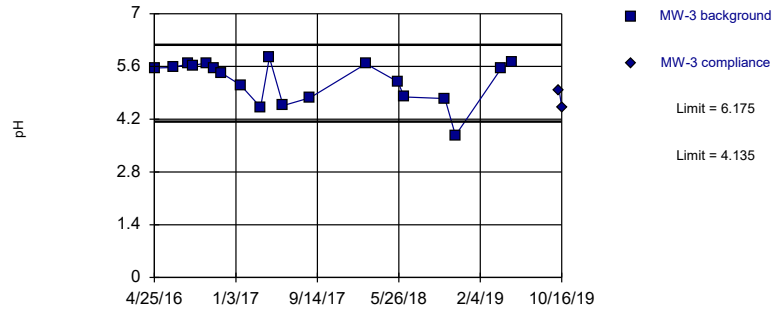


Background Data Summary: Mean=5.961, Std. Dev.=0.1039, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9465, critical = 0.858. Kappa = 1.931 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limits

Prediction Limit
Intrawell Parametric

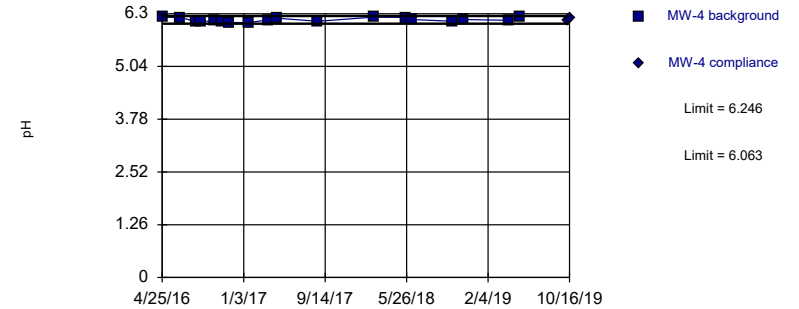


Background Data Summary (based on square transformation): Mean=27.62, Std. Dev.=5.502, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8755, critical = 0.863. Kappa = 1.912 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limits

Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=6.154, Std. Dev.=0.04755, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9068, critical = 0.858. Kappa = 1.931 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Prediction Limit

Constituent: pH (pH) Analysis Run 1/21/2020 7:58 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-1	MW-1
4/26/2016	5.2	
6/20/2016	5.18	
8/8/2016	5.12	
10/3/2016	5.21 (D)	
10/26/2016	5.2	
11/21/2016	5.19 (D)	
1/17/2017	5.17 (D)	
3/22/2017	5.2 (D)	
4/18/2017	5.2	
5/30/2017	5.14 (D)	
8/23/2017	5.12 (D)	
2/13/2018	5.18	
5/22/2018	5.2	
6/12/2018	5.15	
10/17/2018	5.12	
11/19/2018	5.09 (D)	
4/10/2019	5.11	
5/14/2019	5.19	
10/8/2019		5.12
10/16/2019		5.16

Prediction Limit

Constituent: pH (pH) Analysis Run 1/21/2020 7:58 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-2	MW-2
4/25/2016	5.94	
6/20/2016	5.96	
8/8/2016	5.88	
10/3/2016	5.91 (D)	
10/26/2016	5.84	
11/21/2016	5.82 (D)	
1/17/2017	5.87 (D)	
3/22/2017	6.01 (D)	
4/18/2017	6.02	
5/31/2017	5.85 (D)	
8/23/2017	5.89 (D)	
2/13/2018	6.21	
5/22/2018	6.04	
6/12/2018	5.95	
10/17/2018	5.9	
11/19/2018	6.03 (D)	
4/10/2019	6.1	
5/14/2019	6.07	
10/8/2019		5.96
10/16/2019		5.98

Prediction Limit

Constituent: pH (pH) Analysis Run 1/21/2020 7:58 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-3	MW-3
4/25/2016	5.56	
6/22/2016	5.57	
8/9/2016	5.67	
8/24/2016	5.63	
10/4/2016	5.69 (D)	
10/26/2016	5.56	
11/21/2016	5.42 (D)	
1/18/2017	5.11 (D)	
3/22/2017	4.52 (D)	
4/18/2017	5.84	
5/31/2017	4.56 (D)	
8/23/2017	4.77 (D)	
2/13/2018	5.67	
5/24/2018	5.19	
6/12/2018	4.79	
10/17/2018	4.75	
11/19/2018	3.77 (D)	
4/10/2019	5.54	
5/14/2019	5.71	
10/8/2019		4.98
10/16/2019		4.51

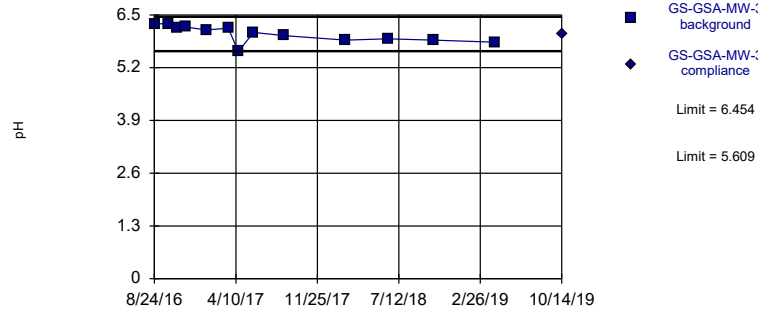
Prediction Limit

Constituent: pH (pH) Analysis Run 1/21/2020 7:58 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	MW-4	MW-4
4/25/2016	6.22	
6/20/2016	6.21	
8/9/2016	6.11	
8/24/2016	6.11	
10/3/2016	6.13 (D)	
10/26/2016	6.12	
11/21/2016	6.09 (D)	
1/18/2017	6.09 (D)	
3/22/2017	6.15 (D)	
4/18/2017	6.19	
8/23/2017	6.12	
2/13/2018	6.22	
5/23/2018	6.21	
6/12/2018	6.16	
10/17/2018	6.12	
11/19/2018	6.16 (D)	
4/10/2019	6.14	
5/14/2019	6.23	
10/10/2019		6.15
10/16/2019		6.19

Within Limits

Prediction Limit
Intrawell Parametric

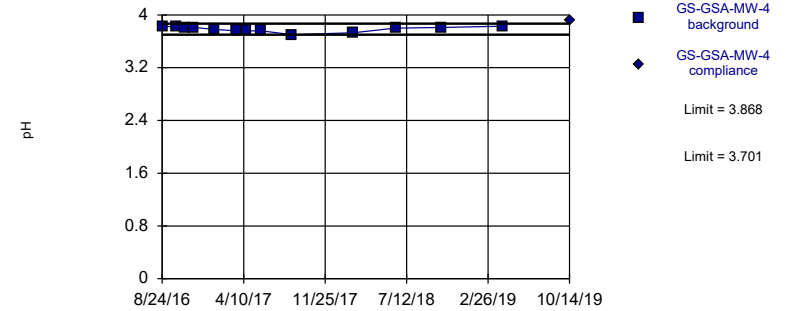


Background Data Summary: Mean=6.032, Std. Dev.=0.2034, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9319, critical = 0.814. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limits

Prediction Limit
Intrawell Parametric

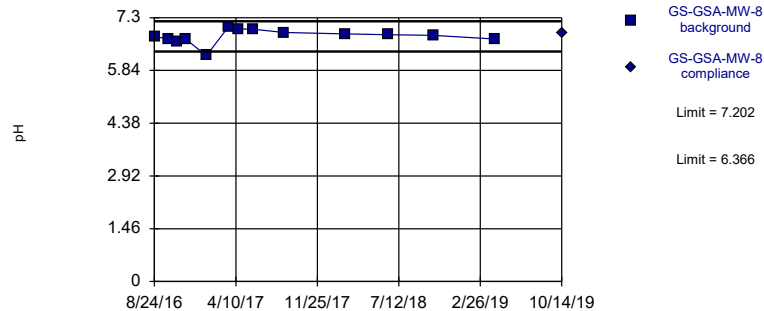


Background Data Summary: Mean=3.785, Std. Dev.=0.04034, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9065, critical = 0.814. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limits

Prediction Limit
Intrawell Parametric

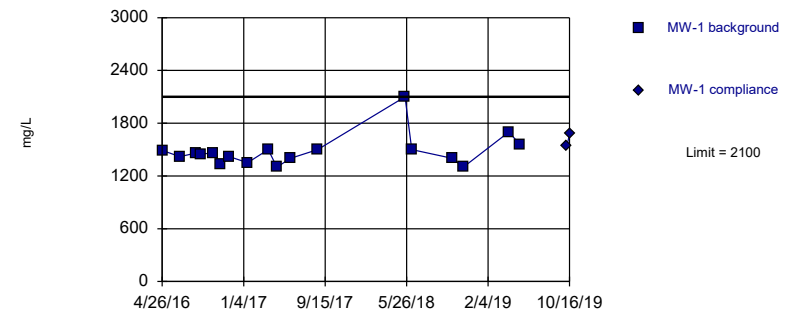


Background Data Summary: Mean=6.784, Std. Dev.=0.2012, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8769, critical = 0.814. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: pH Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

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 1/21/2020 7:56 AM View: Intrawell PL
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Prediction Limit

Constituent: pH (pH) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-3	GS-GSA-MW-3
8/24/2016	6.28	
10/3/2016	6.28	
10/26/2016	6.19	
11/21/2016	6.2	
1/17/2017	6.13	
3/20/2017	6.17	
4/17/2017	5.6	
5/30/2017	6.07	
8/24/2017	5.99	
2/13/2018	5.88	
6/11/2018	5.91	
10/17/2018	5.88	
4/10/2019	5.83	
10/14/2019		6.04

Prediction Limit

Constituent: pH (pH) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-4	GS-GSA-MW-4
8/24/2016	3.83 (E)	
10/3/2016	3.82 (E)	
10/26/2016	3.81 (E)	
11/21/2016	3.81	
1/17/2017	3.78	
3/21/2017	3.76	
4/17/2017	3.76	
5/30/2017	3.76	
8/24/2017	3.7	
2/13/2018	3.73	
6/11/2018	3.8	
10/17/2018	3.81	
4/10/2019	3.83	
10/14/2019		3.91

Prediction Limit

Constituent: pH (pH) Analysis Run 1/21/2020 7:58 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-8	GS-GSA-MW-8
8/24/2016	6.78	
10/3/2016	6.71	
10/26/2016	6.65	
11/21/2016	6.7	
1/17/2017	6.25	
3/20/2017	7.04	
4/18/2017	6.99	
5/30/2017	6.98	
8/24/2017	6.89	
2/13/2018	6.85	
6/12/2018	6.83	
10/17/2018	6.81	
4/10/2019	6.71	
10/14/2019		6.88

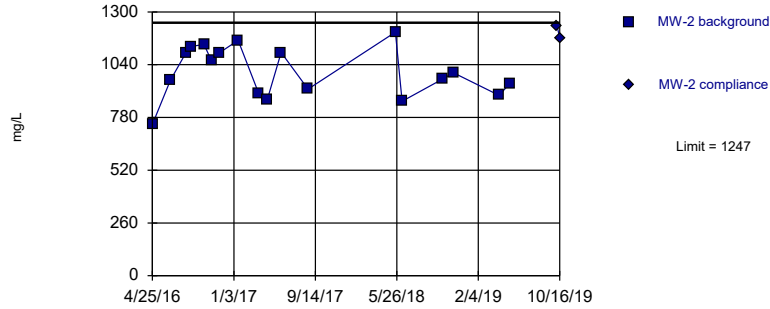
Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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

Within Limit

Prediction Limit
Intrawell Parametric

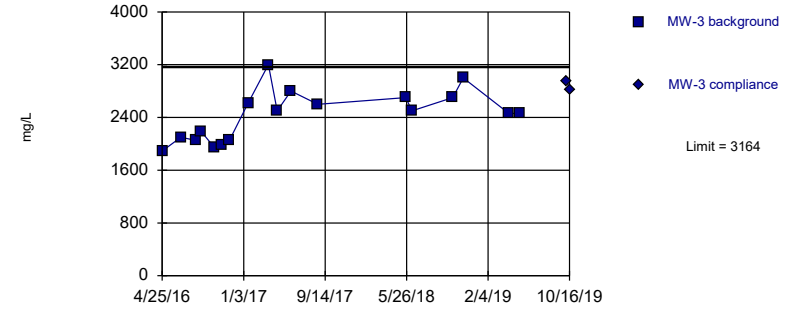


Background Data Summary: Mean=1003, Std. Dev.=126.2, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.957, critical = 0.858. Kappa = 1.931 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limit

Prediction Limit
Intrawell Parametric

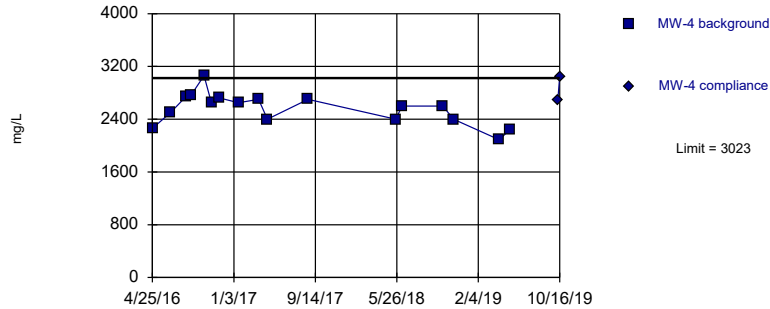


Background Data Summary: Mean=2431, Std. Dev.=379.6, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9476, critical = 0.858. Kappa = 1.931 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limit

Prediction Limit
Intrawell Parametric

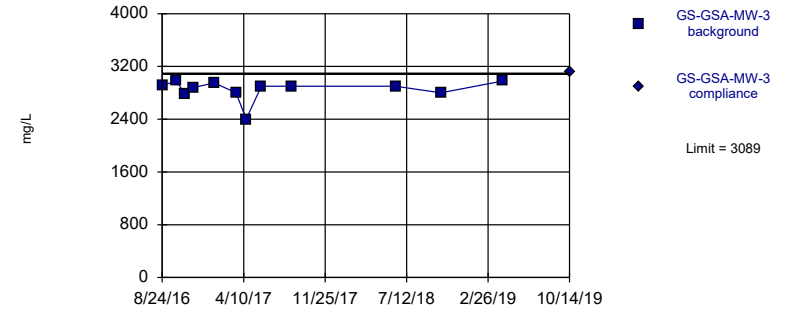


Background Data Summary: Mean=2558, Std. Dev.=238.2, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.963, critical = 0.851. Kappa = 1.951 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limit

Prediction Limit
Intrawell Parametric



Background Data Summary (based on x^5 transformation): Mean=1.9e17, Std. Dev.=4.2e16, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8091, critical = 0.805. Kappa = 2.112 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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	
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

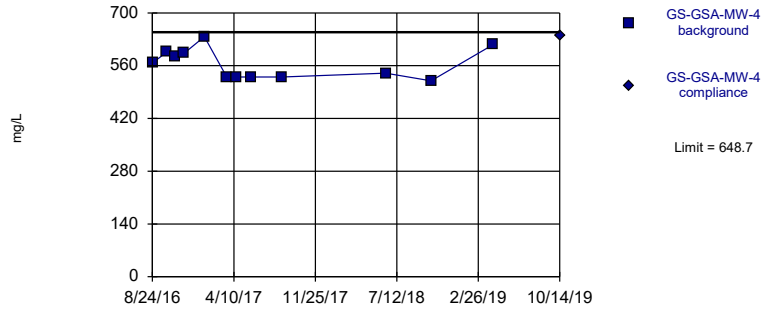
Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-3	GS-GSA-MW-3
8/24/2016	2910	
10/3/2016	2980	
10/26/2016	2790	
11/21/2016	2880	
1/17/2017	2950	
3/20/2017	2800	
4/17/2017	2400	
5/30/2017	2900	
8/24/2017	2900	
6/11/2018	2900	
10/17/2018	2800	
4/10/2019	2980	
10/14/2019		3110

Within Limit

Prediction Limit
Intrawell Parametric

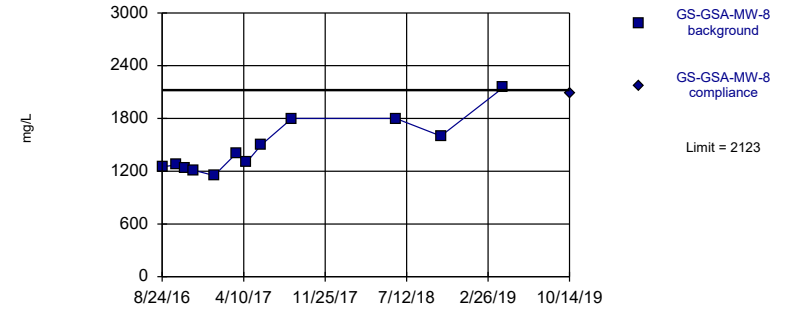


Background Data Summary: Mean=564.5, Std. Dev.=39.86, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8799, critical = 0.805. Kappa = 2.112 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limit

Prediction Limit
Intrawell Parametric

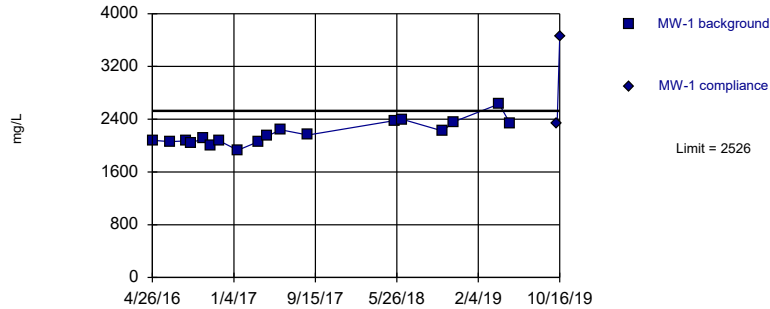


Background Data Summary: Mean=1473, Std. Dev.=307.9, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8741, critical = 0.805. Kappa = 2.112 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Sulfate Analysis Run 1/21/2020 7:56 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Exceeds Limit

Prediction Limit
Intrawell Parametric



Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-4	GS-GSA-MW-4
8/24/2016	567	
10/3/2016	596	
10/26/2016	585	
11/21/2016	593	
1/17/2017	637	
3/21/2017	530	
4/17/2017	530	
5/30/2017	530	
8/24/2017	530	
6/11/2018	540	
10/17/2018	520	
4/10/2019	616	
10/14/2019		641

