

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

**ALABAMA POWER COMPANY  
PLANT GORGAS  
BOTTOM ASH LANDFILL**

**January 31, 2020**

Prepared for

Alabama Power Company  
Birmingham, Alabama

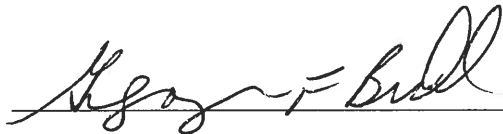
By

Southern Company Services  
Earth Science and Environmental Engineering



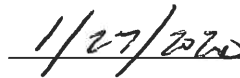
## CERTIFICATION STATEMENT

This *Annual Groundwater Monitoring and Corrective Action Report, Alabama Power Company - Plant Gorgas Bottom Ash Landfill* has been prepared in accordance with the United States Environmental Protection Agency's coal combustion residual rule (40 CFR Part 257, Subpart D) 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.

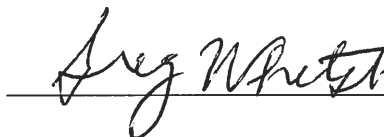

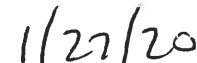


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## EXECUTIVE SUMMARY

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 Alabama Department of Environmental Management (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 Bottom Ash Landfill (BALF) 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 BALF were performed in accordance with the monitoring requirements § 257.90 through § 257.95 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(6). The 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). Assessment monitoring was initiated in January 2018.
- Statistically Significant Levels (SSL) of the Appendix IV parameter, arsenic, were identified during sampling events conducted in 2018 and 2019. An Alternate Source Demonstration (ASD) was prepared to address the arsenic SSL in June 2019. This ASD was prepared in accordance with § 257.95(g)(3)(ii) and ADEM Admin Code r. 335-13-15-.06(6)(g)4.(ii) under the direction of a licensed professional engineer with Southern Company Services.
- ADEM has yet to approve the ASD for arsenic. Pending Department action on the ASD, APC will continue to proceed with assessment monitoring and amend the Plant Gorgas Assessment of Corrective Measures (ACM) prepared under § 257.96 and ADEM Admin. Code r. 335-13-15-.06(7) to include the BALF.

The CCR Unit concluded the monitoring period in Assessment Monitoring. The following next steps will be taken for the CCR Unit:

- Pending Department action, update the Plant Gorgas ACM to include the BALF by February 28, 2020.
- Continue semi-annual assessment monitoring in March or April 2020 and submit first semi-annual groundwater monitoring report of 2020 to the Department by July 31, 2020.
- Continue evaluation of groundwater remedial options described in the ACM and update the Department semi-annually pursuant to § 257.98 and ADEM Admin. Code r. 335-13-15-.06(9).

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	i
1.0 Introduction.....	1
2.0 Site Location and Description.....	2
2.1 Geology and Hydrogeology.....	2
2.1.1 Physical Setting.....	2
2.1.2 Geology and Hydrogeology .....	2
2.1.3 Pottsville Formation – Rock Chemistry.....	4
2.1.4 Uppermost Aquifer .....	5
2.1.5 Flow Interpretation.....	6
2.2 Groundwater Monitoring System.....	6
2.2.1 Monitoring Wells .....	7
2.2.1.1 Upgradient Wells .....	7
2.2.1.2 Downgradient Wells .....	7
2.2.1.3 Piezometers .....	7
2.2.1.4 Delineation Wells.....	8
2.2.1.5 Monitoring Variance .....	8
2.2.2 Groundwater Monitoring History .....	8
2.2.2.1 Available Monitoring Data .....	8
2.2.2.2 Historical Groundwater Flow.....	9
2.2.3 Groundwater Sampling and Analysis.....	9
2.2.3.1 Sampling Event Summary .....	10
2.2.3.2 Groundwater Sample Collection .....	10
2.2.3.3 Sample Preservation and Handling .....	11
2.2.3.4 Chain of Custody .....	11

2.2.3.5	Laboratory Analysis .....	11
3.0	Groundwater Data Evaluation.....	12
3.1	Groundwater Elevation Data Evaluation .....	12
3.2	Groundwater Flow Velocity Calculations.....	12
4.0	Evaluation of Groundwater Quality Data .....	14
4.1	Data Validation – Quality Assurance/Quality Control .....	14
4.2	Statistical Methodology and Tests .....	15
4.2.1	Appendix III Evaluation.....	15
4.2.2	Appendix IV Evaluation .....	16
4.3	Statistical Exceedances .....	17
4.3.1	Appendix III Constituents .....	17
4.3.2	Appendix IV Constituents.....	17
4.4	Alternate Source Demonstration.....	18
5.0	Monitoring Program Status.....	19
6.0	Summary and Conclusions .....	20
7.0	References.....	21