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-8	GS-GSA-MW-8
8/24/2016	1250	
10/3/2016	1270	
10/26/2016	1240	
11/21/2016	1210	
1/17/2017	1150	
3/20/2017	1400	
4/18/2017	1300	
5/30/2017	1500	
8/24/2017	1800	
6/12/2018	1800	
10/17/2018	1600	
4/10/2019	2150	
10/14/2019		2090

Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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 (D)	
10/8/2019		2330
10/16/2019		3650

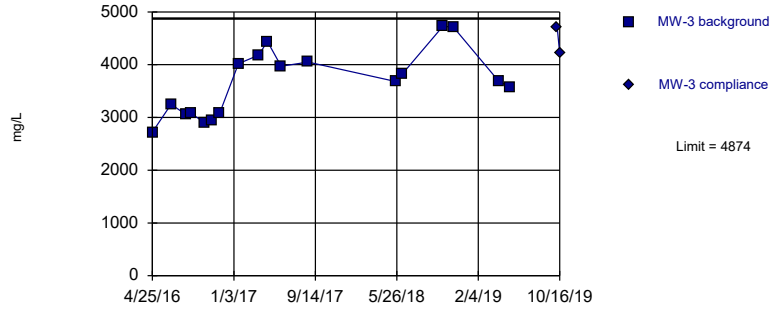
Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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

Within Limit

Prediction Limit
Intrawell Parametric

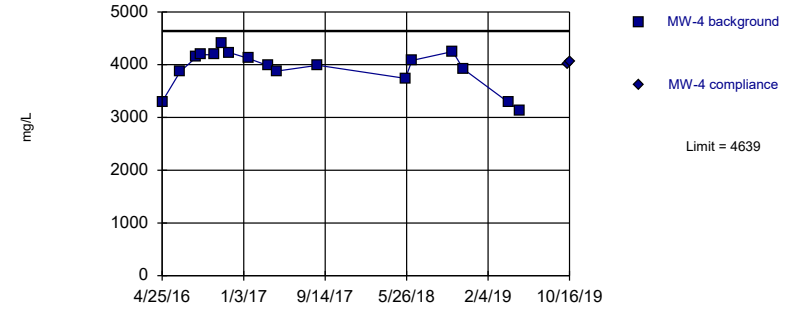


Background Data Summary: Mean=3661, Std. Dev.=628.6, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9455, critical = 0.858. Kappa = 1.931 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Total dissolved solids Analysis Run 1/21/2020 7:57 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limit

Prediction Limit
Intrawell Parametric

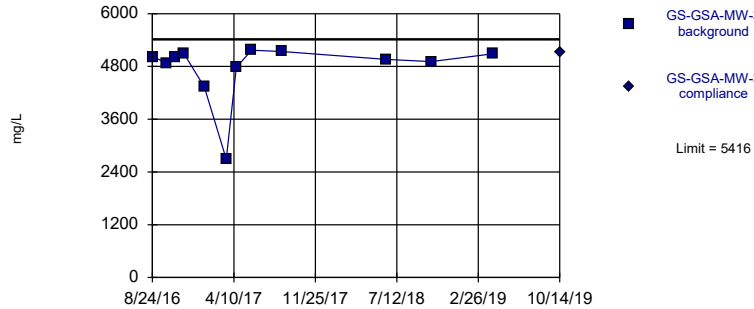


Background Data Summary: Mean=3923, Std. Dev.=367.3, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8694, critical = 0.851. Kappa = 1.951 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Total dissolved solids Analysis Run 1/21/2020 7:57 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Within Limit

Prediction Limit
Intrawell Parametric



Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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 (D)	
10/8/2019		4720
10/16/2019		4210

Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	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	
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 (D)	
10/10/2019		4000
10/16/2019		4060

Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-3	GS-GSA-MW-3
8/24/2016	5020	
10/3/2016	4880	
10/26/2016	5020	
11/21/2016	5090	
1/17/2017	4330	
3/20/2017	2690	
4/17/2017	4780	
5/30/2017	5170	
8/24/2017	5140	
6/11/2018	4960	
10/17/2018	4910	
4/10/2019	5090	
10/14/2019		5110

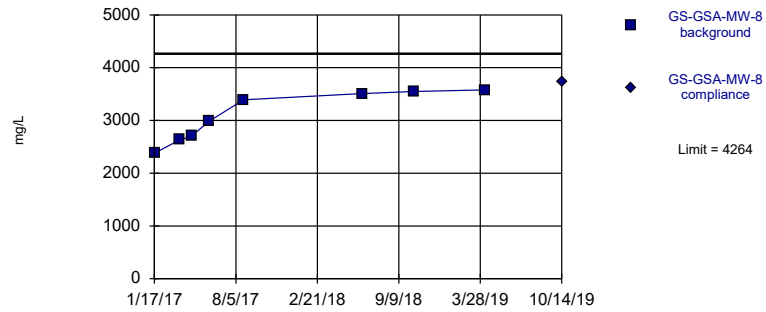
Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-4	GS-GSA-MW-4
8/24/2016	992	
10/3/2016	988	
10/26/2016	1030	
11/21/2016	1020	
1/17/2017	988	
3/21/2017	990	
4/17/2017	884	
5/30/2017	1060	
8/24/2017	1060	
6/11/2018	944	
10/17/2018	928	
4/10/2019	1000	
10/14/2019		967

Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=3090, Std. Dev.=477.8, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8736, critical = 0.749. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Constituent: Total dissolved solids Analysis Run 1/21/2020 7:57 AM View: Intrawell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Prediction Limit

Constituent: Total dissolved solids (mg/L) Analysis Run 1/21/2020 7:58 AM View: IntraWell PL
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

	GS-GSA-MW-8	GS-GSA-MW-8
8/24/2016	2280	
10/3/2016	2370	
10/26/2016	2350	
11/21/2016	2530	
1/17/2017	2380	
3/20/2017	2630	
4/18/2017	2700	
5/30/2017	2980	
8/24/2017	3390	
6/12/2018	3510	
10/17/2018	3550	
4/10/2019	3580	
10/14/2019		3730

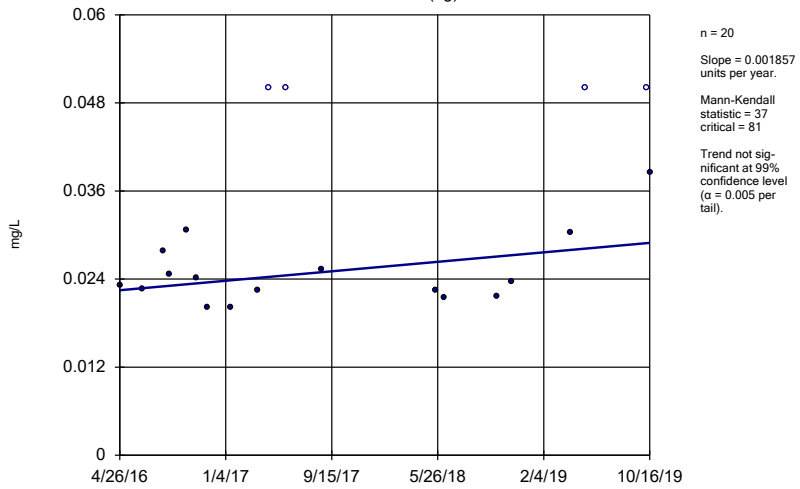
Trend Test Summary Table

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 1/21/2020, 8:01 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW-1 (bg)	0.001857	37	81	No	20	20	n/a	n/a	0.01	NP
Boron (mg/L)	MW-2 (bg)	0.003252	55	81	No	20	10	n/a	n/a	0.01	NP
Boron (mg/L)	MW-3 (bg)	0.004556	59	81	No	20	15	n/a	n/a	0.01	NP
Boron (mg/L)	MW-4 (bg)	0.001541	47	74	No	19	5.263	n/a	n/a	0.01	NP
Boron (mg/L)	GS-GSA-MW-3	0.7811	34	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	GS-GSA-MW-4	-0.4471	-38	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	GS-GSA-MW-8	0.09238	54	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-1 (bg)	7.248	80	81	No	20	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-2 (bg)	7.837	57	81	No	20	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-3 (bg)	34.15	88	81	Yes	20	0	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-4 (bg)	4.337	25	74	No	19	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GS-GSA-MW-3	4.001	3	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GS-GSA-MW-8	113	56	43	Yes	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-1 (bg)	0.03861	25	81	No	20	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-2 (bg)	0.2133	27	81	No	20	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-3 (bg)	0.03402	28	81	No	20	10	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-4 (bg)	-0.03308	-21	-74	No	19	5.263	n/a	n/a	0.01	NP
Chloride (mg/L)	GS-GSA-MW-3	7.498	9	43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GS-GSA-MW-4	-16.24	-46	-43	Yes	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GS-GSA-MW-8	67.98	68	43	Yes	13	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-1 (bg)	-0.00...	-4	-87	No	21	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-2 (bg)	0.01427	77	87	No	21	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-3 (bg)	0.003006	15	87	No	21	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	MW-4 (bg)	0.005826	25	81	No	20	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GS-GSA-MW-3	0.2076	68	48	Yes	14	0	n/a	n/a	0.01	NP
pH (pH)	MW-1 (bg)	-0.01606	-68	-81	No	20	0	n/a	n/a	0.01	NP
pH (pH)	MW-2 (bg)	0.03902	65	81	No	20	0	n/a	n/a	0.01	NP
pH (pH)	MW-3 (bg)	-0.2239	-64	-87	No	21	0	n/a	n/a	0.01	NP
pH (pH)	MW-4 (bg)	0.01009	36	81	No	20	0	n/a	n/a	0.01	NP
pH (pH)	GS-GSA-MW-4	-0.00...	-8	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-1 (bg)	36.26	45	81	No	20	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-2 (bg)	18.99	17	81	No	20	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-3 (bg)	243.9	91	81	Yes	20	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-4 (bg)	-48.15	-33	-74	No	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GS-GSA-MW-3	19.32	11	43	No	13	0	n/a	n/a	0.01	NP
Total dissolved solids...	MW-1 (bg)	140.7	112	81	Yes	20	0	n/a	n/a	0.01	NP
Total dissolved solids...	MW-2 (bg)	3.621	5	81	No	20	0	n/a	n/a	0.01	NP
Total dissolved solids...	MW-3 (bg)	409	93	81	Yes	20	0	n/a	n/a	0.01	NP
Total dissolved solids...	MW-4 (bg)	-56.4	-28	-74	No	19	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

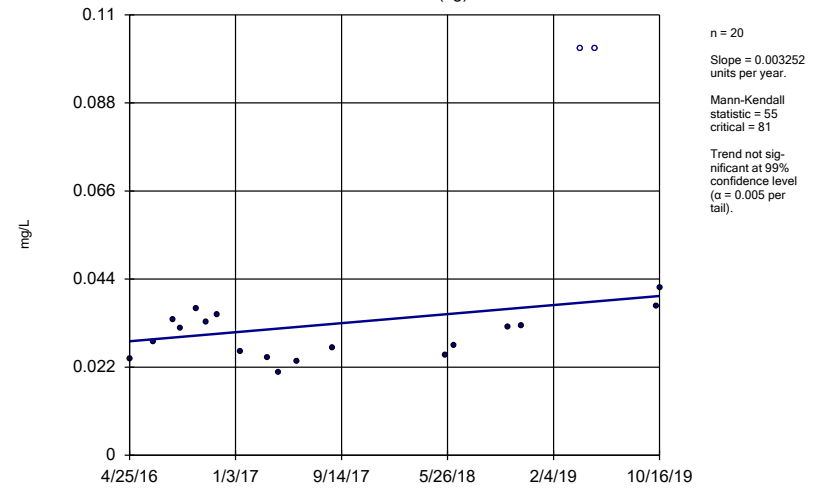
MW-1 (bg)



Constituent: Boron Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

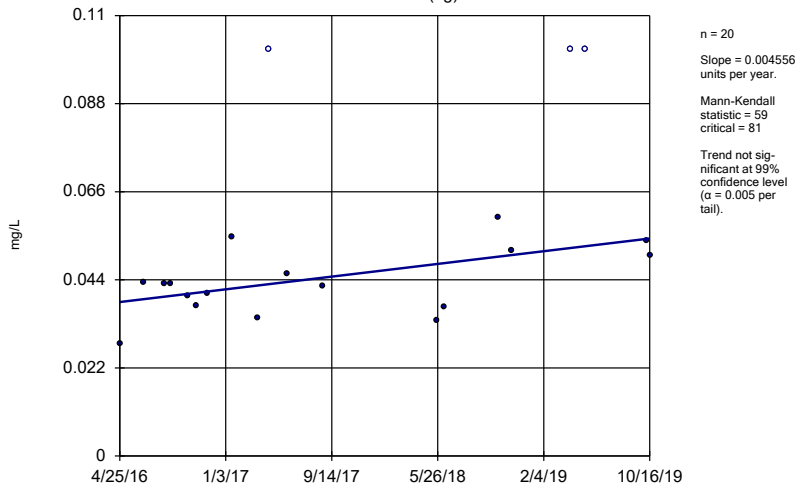
MW-2 (bg)



Constituent: Boron Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

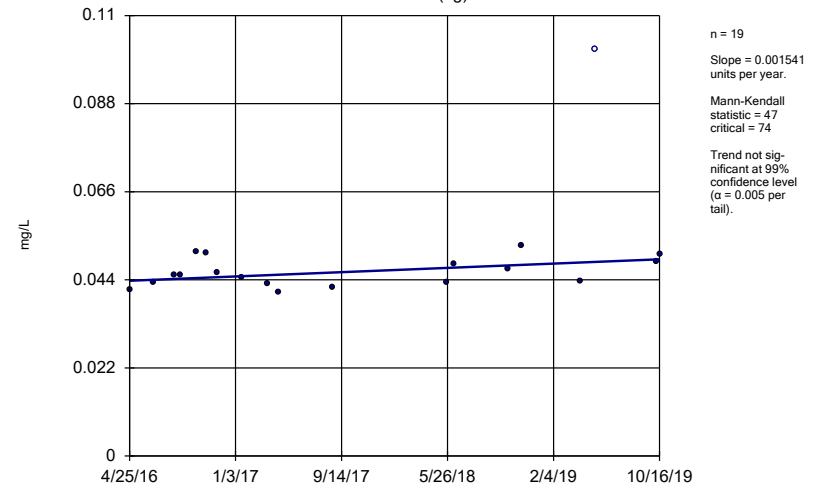
MW-3 (bg)



Constituent: Boron Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

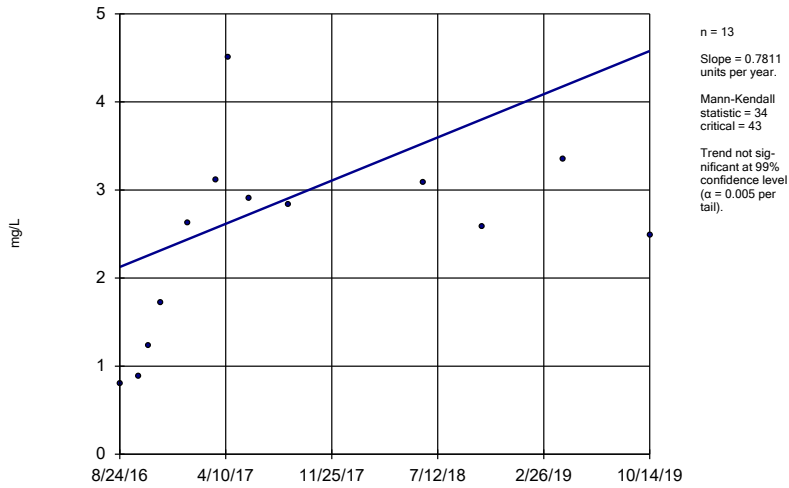
Sen's Slope Estimator

MW-4 (bg)



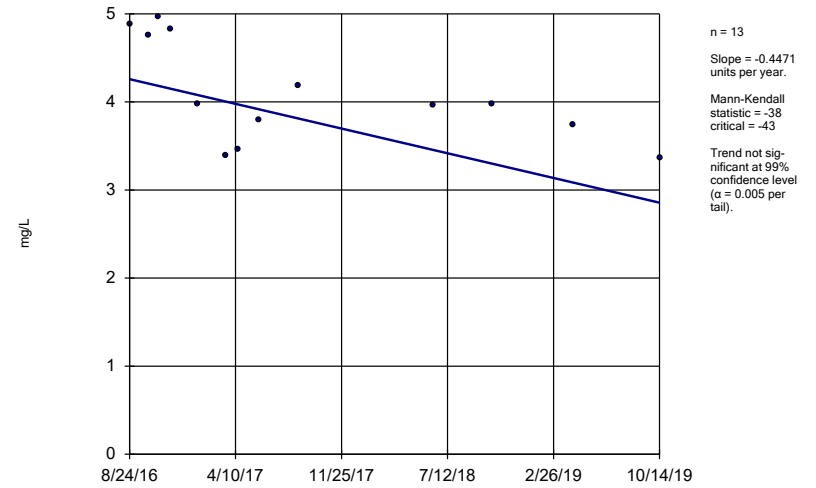
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Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator
GS-GSA-MW-3



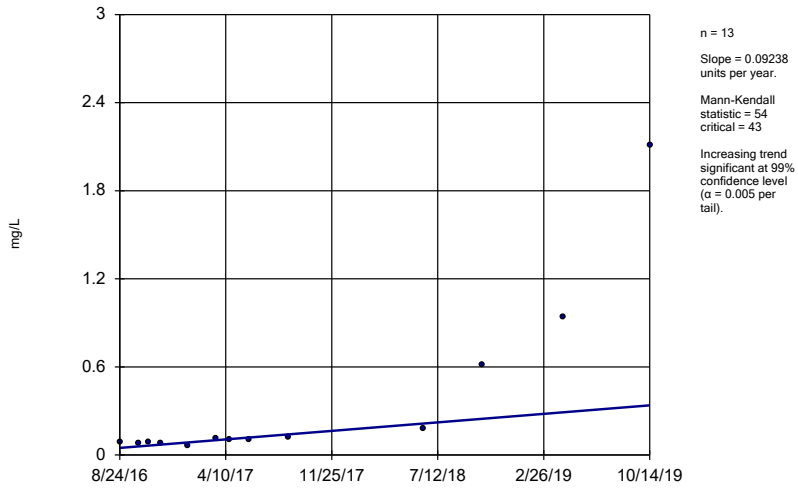
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Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator
GS-GSA-MW-4



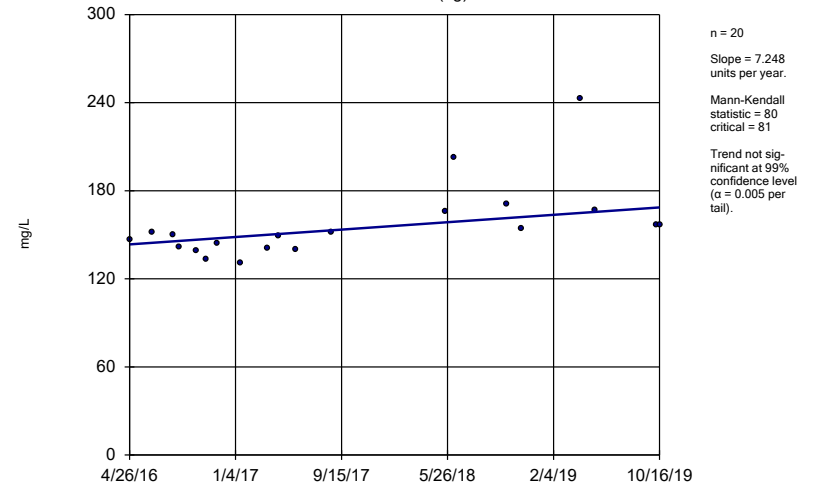
Constituent: Boron Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator
GS-GSA-MW-8



Constituent: Boron Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

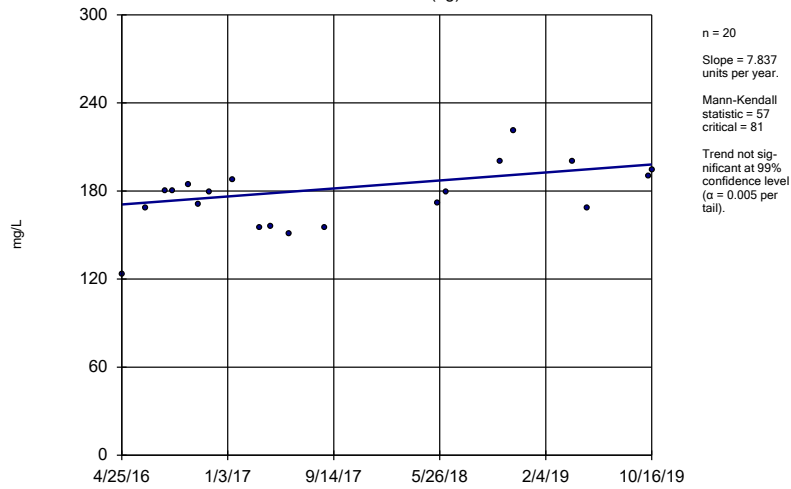
Sen's Slope Estimator
MW-1 (bg)



Constituent: Calcium Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

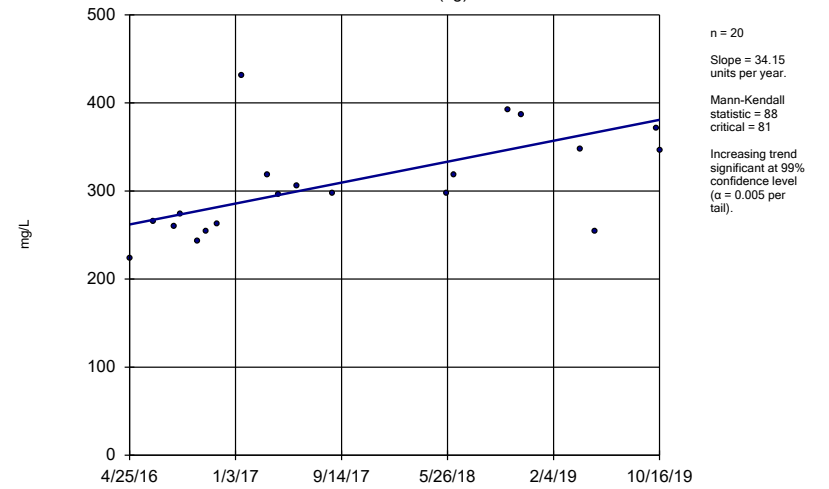
MW-2 (bg)



Constituent: Calcium Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

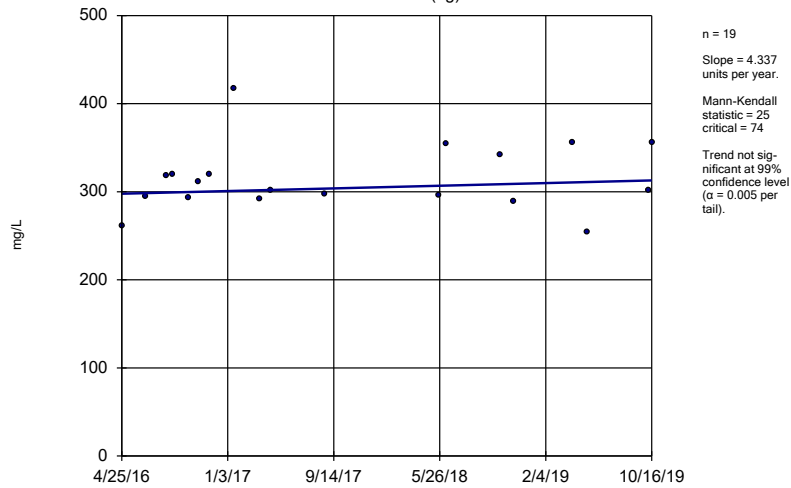
MW-3 (bg)



Constituent: Calcium Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

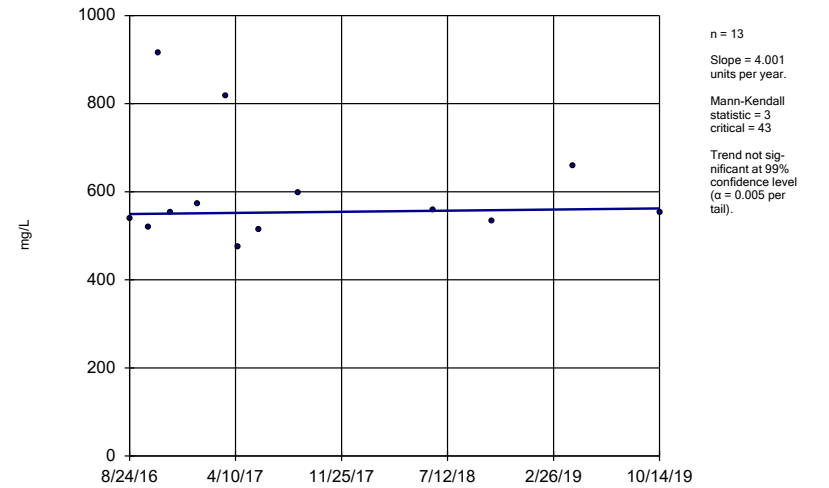
MW-4 (bg)



Constituent: Calcium Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

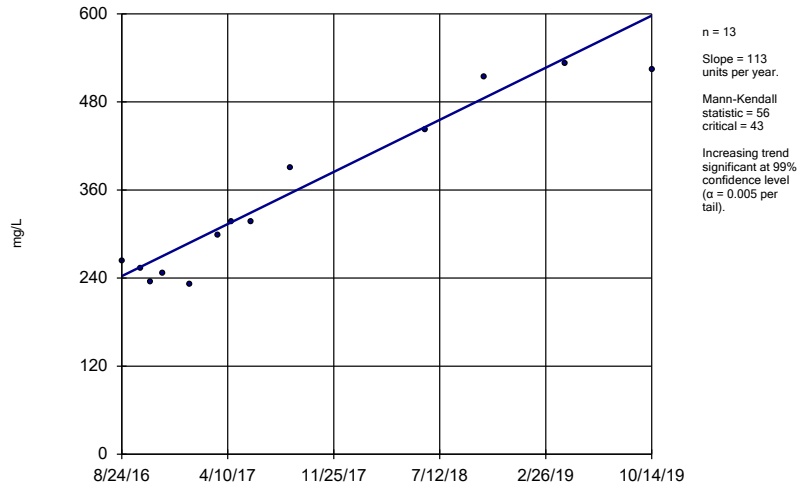
GS-GSA-MW-3



Constituent: Calcium Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

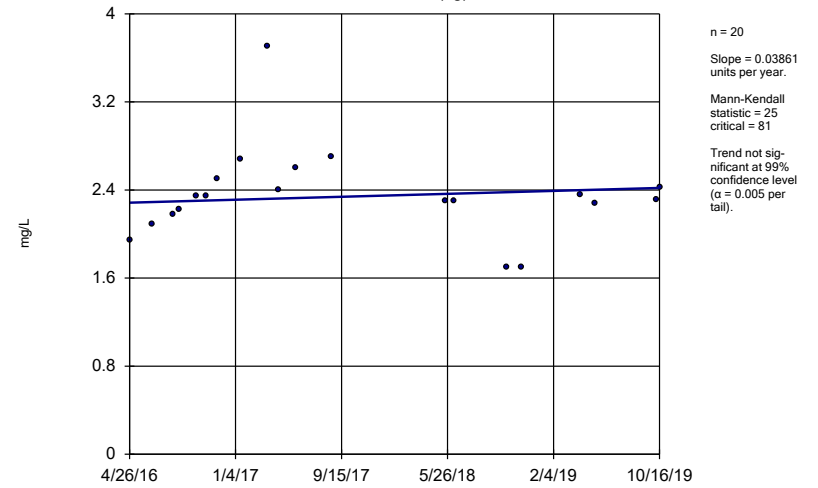
GS-GSA-MW-8



Constituent: Calcium Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

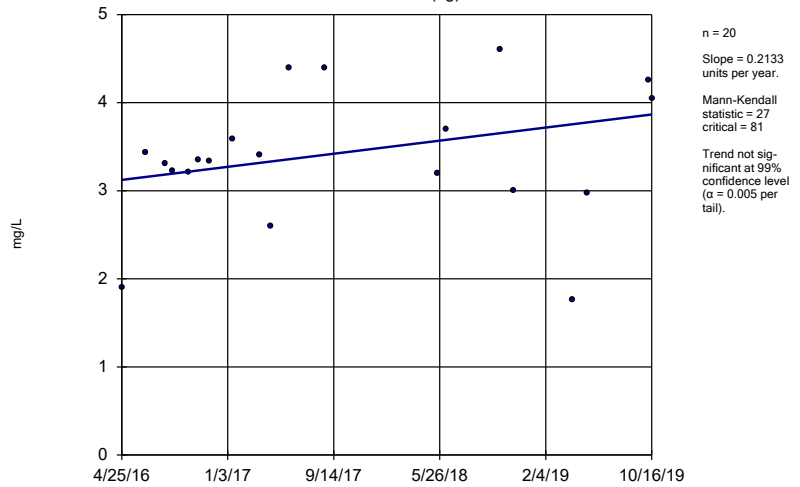
MW-1 (bg)



Constituent: Chloride Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

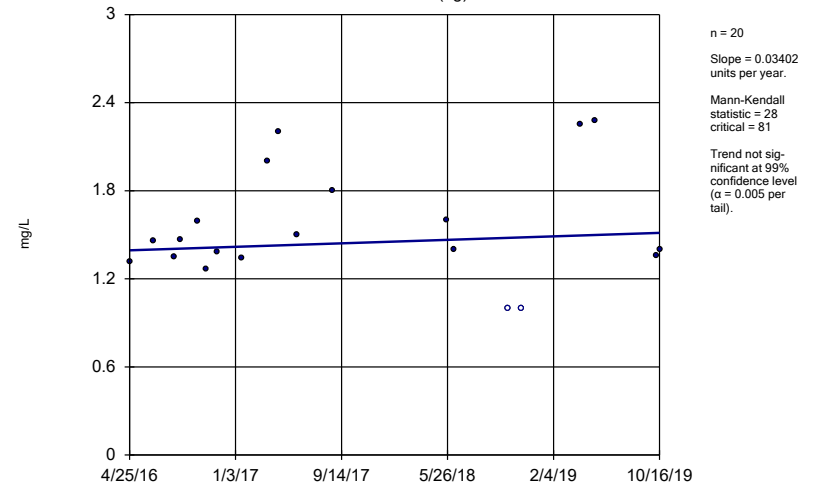
MW-2 (bg)



Constituent: Chloride Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

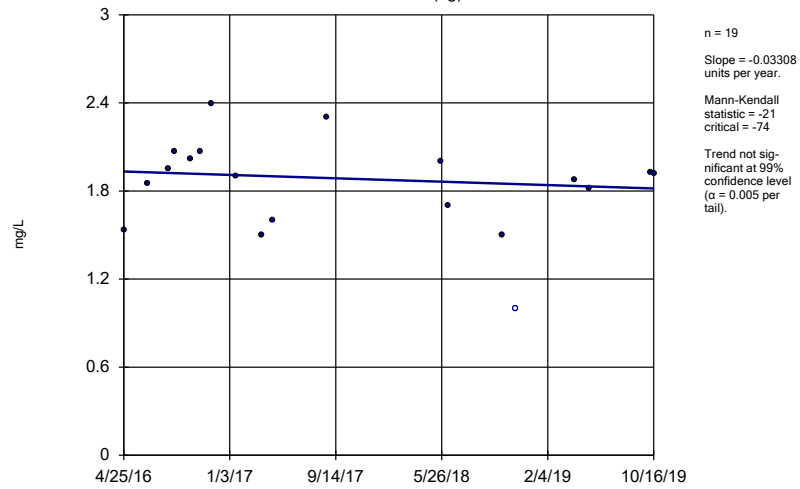
Sen's Slope Estimator

MW-3 (bg)



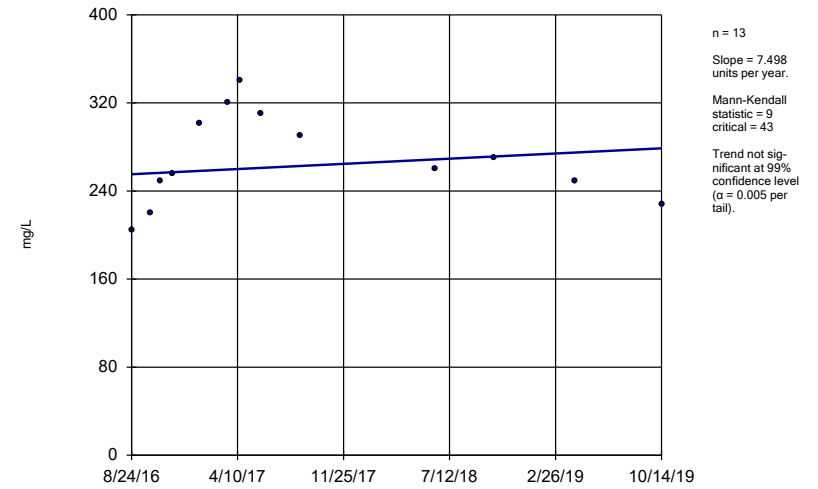
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Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator
MW-4 (bg)



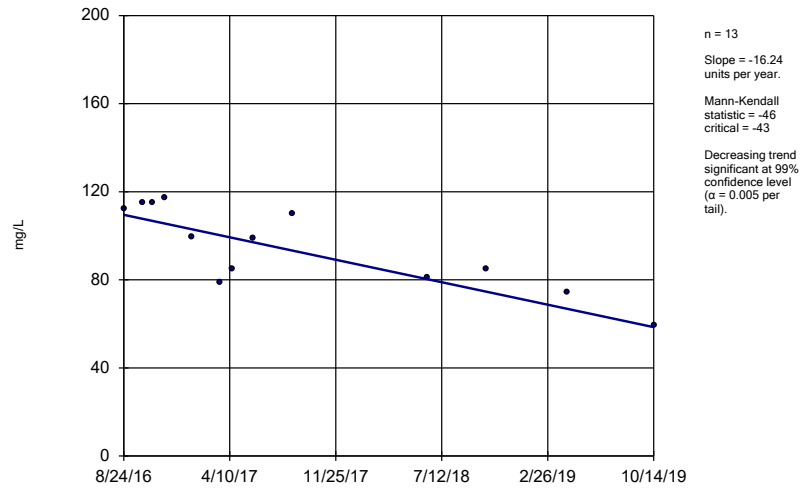
Constituent: Chloride Analysis Run 1/21/2020 7:59 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator
GS-GSA-MW-3



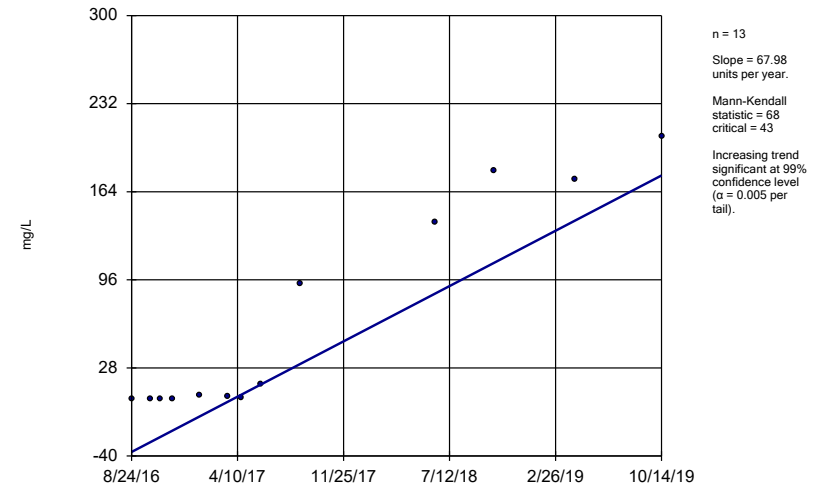
Constituent: Chloride Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator
GS-GSA-MW-4