## **FIGURES**

Figure 1	Site Location Map
Figure 2	Site Topographic Map
Figure 3	Site Geologic Map
Figure 4a	Geologic Cross-Section A-A'
Figure 4b	Geologic Cross-Section B-B'
Figure 5	Monitoring Well Location Map
Figure 6	Potentiometric Surface Contour Map (May 13, 2019)
Figure 7	Potentiometric Surface Contour Map (October 7, 2019)

## **TABLES**

Table 1	Groundwater Monitoring Well Network Details
Table 2	Monitoring Parameters and Reporting Limits
Table 3	Groundwater Elevation Summary
Table 4	Horizontal Groundwater Flow Velocity Calculations
Table 5	Relative Percent Difference Calculations
Table 6	Summary of Background Levels and Groundwater Protection Standards
Table 7	First Semi-Annual Monitoring Event Analytical Summary
Table 8	Second Semi-Annual Monitoring Event Analytical Summary

## **APPENDICES**

Appendix A	Groundwater Analytical Data
Appendix B	Laboratory and Field Records
Appendix C	Statistical Analysis
Appendix D	Alternate Source Demonstration

## ABBREVIATIONS

ACM	Assessments 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)
LCL	Lower Confidence Limit(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 Program
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 Bottom Ash Landfill (BALF) 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 Plant Gorgas BALF is performed in accordance with the monitoring requirements § 257.90 through § 257.95 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(6).

## 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. Based on visual inspection of United States Geological Survey (USGS) topographic quadrangle maps and GIS plant boundary files provided by SCS, the plant occupies portions of Sections 7, 8, 9, 16, 17, 18, 19, 20, 21, 28 and 29, Township 16 South, Range 6 West and Section 12, 13 and 24, Township 16 South, Range 7 West (USGS, 1975; USGS, 1983).

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

## 2.1 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, near the landfill, 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. The 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 Lower Pottsville

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

Plant Gorgas is directly underlain by rocks belonging to the Pratt Coal Group (Ward II et al., 1989) of the Upper Pottsville Formation. In general, the Pratt Coal Group consists of mudstone, shale, fine-grained sandstone, and interbedded coal in fining-upward sequences. The Pratt Coal Group generally contains 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 BALF is dominated by backfilled mine overburden (mine spoils) and is characterized by weathered shale and sandstone boulders with lenses of fine sediments and small amounts of coal fragments and coarse sediments. Geologic logs generated during various on-site investigations indicate that the depth to rock varies significantly, ranging from as little as five feet (un-mined areas) to as much as 155 feet below ground surface (BGS). Beneath the BALF, 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 4a, Geologic Cross-Section A-A'** and **Figure 4b, Geologic Cross-Section B-B'**, 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. 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 were 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. The Pottsville aquifer is also the uppermost aquifer beneath the BALF. In the Pottsville aquifer, 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 BALF 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 BALF to lower topographic elevations to the south and generally, towards the Mulberry Fork of the Black Warrior River. Mine spoil layering and complex Pottsville Formation lithofacies contribute to the vertical and horizontal heterogeneity present within the aquifer system and overlying saturated mine spoils. This heterogeneity focuses groundwater flow along more permeable pathways, such as parallel to coal seams and bedding plains, or along vertical or sub-vertical discontinuities in the rock fabric. The Mulberry Fork of the Black Warrior River. 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 BALF is designed to monitor groundwater passing the waste boundary of the CCR unit within the uppermost aquifer. Wells were located to serve as upgradient, or downgradient monitoring locations based on groundwater flow direction as determined by

the potentiometric surface elevation contour maps. All groundwater monitoring wells were designed and constructed using “Design and Installation of Groundwater Monitoring Wells in Aquifers”, ASTM Subcommittee D18.21, as a guideline.

### **2.2.1 Monitoring Wells**

The groundwater monitoring network is comprised of 9 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 BALF.

#### **2.2.1.1 Upgradient Wells**

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

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

#### **2.2.1.2 Downgradient Wells**

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

#### **2.2.1.3 Piezometers**

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

#### **2.2.1.4 Delineation Wells**

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

#### **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 samples were collected over the period of April 2016 to October 2017. Semi-annual groundwater monitoring was initiated at the Bottom Ash Landfill in November 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 upgradient 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 April 2016 to October 2017. Groundwater sampling for the first detection monitoring event after the background period was performed in August and November 2017.

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

February 2018, within 90 days of initiating the assessment monitoring program. Semi-annual assessment sampling has continued since the initiation of assessment monitoring.