Constituent: Chloride Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

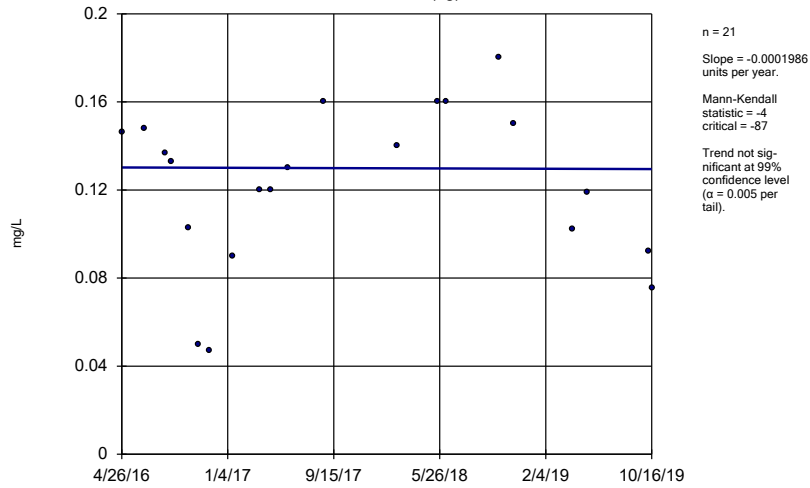
Sen's Slope Estimator
GS-GSA-MW-8



Constituent: Chloride Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

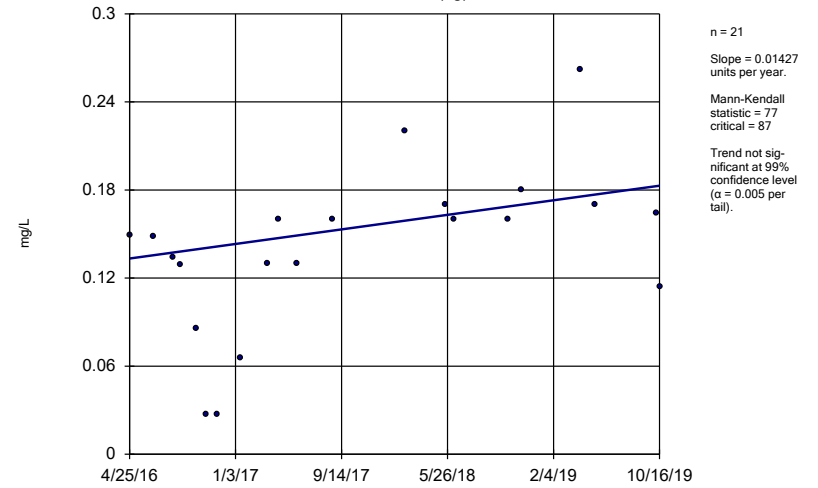
MW-1 (bg)



Constituent: Fluoride Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

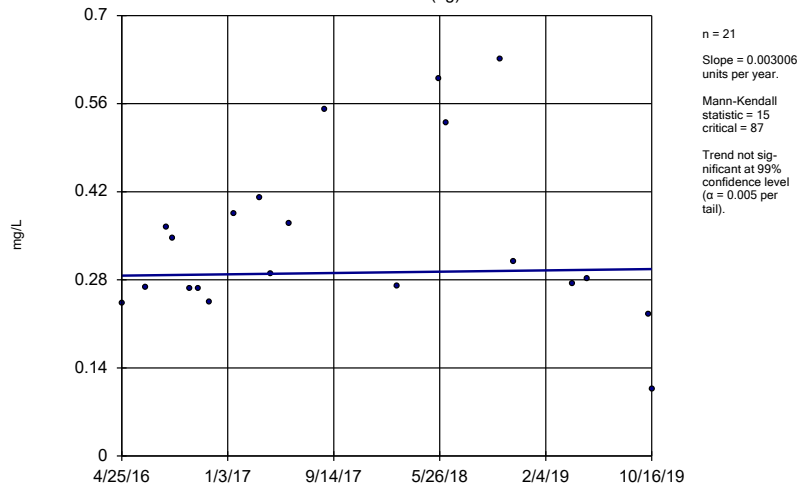
MW-2 (bg)



Constituent: Fluoride Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

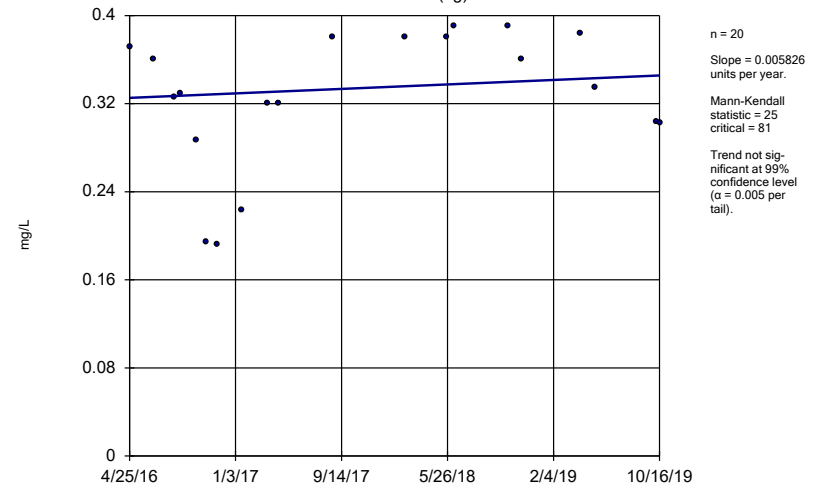
MW-3 (bg)



Constituent: Fluoride Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

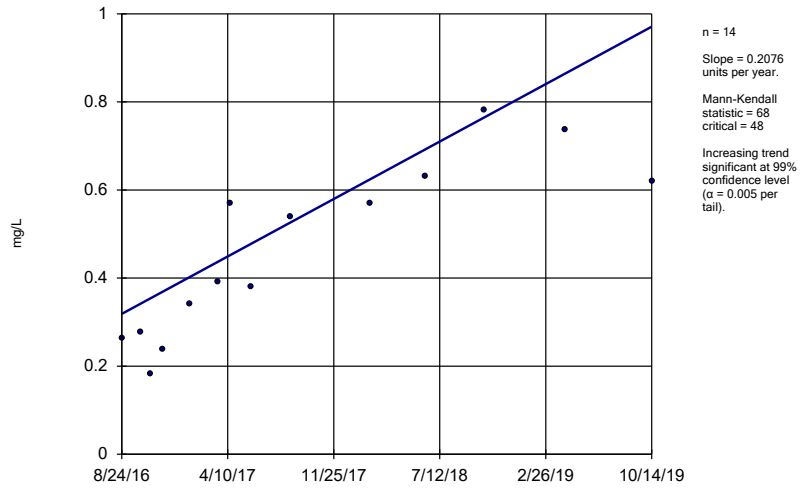
Sen's Slope Estimator

MW-4 (bg)



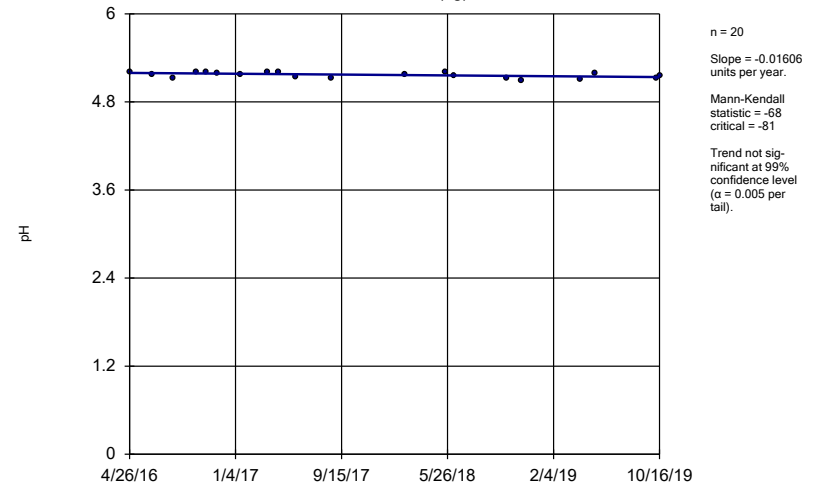
Constituent: Fluoride Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator
GS-GSA-MW-3



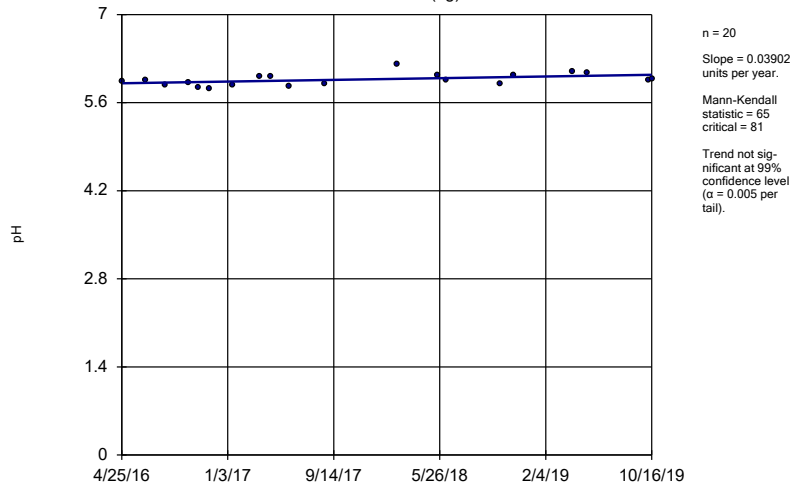
Constituent: Fluoride Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator
MW-1 (bg)



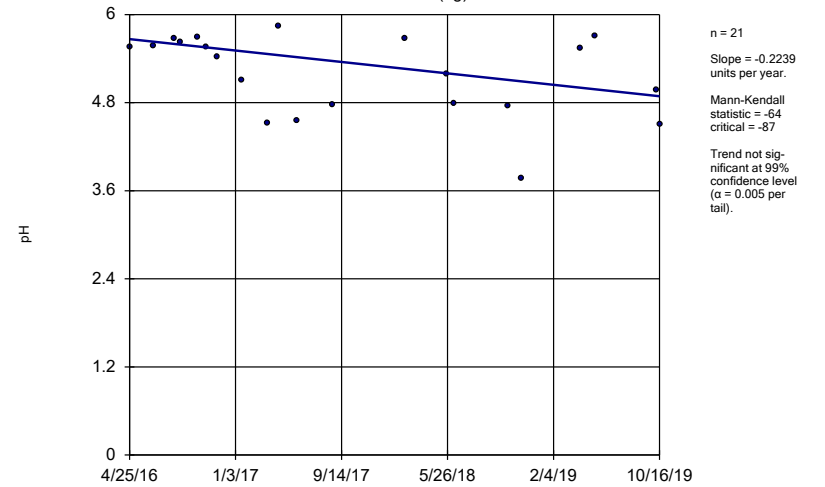
Constituent: pH Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator
MW-2 (bg)



Constituent: pH Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

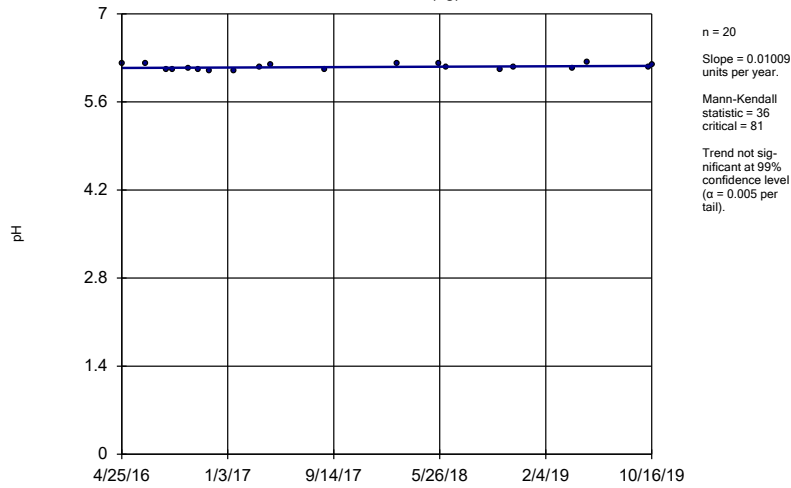
Sen's Slope Estimator
MW-3 (bg)



Constituent: pH Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

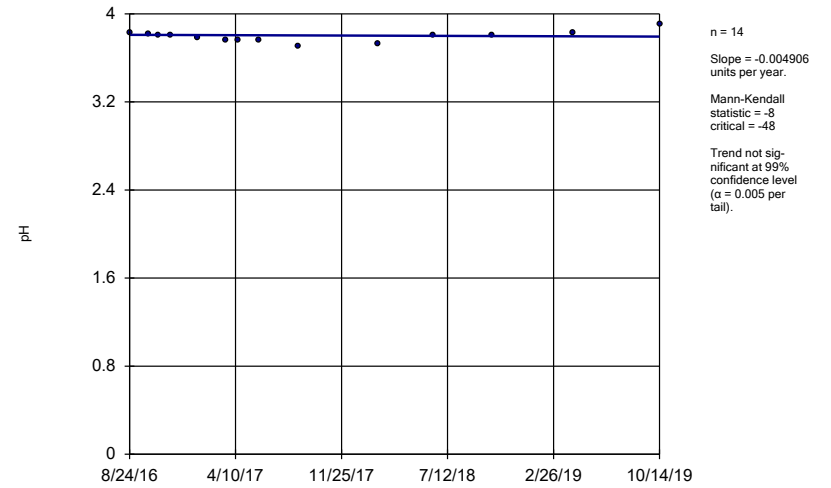
MW-4 (bg)



Constituent: pH Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

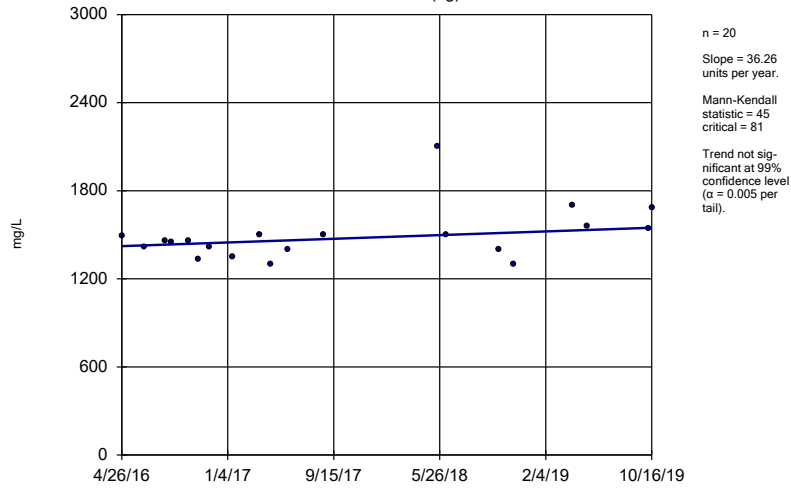
GS-GSA-MW-4



Constituent: pH Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

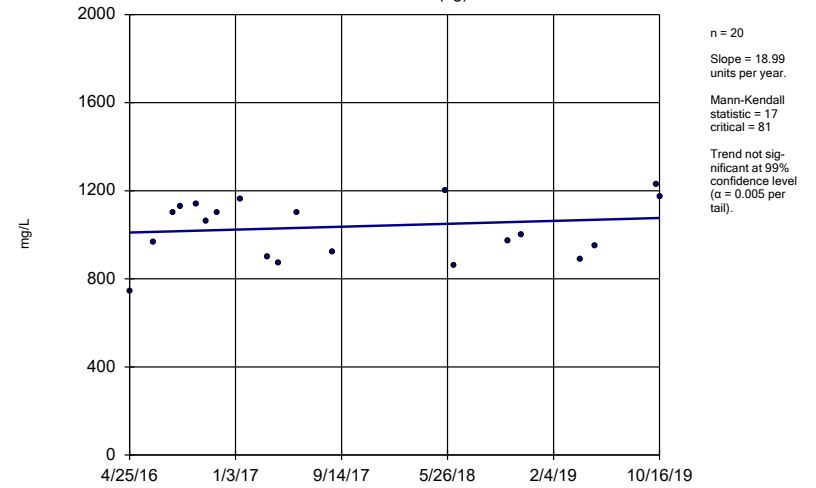
MW-1 (bg)



Constituent: Sulfate Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

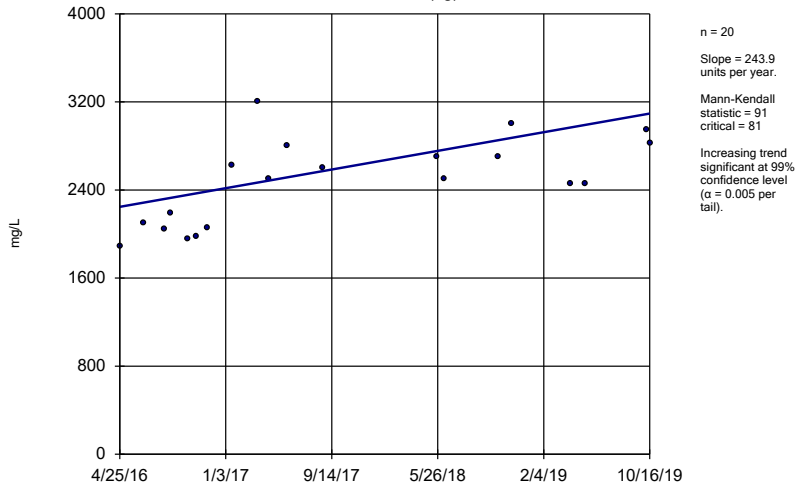
MW-2 (bg)



Constituent: Sulfate Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

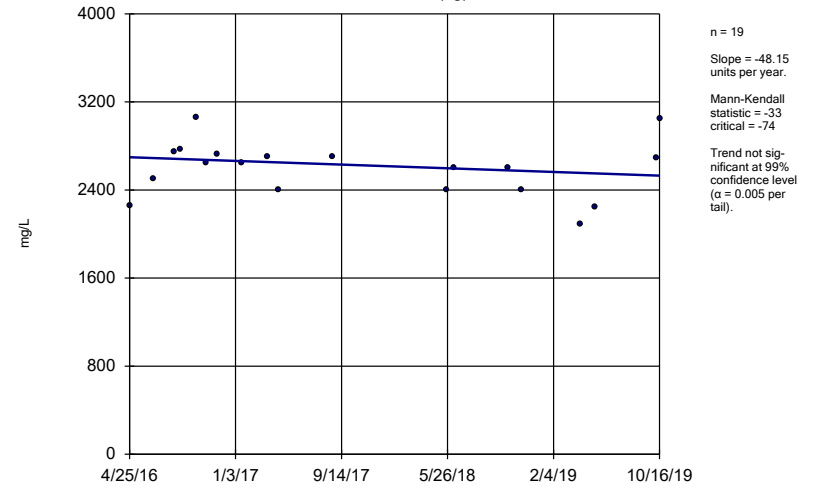
MW-3 (bg)



Constituent: Sulfate Analysis Run 1/21/2020 8:00 AM View: Trend Test
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

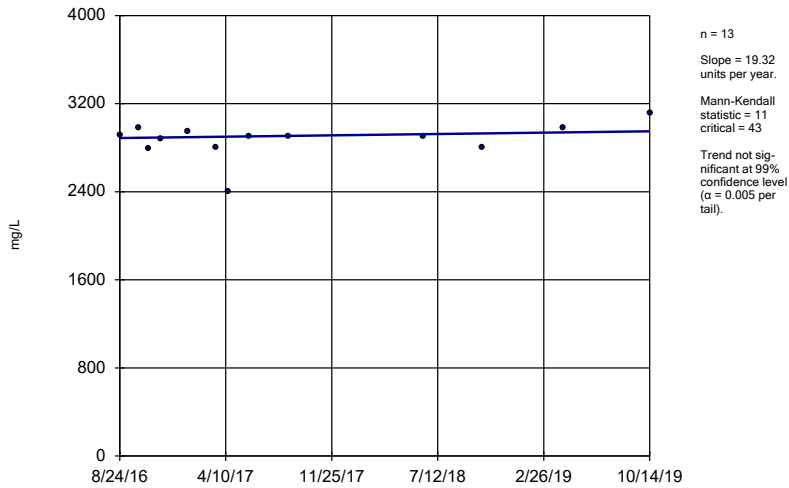
MW-4 (bg)



Constituent: Sulfate Analysis Run 1/21/2020 8:00 AM View: Trend Test
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

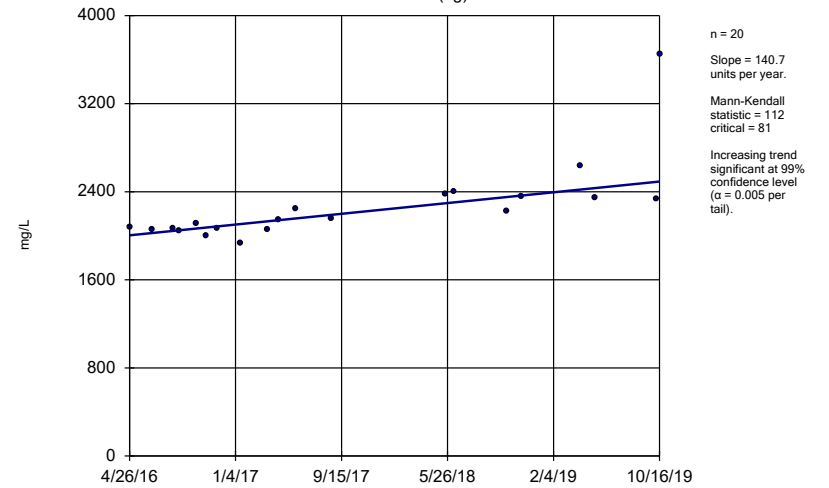
GS-GSA-MW-3



Constituent: Sulfate Analysis Run 1/21/2020 8:00 AM View: Trend Test
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

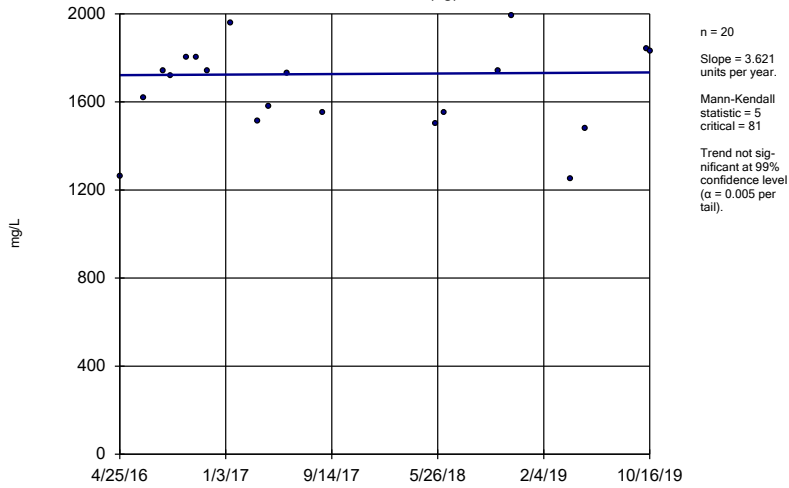
MW-1 (bg)



Constituent: Total dissolved solids Analysis Run 1/21/2020 8:00 AM View: Trend Test
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

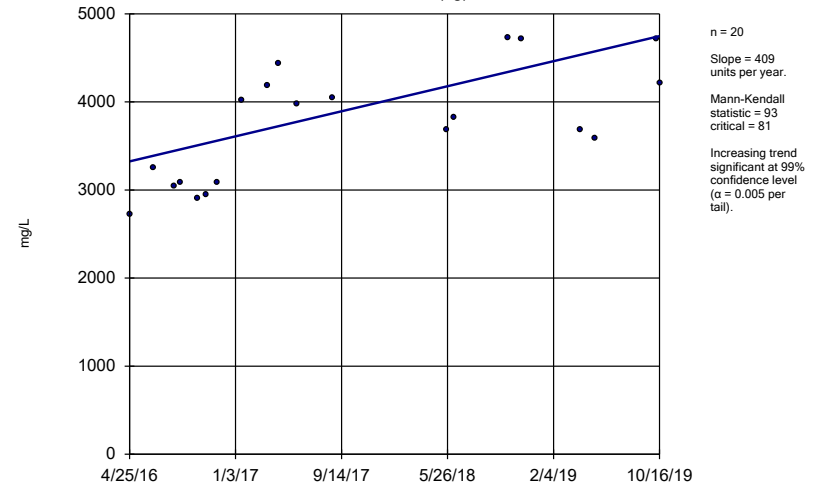
MW-2 (bg)



Constituent: Total dissolved solids Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Sen's Slope Estimator

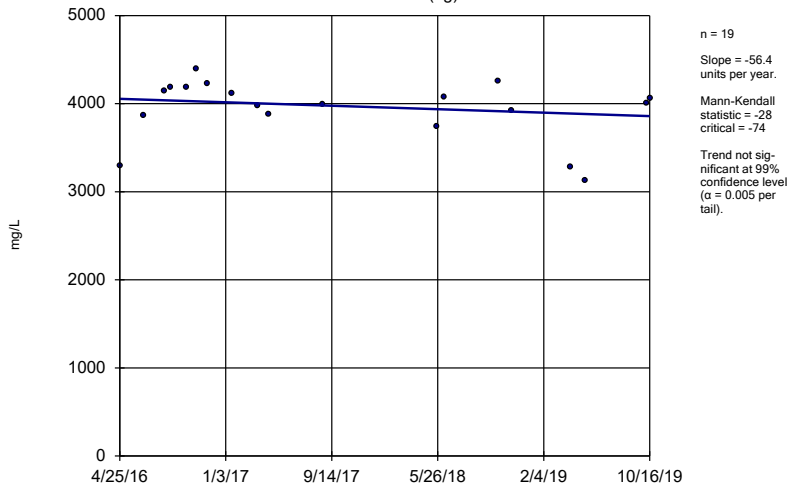
MW-3 (bg)



Constituent: Total dissolved solids Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

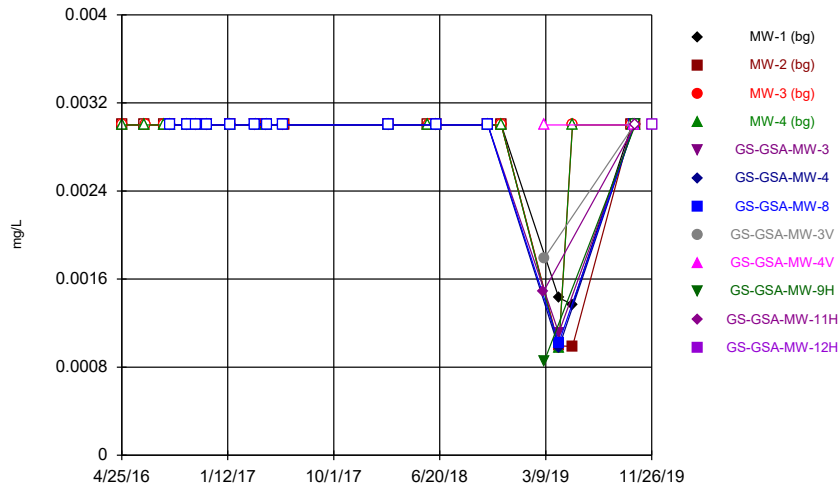
Sen's Slope Estimator

MW-4 (bg)

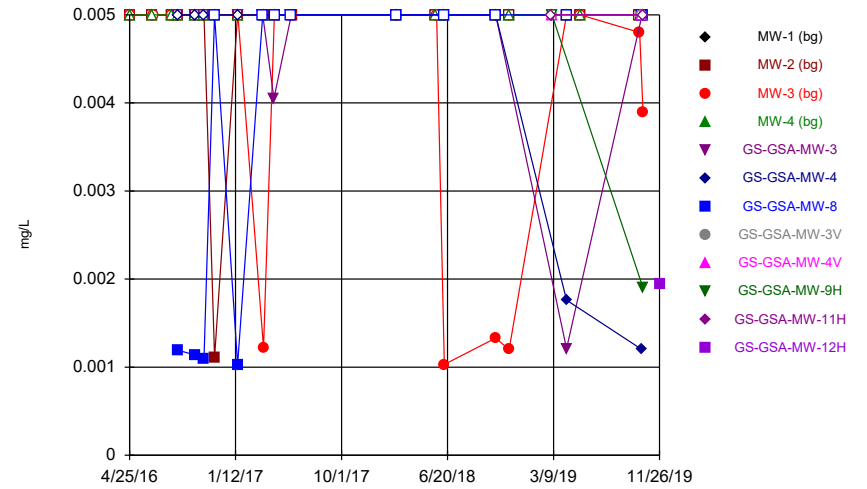


Constituent: Total dissolved solids Analysis Run 1/21/2020 8:00 AM View: Trend Test
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

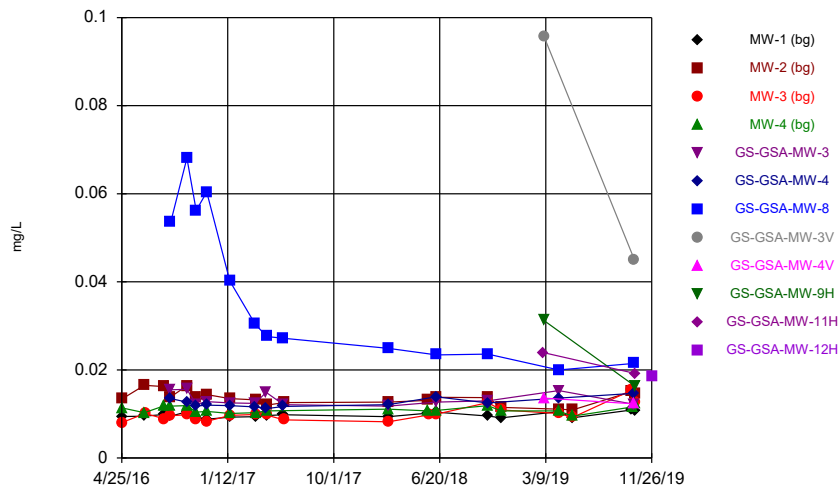
Time Series



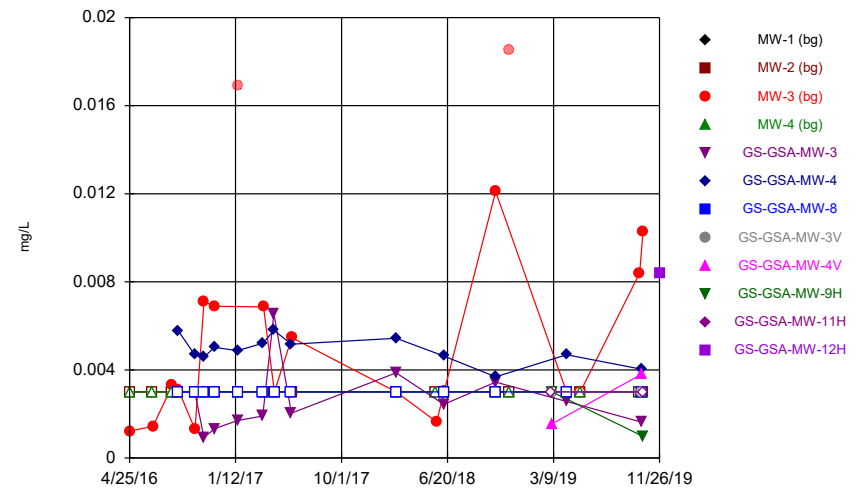
Time Series



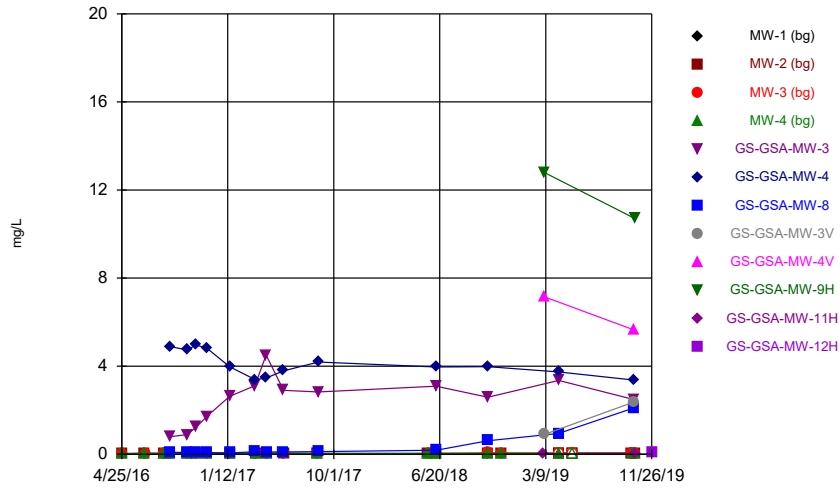
Time Series



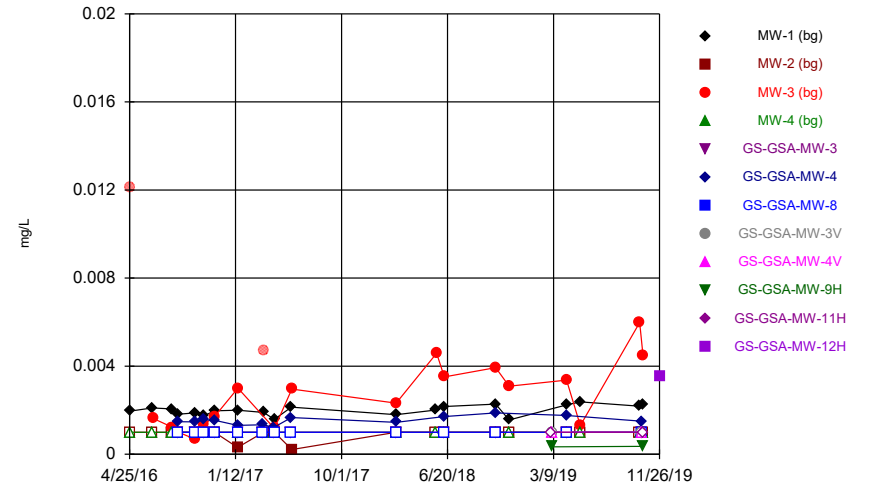
Time Series



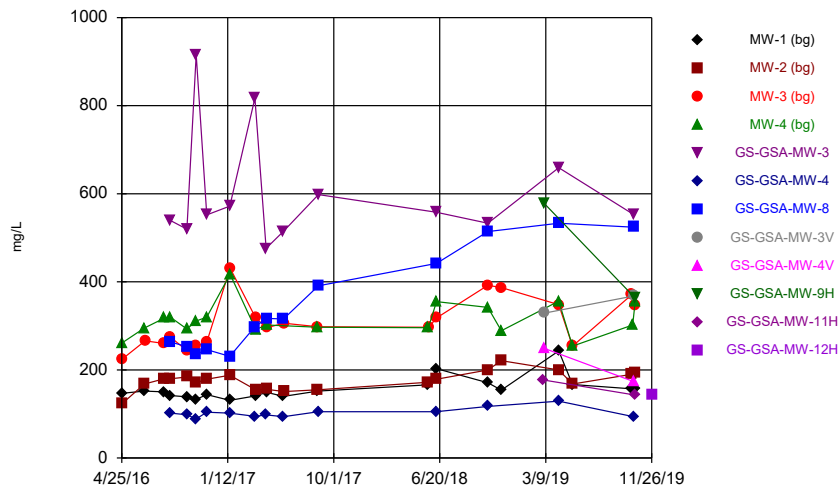
Time Series



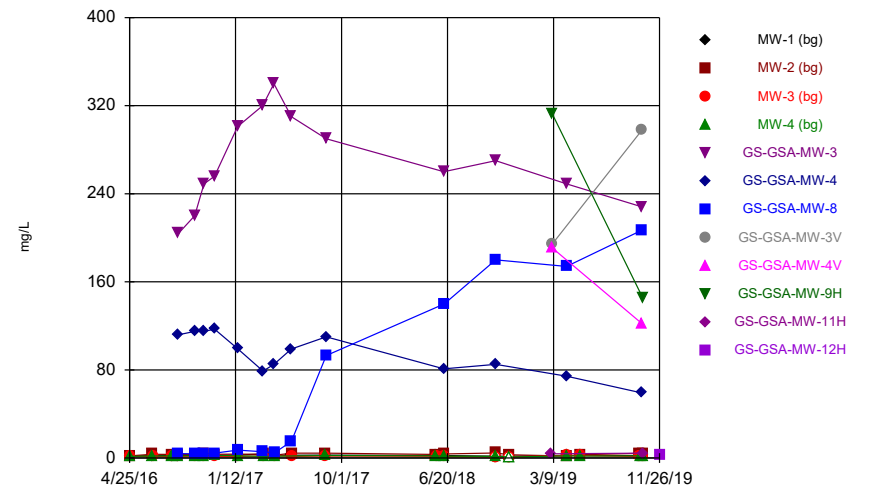
Time Series



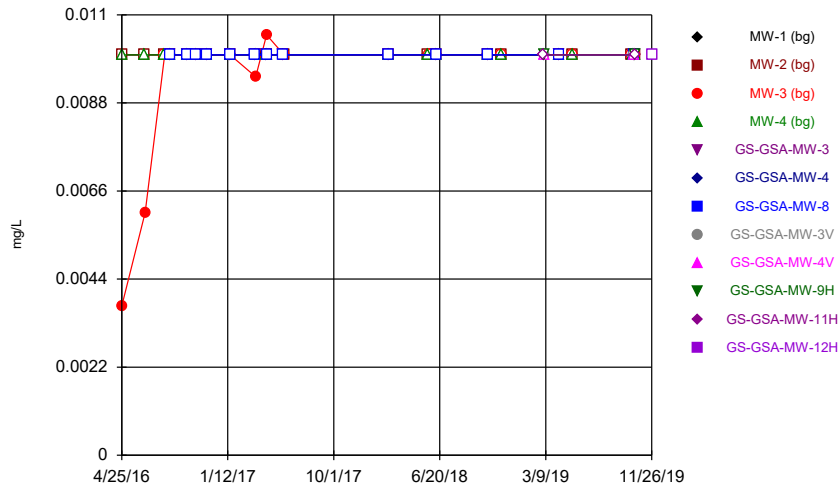
Time Series



Time Series

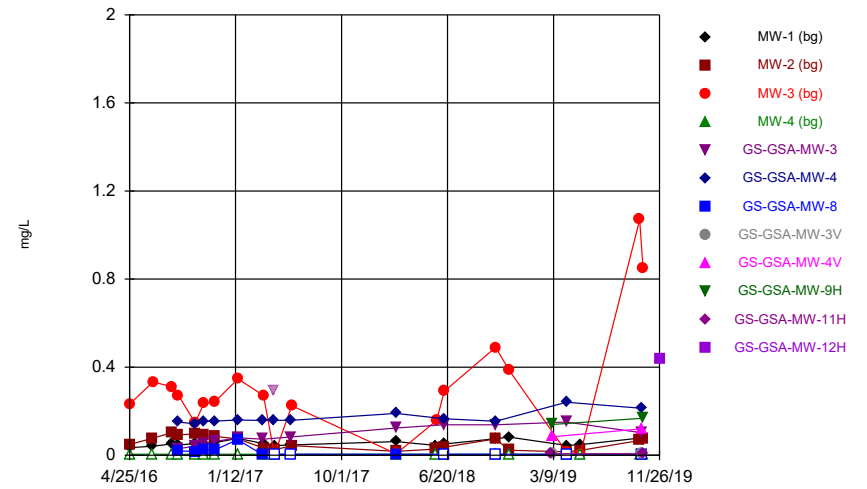


Time Series



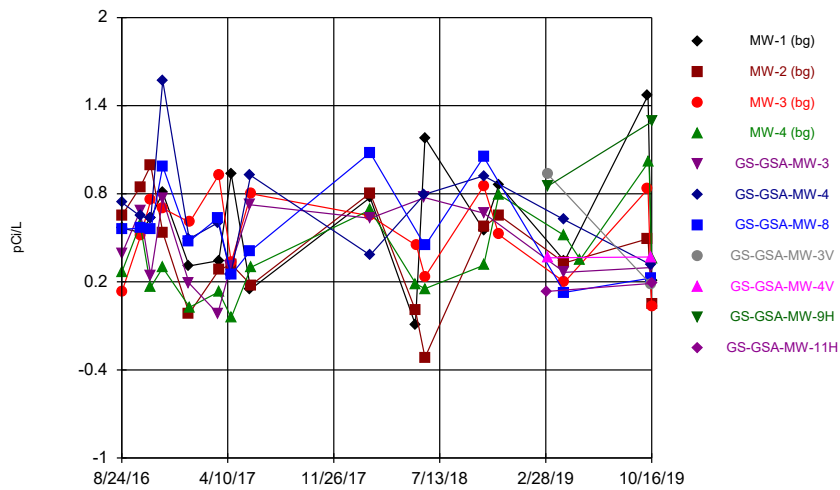
Constituent: Chromium Analysis Run 1/21/2020 8:03 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



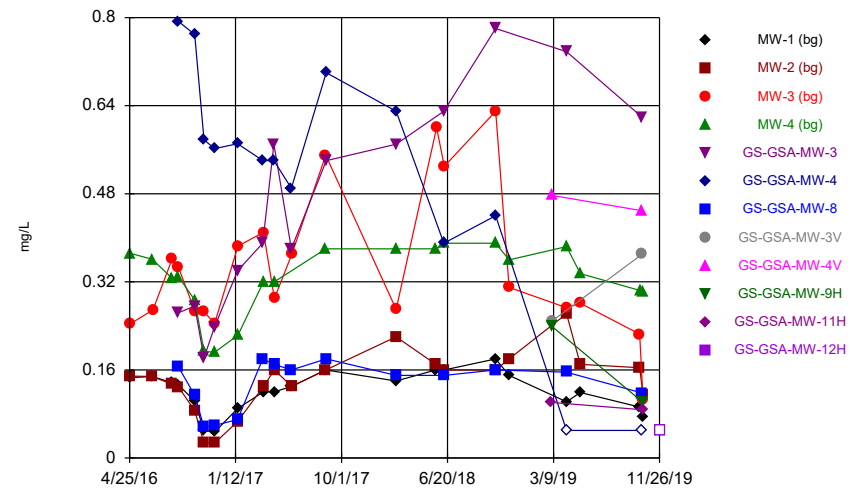
Constituent: Cobalt Analysis Run 1/21/2020 8:03 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



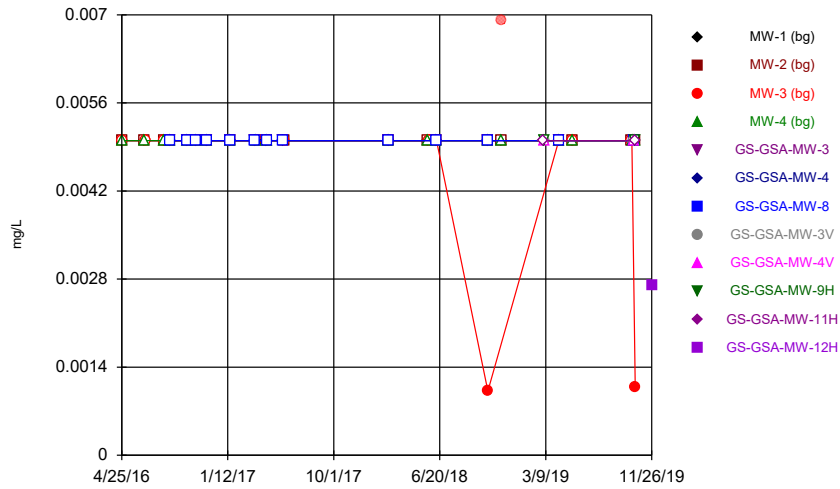
Constituent: Combined Radium 226 + 228 Analysis Run 1/21/2020 8:03 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



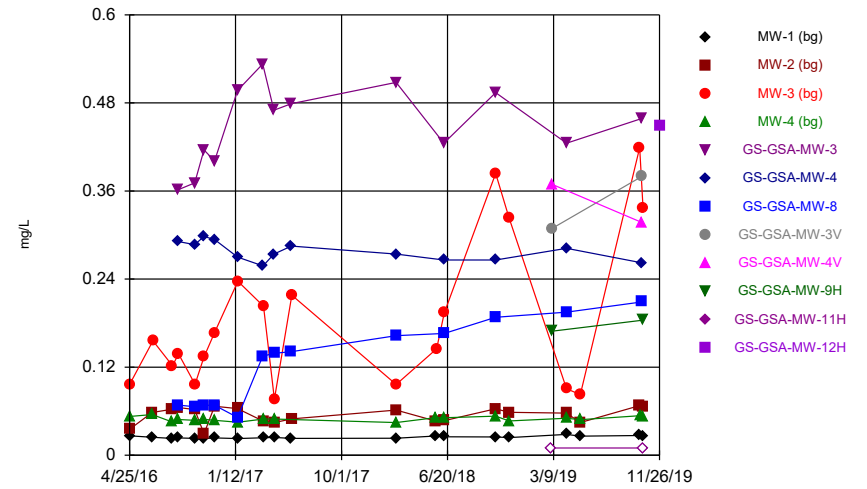
Constituent: Fluoride Analysis Run 1/21/2020 8:03 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



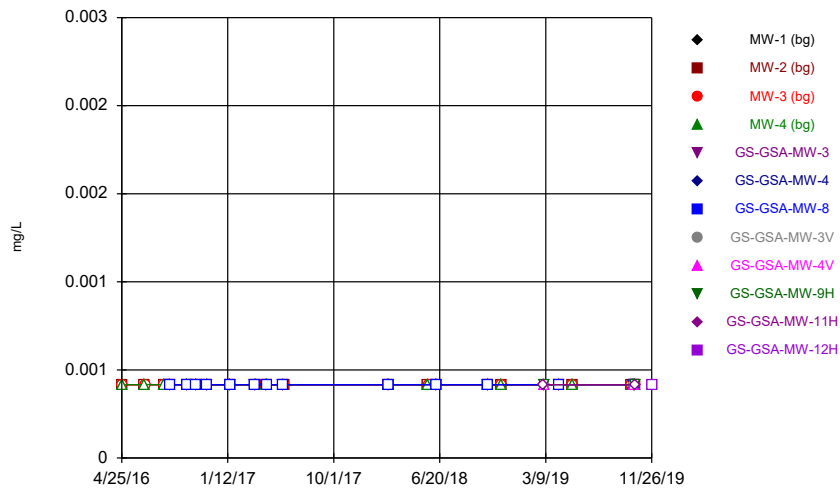
Constituent: Lead Analysis Run 1/21/2020 8:04 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



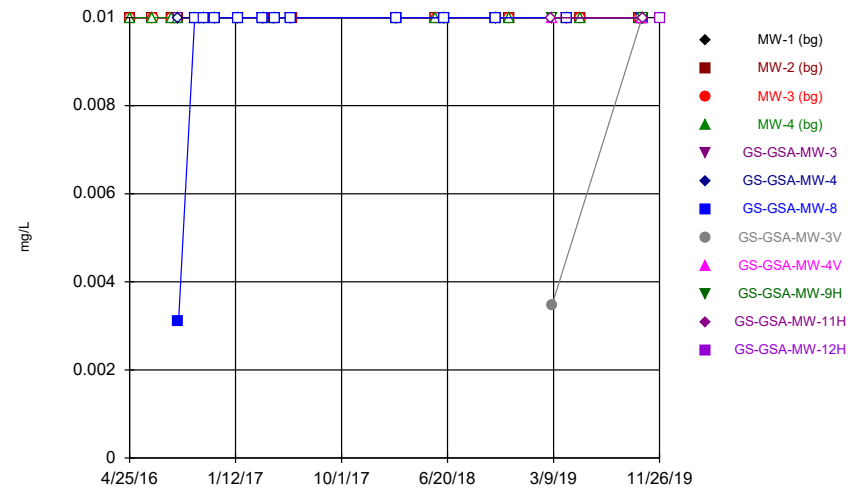
Constituent: Lithium Analysis Run 1/21/2020 8:04 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



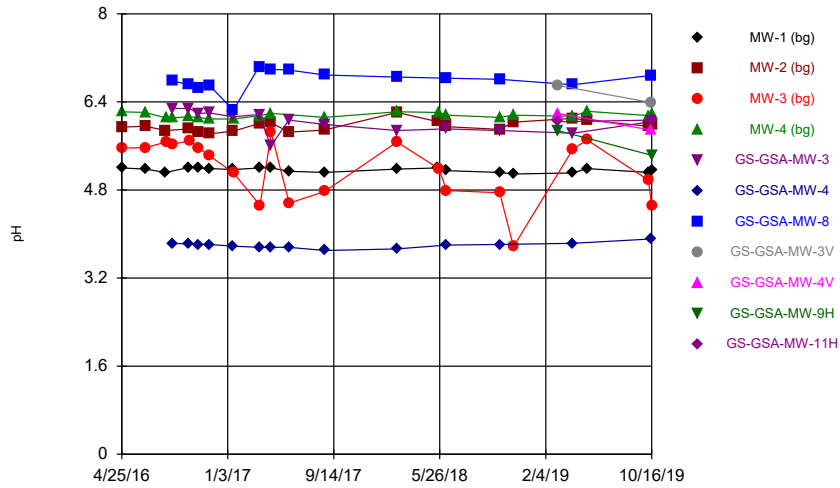
Constituent: Mercury Analysis Run 1/21/2020 8:04 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



Constituent: Molybdenum Analysis Run 1/21/2020 8:04 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

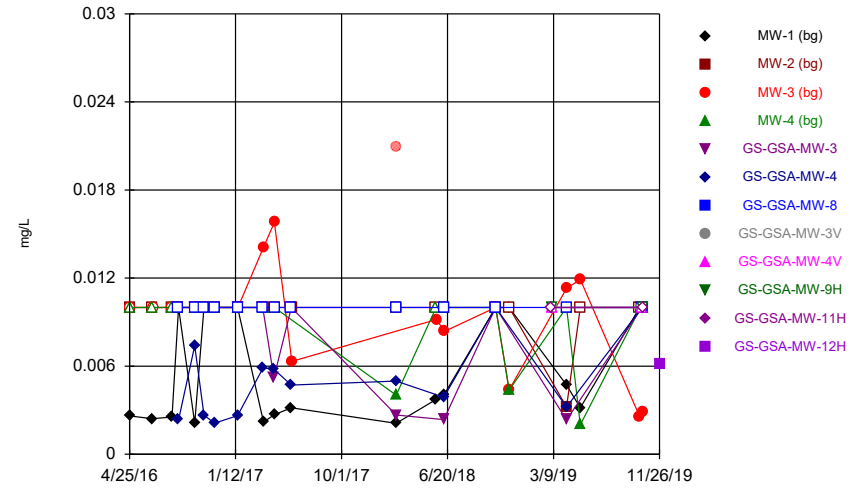
Time Series



Constituent: pH Analysis Run 1/21/2020 8:04 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

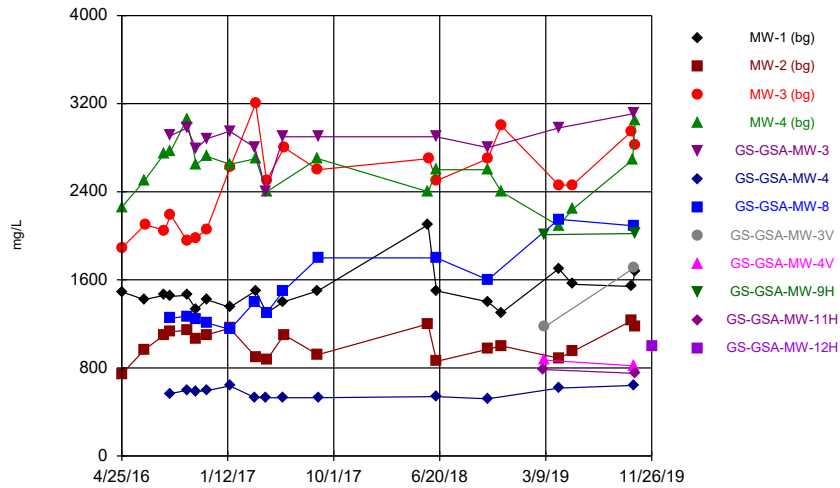
Hollow symbols indicate censored values.

Time Series



Constituent: Selenium Analysis Run 1/21/2020 8:04 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

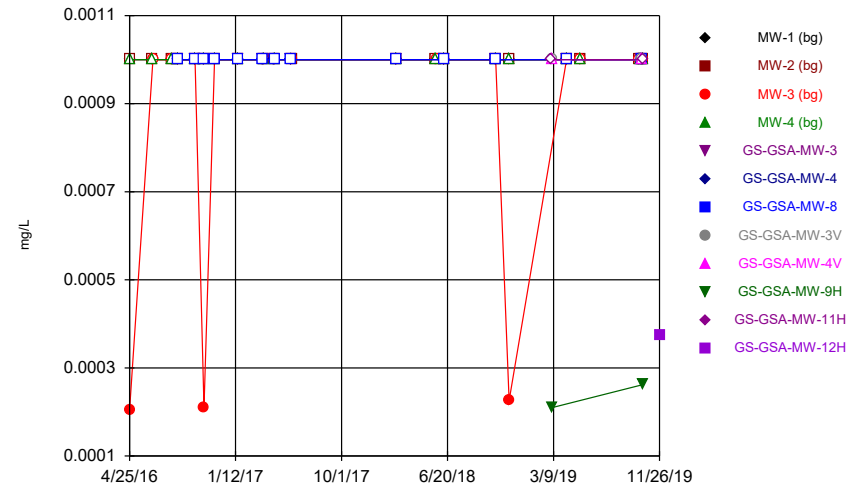
Time Series



Constituent: Sulfate Analysis Run 1/21/2020 8:04 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

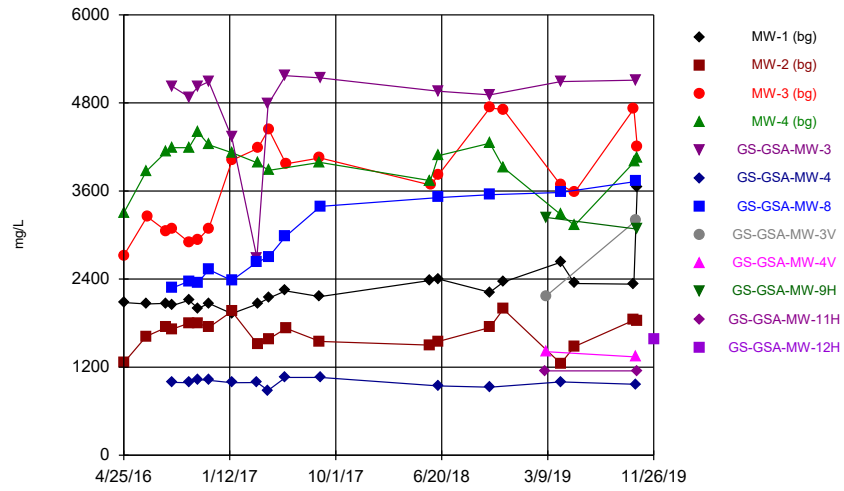
Hollow symbols indicate censored values.

Time Series



Constituent: Thallium Analysis Run 1/21/2020 8:04 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Time Series



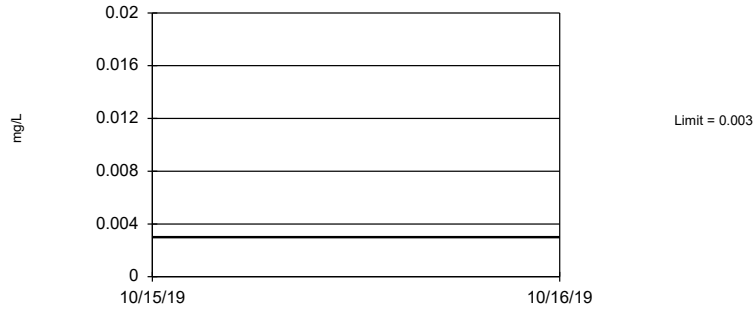
Constituent: Total dissolved solids Analysis Run 1/21/2020 8:04 AM View: Time Series
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Upper Tolerance Limits - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 1/21/2020, 8:13 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	79	n/a	n/a	92.41	n/a	n/a	0.01738	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	79	n/a	n/a	91.14	n/a	n/a	0.01738	NP Inter(NDs)
Barium (mg/L)	0.01531	n/a	79	-4.516	0.1715	0	None	ln(x)	0.05	Inter
Beryllium (mg/L)	0.0121	n/a	77	n/a	n/a	81.82	n/a	n/a	0.01926	NP Inter(NDs)
Cadmium (mg/L)	0.00598	n/a	77	n/a	n/a	49.35	n/a	n/a	0.01926	NP Inter(normal...)
Chromium (mg/L)	0.0105	n/a	79	n/a	n/a	94.94	n/a	n/a	0.01738	NP Inter(NDs)
Cobalt (mg/L)	1.07	n/a	79	n/a	n/a	24.05	n/a	n/a	0.01738	NP Inter(normal...)
Combined Radium 226 + 228 (pCi/L)	1.151	n/a	65	0.4707	0.3403	0	None	No	0.05	Inter
Fluoride (mg/L)	0.5302	n/a	83	0.4625	0.1358	0	None	sqrt(x)	0.05	Inter
Lead (mg/L)	0.005	n/a	78	n/a	n/a	97.44	n/a	n/a	0.0183	NP Inter(NDs)
Lithium (mg/L)	0.419	n/a	79	n/a	n/a	0	n/a	n/a	0.01738	NP Inter(normal...)
Mercury (mg/L)	0.0005	n/a	79	n/a	n/a	100	n/a	n/a	0.01738	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	79	n/a	n/a	100	n/a	n/a	0.01738	NP Inter(NDs)
Selenium (mg/L)	0.0158	n/a	78	n/a	n/a	66.67	n/a	n/a	0.0183	NP Inter(normal...)
Thallium (mg/L)	0.001	n/a	79	n/a	n/a	96.2	n/a	n/a	0.01738	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 79 background values. 92.41% 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: Antimony Analysis Run 1/21/2020 8:11 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

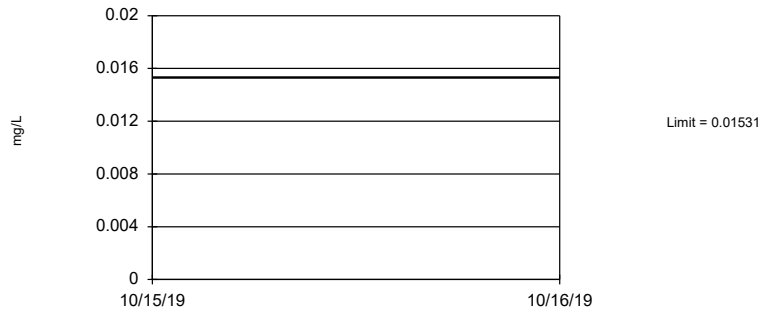
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 79 background values. 91.14% 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: Arsenic Analysis Run 1/21/2020 8:11 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary (based on natural log transformation): Mean=-4.516, Std. Dev.=0.1715, n=79. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9604, critical = 0.957. Report alpha = 0.05.

Constituent: Barium Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

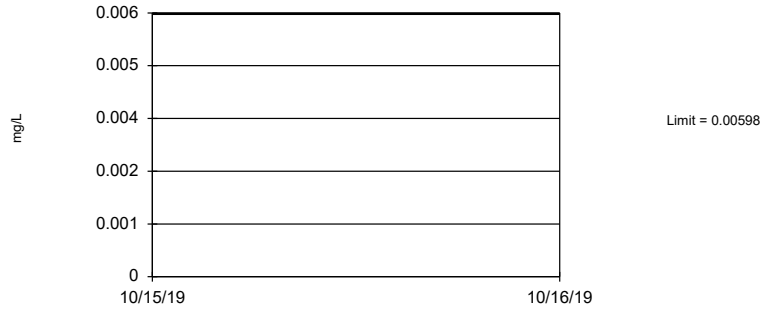
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 77 background values. 81.82% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01926.

Constituent: Beryllium Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

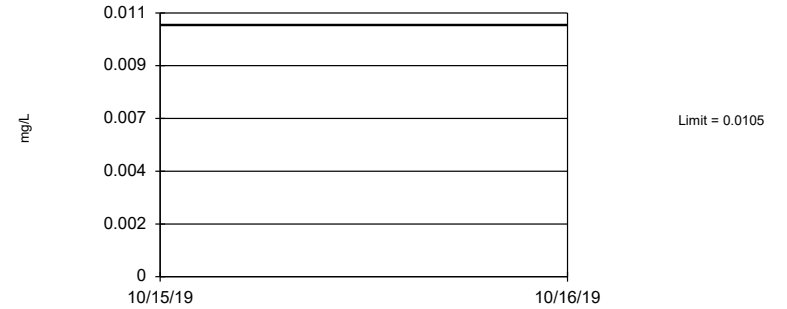
Tolerance Limit Interwell Non-parametric



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 77 background values. 49.35% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01926.

Constituent: Cadmium Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

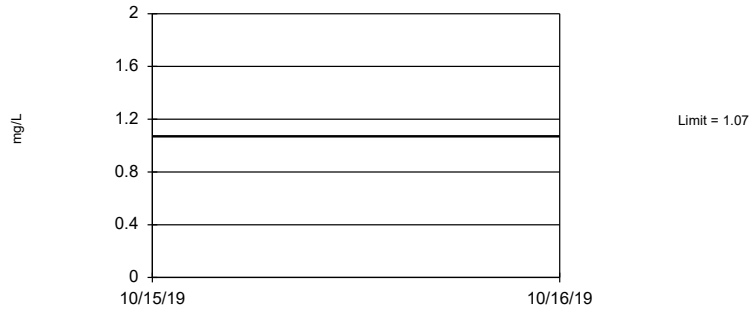
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 79 background values. 94.94% 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: Chromium Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

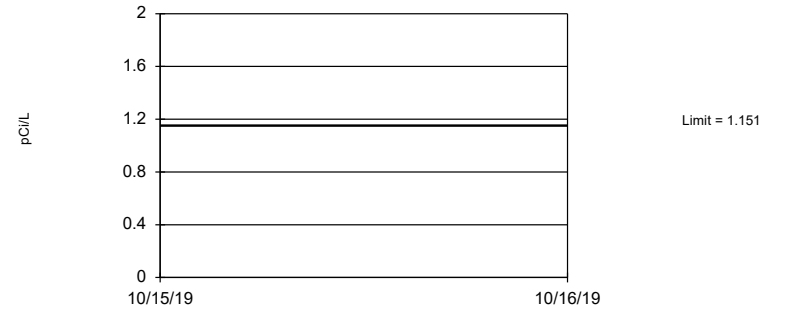
Tolerance Limit Interwell Non-parametric



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. 24.05% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01738.

Constituent: Cobalt Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

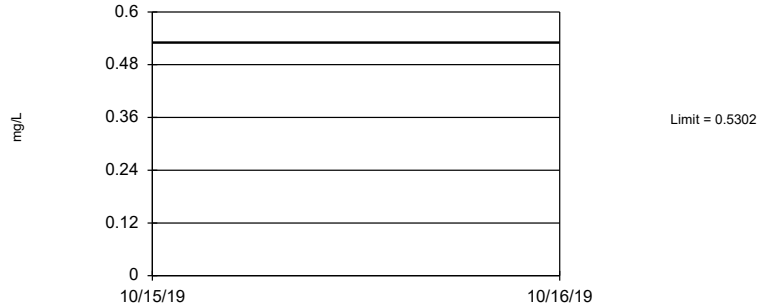
Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary: Mean=0.4707, Std. Dev.=0.3403, n=65. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.982, critical = 0.948. Report alpha = 0.05.

Constituent: Combined Radium 226 + 228 Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

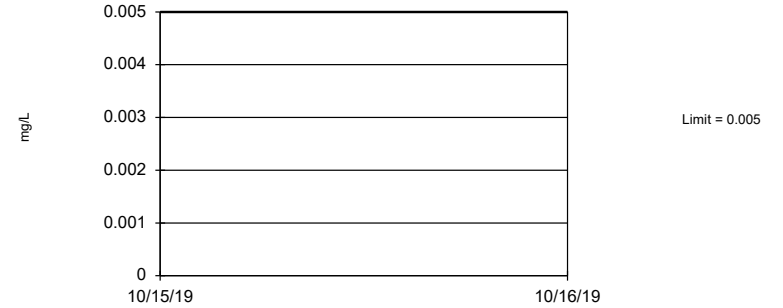
Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary (based on square root transformation): Mean=0.4625, Std. Dev.=0.1358, n=83. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9794, critical = 0.96. Report alpha = 0.05.

Constituent: Fluoride Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

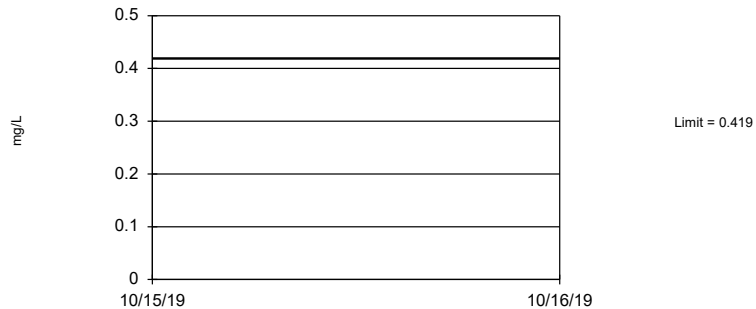
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 78 background values. 97.44% 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: Lead Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

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. 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: Lithium Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

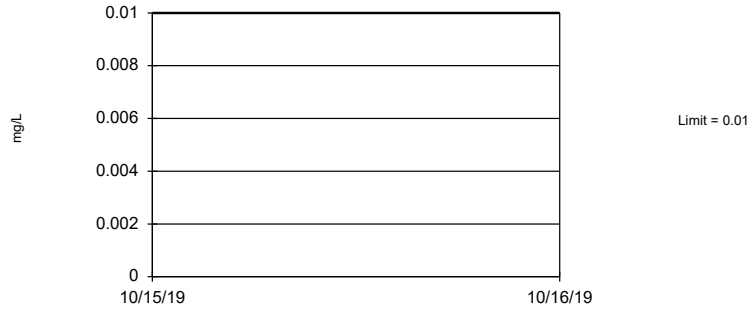
Tolerance Limit Interwell Non-parametric



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 = 0.01738.

Constituent: Mercury Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

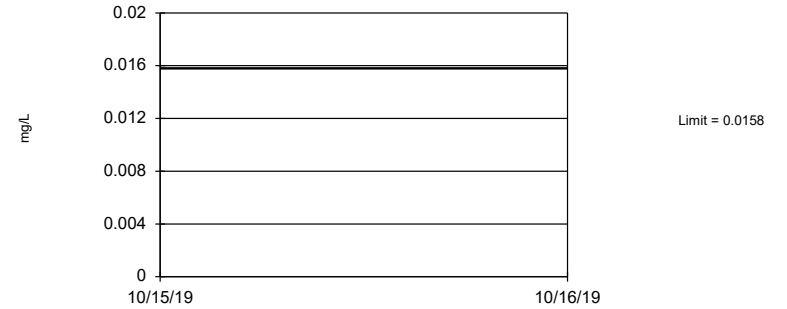
Tolerance Limit Interwell Non-parametric



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 = 0.01738.

Constituent: Molybdenum Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

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. 66.67% 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: Selenium Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Tolerance Limit Interwell Non-parametric



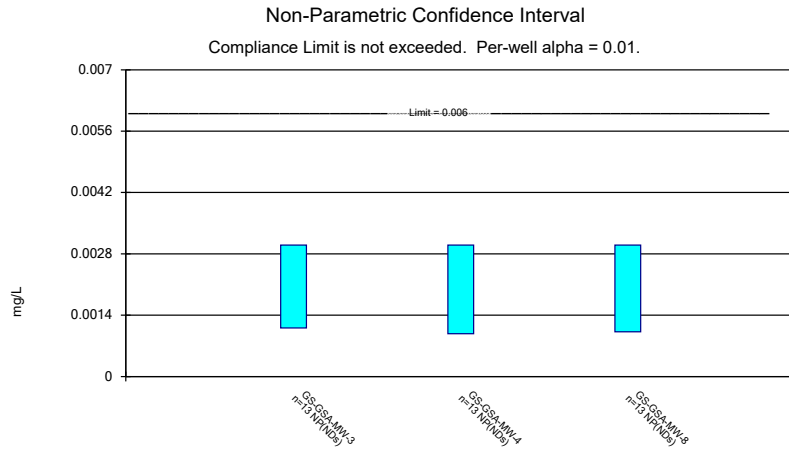
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 79 background values. 96.2% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01738.

Constituent: Thallium Analysis Run 1/21/2020 8:12 AM View: UTL's - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

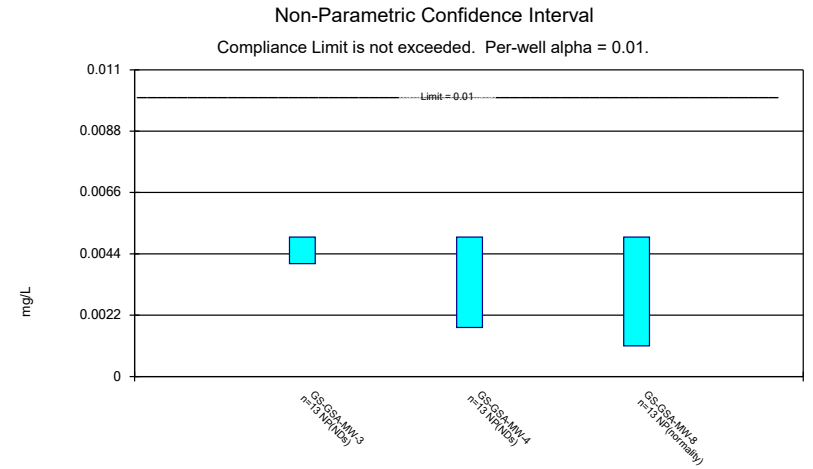
Confidence Intervals - All Results (No Significant Results)

Plant William C Gorgas Client: Southern Company Data: Gorgas GSA Printed 1/21/2020, 8:16 AM

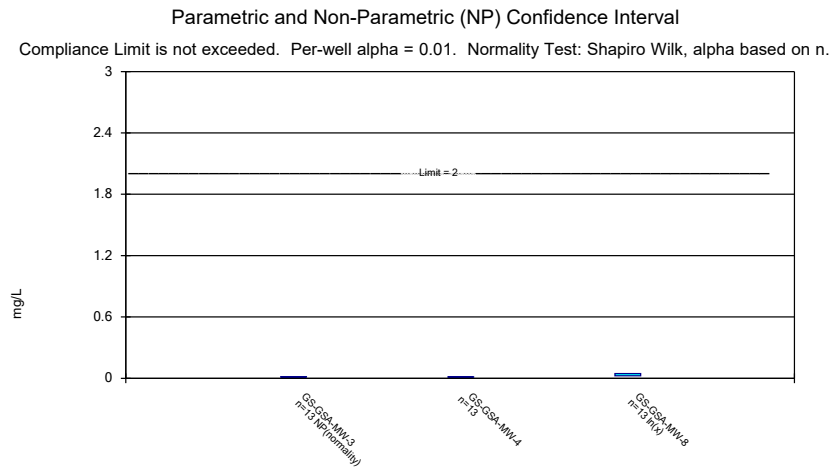
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	GS-GSA-MW-3	0.003	0.00111	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	GS-GSA-MW-4	0.003	0.000976	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	GS-GSA-MW-8	0.003	0.00102	0.006	No	13	92.31	No	0.01	NP (NDs)
Arsenic (mg/L)	GS-GSA-MW-3	0.005	0.00405	0.01	No	13	84.62	No	0.01	NP (NDs)
Arsenic (mg/L)	GS-GSA-MW-4	0.005	0.00176	0.01	No	13	84.62	No	0.01	NP (NDs)
Arsenic (mg/L)	GS-GSA-MW-8	0.005	0.0011	0.01	No	13	69.23	No	0.01	NP (normality)
Barium (mg/L)	GS-GSA-MW-3	0.0155	0.0121	2	No	13	0	No	0.01	NP (normality)
Barium (mg/L)	GS-GSA-MW-4	0.01334	0.01177	2	No	13	0	No	0.01	Param.
Barium (mg/L)	GS-GSA-MW-8	0.0463	0.02427	2	No	13	0	ln(x)	0.01	Param.
Beryllium (mg/L)	GS-GSA-MW-3	0.00387	0.00133	0.0121	No	13	15.38	No	0.01	NP (Cohens/xfrm)
Beryllium (mg/L)	GS-GSA-MW-4	0.005348	0.004437	0.0121	No	13	0	No	0.01	Param.
Beryllium (mg/L)	GS-GSA-MW-8	0.003	0.003	0.0121	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	GS-GSA-MW-3	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	GS-GSA-MW-4	0.00167	0.001391	0.005	No	13	0	No	0.01	Param.
Cadmium (mg/L)	GS-GSA-MW-8	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	GS-GSA-MW-3	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	GS-GSA-MW-4	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	GS-GSA-MW-8	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	GS-GSA-MW-3	0.1214	0.0572	1.07	No	12	0	No	0.01	Param.
Cobalt (mg/L)	GS-GSA-MW-4	0.213	0.151	1.07	No	13	0	No	0.01	NP (normality)
Cobalt (mg/L)	GS-GSA-MW-8	0.0253	0.00492	1.07	No	13	46.15	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GS-GSA-MW-3	0.65	0.2608	5	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GS-GSA-MW-4	0.937	0.4329	5	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GS-GSA-MW-8	0.7952	0.3376	5	No	13	0	No	0.01	Param.
Fluoride (mg/L)	GS-GSA-MW-3	0.6028	0.3282	4	No	14	0	No	0.01	Param.
Fluoride (mg/L)	GS-GSA-MW-4	0.6607	0.4143	4	No	14	14.29	x^2	0.01	Param.
Fluoride (mg/L)	GS-GSA-MW-8	0.1654	0.1124	4	No	14	0	x^2	0.01	Param.
Lead (mg/L)	GS-GSA-MW-3	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lead (mg/L)	GS-GSA-MW-4	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lead (mg/L)	GS-GSA-MW-8	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lithium (mg/L)	GS-GSA-MW-3	0.4891	0.4094	0.419	No	13	0	No	0.01	Param.
Lithium (mg/L)	GS-GSA-MW-4	0.2871	0.2678	0.419	No	13	0	No	0.01	Param.
Lithium (mg/L)	GS-GSA-MW-8	0.1694	0.08569	0.419	No	13	0	No	0.01	Param.
Mercury (mg/L)	GS-GSA-MW-3	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	GS-GSA-MW-4	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	GS-GSA-MW-8	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	GS-GSA-MW-3	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	GS-GSA-MW-4	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	GS-GSA-MW-8	0.01	0.0031	0.1	No	13	92.31	No	0.01	NP (NDs)
Selenium (mg/L)	GS-GSA-MW-3	0.01	0.00236	0.05	No	13	69.23	No	0.01	NP (normality)
Selenium (mg/L)	GS-GSA-MW-4	0.007542	0.002962	0.05	No	13	15.38	No	0.01	Param.
Selenium (mg/L)	GS-GSA-MW-8	0.01	0.01	0.05	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	GS-GSA-MW-3	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	GS-GSA-MW-4	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	GS-GSA-MW-8	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)



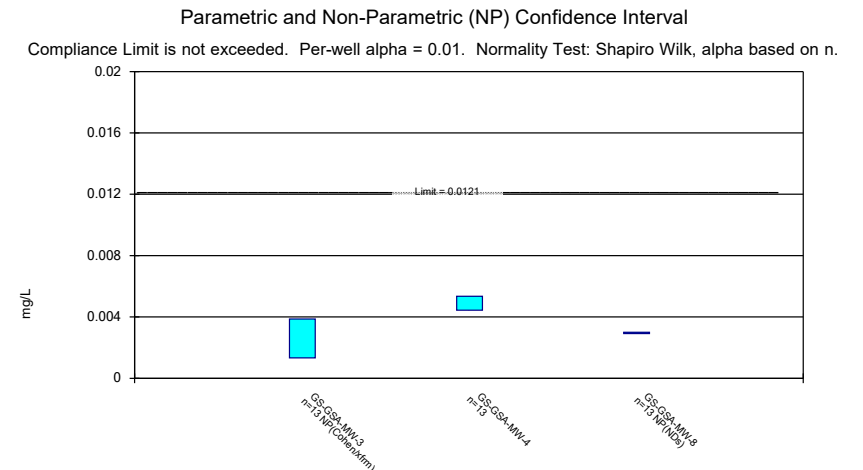
Constituent: Antimony Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA



Constituent: Arsenic Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA



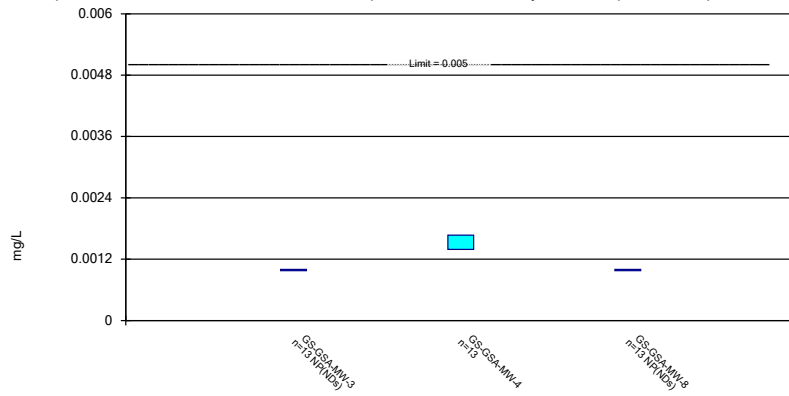
Constituent: Barium Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA



Constituent: Beryllium Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric and Non-Parametric (NP) Confidence Interval

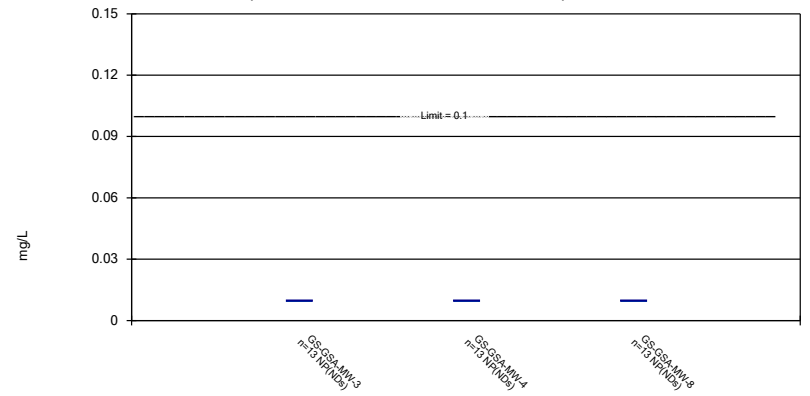
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Non-Parametric Confidence Interval

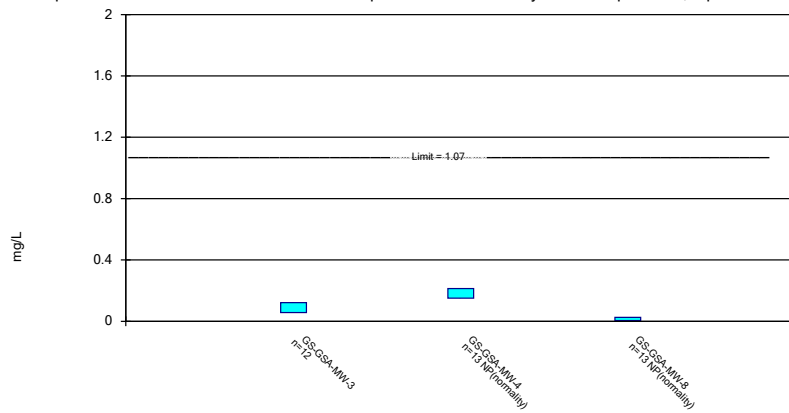
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric and Non-Parametric (NP) Confidence Interval

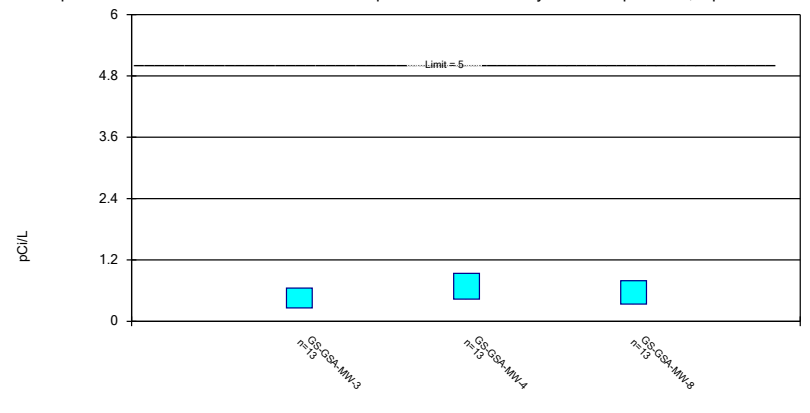
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric Confidence Interval

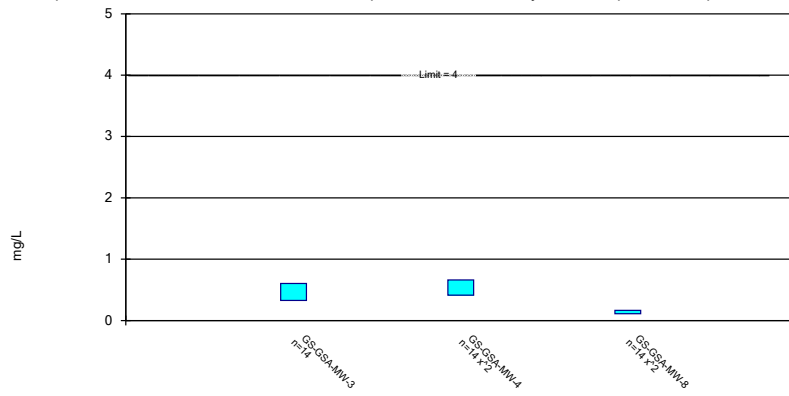
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Constituent: Combined Radium 226 + 228 Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals -
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric Confidence Interval

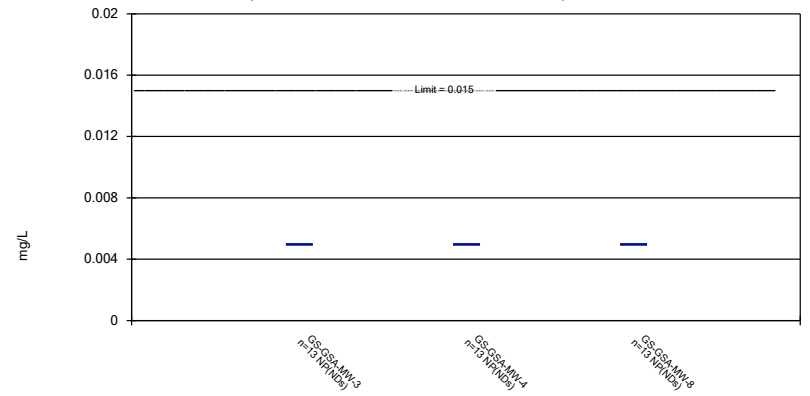
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Constituent: Fluoride Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Non-Parametric Confidence Interval

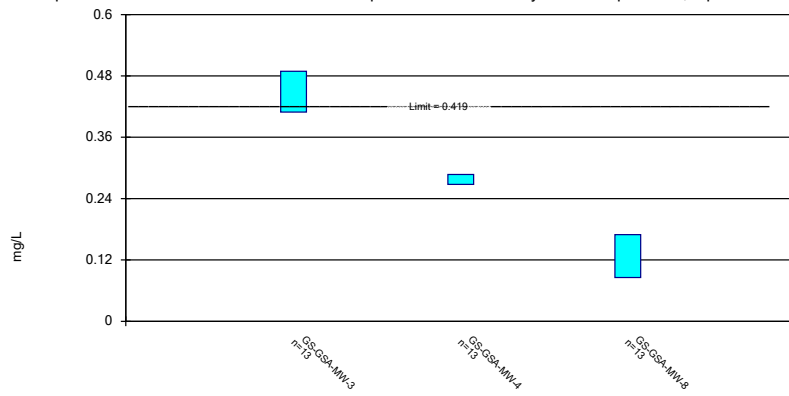
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Constituent: Lead Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Parametric Confidence Interval

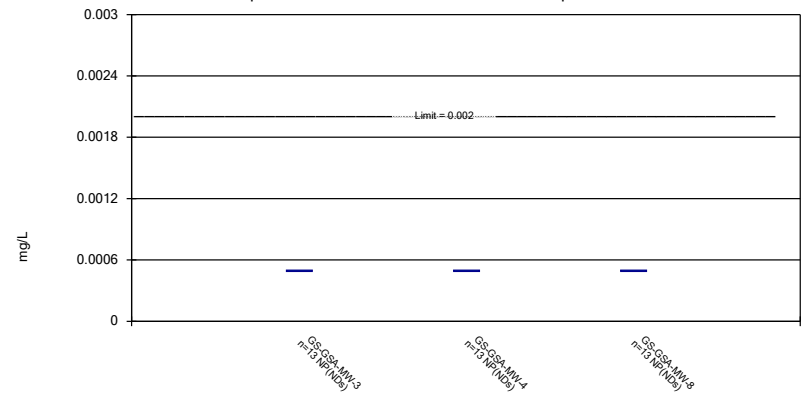
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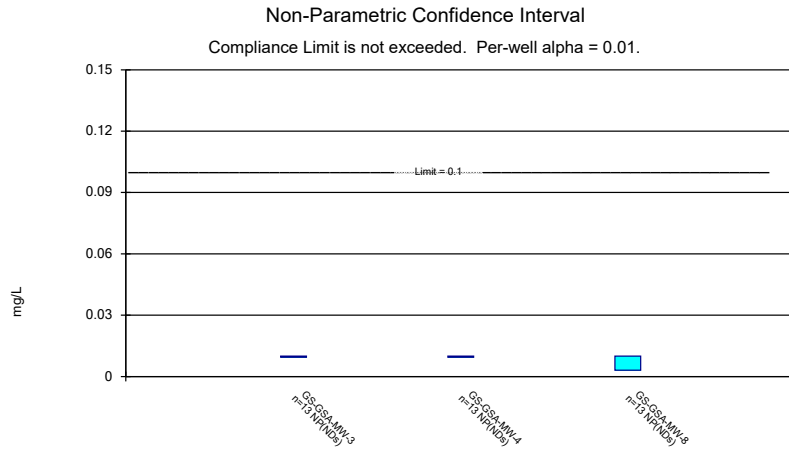
Constituent: Lithium Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Non-Parametric Confidence Interval

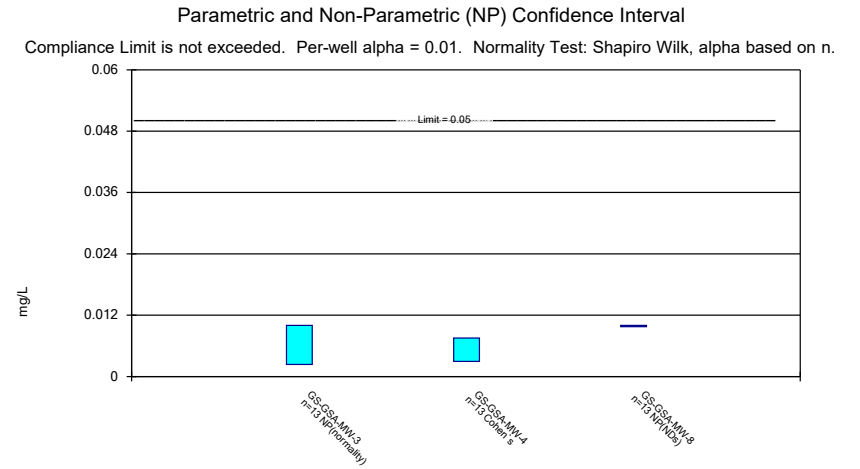
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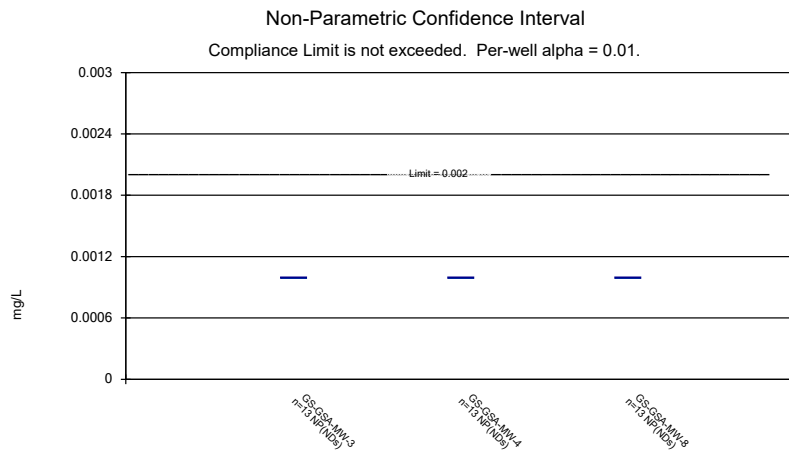
Constituent: Mercury Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA



Constituent: Molybdenum Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

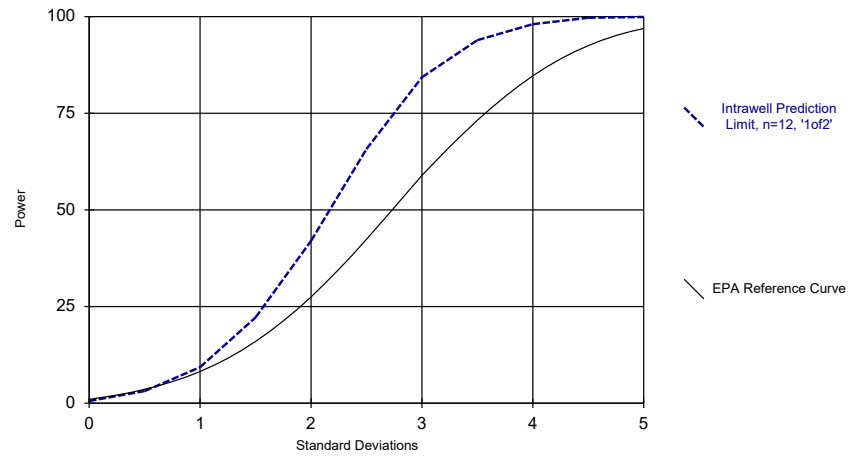


Constituent: Selenium Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA



Constituent: Thallium Analysis Run 1/21/2020 8:15 AM View: Confidence Intervals - Appendix IV
 Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

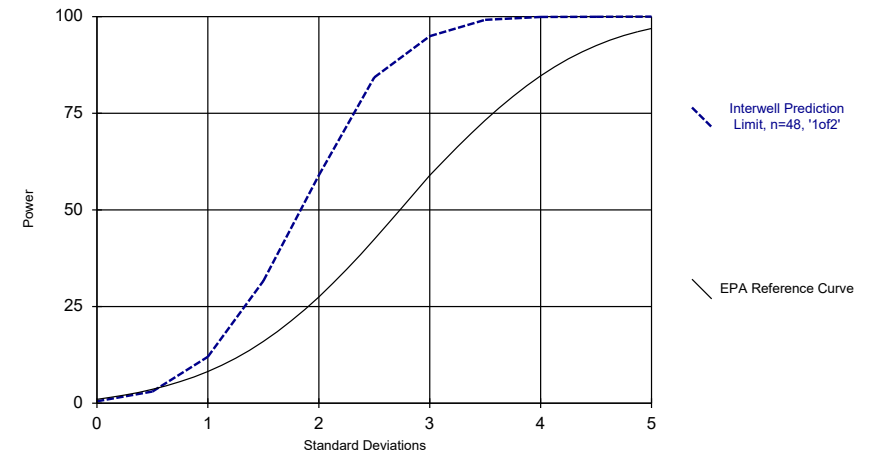
Power Curve



Kappa = 2.112, based on 3 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/30/2020 10:38 AM View: Power Curves
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA

Power Curve



Kappa = 1.73, based on 3 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/30/2020 10:38 AM View: Power Curves
Plant William C Gorgas Client: Southern Company Data: Gorgas GSA