Any well installed for site investigation and delineation subsequent to identifying statistical exceedances in groundwater data is incorporated into the semi-annual groundwater monitoring program.

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 BALF show that groundwater flow from higher topographic elevations north of the to lower topographic elevations to the south and generally, towards the Mulberry Fork of the Black Warrior River. Mine spoil layering and complex Pottsville Formation lithofacies contribute to the vertical and horizontal heterogeneity present within the aquifer system and overlying saturated mine spoils. This heterogeneity focuses groundwater flow along more permeable pathways, such as parallel to coal seams and bedding plains, or along vertical or sub-vertical discontinuities in the rock fabric. Thus, groundwater flow paths across the site may be tortuous.

Groundwater elevations fluctuate in response to rainfall. Seasonal variations of 1 to 5 feet are typical at the site with MW-11 displaying slightly greater variations (~8 ft). These fluctuations are consistent in monitoring wells across the site indicating a relatively uniform 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 BALF 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 statistically significant increases (SSIs) of Appendix III constituents. Statistically significant levels (SSLs) of Appendix IV constituent arsenic was identified in one well above the GWPS; however, an alternate source demonstration (ASD) was prepared demonstrating that the SSL was not caused by a release from the BALF. Therefore, in accordance with § 257.95(d) and ADEM Admin. Code r. 335-13-15-.06(6)(d), the site remained in assessment monitoring during 2019.

### 2.2.3.1 Sampling Event Summary

Semi-annual assessment monitoring sampling events occurred in April-May 2019 and 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 are included as **Appendix B, Laboratory and Field Records**, 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 degrees Celsius (°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 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. Laboratory and field records for the monitoring events are presented in **Appendix B**.



### 3.0 GROUNDWATER DATA EVALUATION

#### 3.1 GROUNDWATER ELEVATION DATA EVALUATION

Groundwater levels from monitoring wells serving the Plant Gorgas BALF, Gypsum Landfill, and CCR Landfill are used to construct potentiometric surface contour maps. Groundwater levels and top of casing (TOC) elevations were used to calculate groundwater elevation and develop the potentiometric surface elevation contour map. During the May 2019 sampling event, depths to water ranged from 19.58 to 153.79 feet below TOC and groundwater elevations ranged from 298.02 to 417.64 feet below MSL. During the October 2019 sampling event, depths to water ranged from 22.59 to 155.34 feet below TOC and groundwater elevations ranged from 295.86 to 416.63 feet below MSL. **Figure 6, Potentiometric Surface Contour Map (May 13, 2019)** and **Figure 7, Potentiometric Surface Contour Map (October 7, 2019)** depict groundwater elevations and inferred groundwater flow direction from higher elevation to lower. As shown on Figures 6 and 7, the general direction of groundwater flow is lateral to the southeast, consistent with historic observations. All available groundwater elevation data recorded since 2016 have been tabulated and is included in **Table 3, Groundwater Elevations Summary**.

#### 3.2 GROUNDWATER FLOW VELOCITY CALCULATIONS

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

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

Slug testing provided horizontal hydraulic conductivities for the uppermost aquifer between  $5.11 \times 10^{-3}$  centimeters per second (cm/sec) and  $2.47 \times 10^{-4}$  cm/sec. The average hydraulic conductivity value used in the calculations is  $2.83 \times 10^{-3}$  cm/sec or 8.01 feet per day (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 Calculation.**

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

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

Where:

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

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

$i$  = Horizontal hydraulic gradient

$n_e$  = Effective porosity

**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 are below 20%, the difference is considered acceptable and no further action is needed. Where an RPD is greater than 20%, further evaluation is required to attempt to determine the cause of the difference and potentially results in qualified data. **Table 5, Relative Percent Difference Calculations**, provides the RPDs for sample and sample duplicates during 2019 sampling events. RPDs were below 20% in both 2019 sampling events.

Equipment blank detections were noted for antimony in the May 2019 sampling event and calcium in the October 2019 sampling event. A qualifier, (+) U\*, has been added to antimony results from the May 2019 event because blank results were greater than the MDL. This qualifier indicates that antimony results from

the May 2019 should be treated as non-detects. Calcium results from the October 2019 sampling event were not qualified.

## **4.2 STATISTICAL METHODOLOGY AND TESTS**

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

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

The following adjustments were made:

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

- (1) The maximum contaminant level (MCL) established under 40 CFR § 141.62 and 141.66.
- (2) Where an MCL has not been established:
  - (i) Cobalt 0.006 mg/);
  - (ii) Lead 0.015 mg/L;
  - (iii) Lithium 0.040 mg/L; 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.

Background for 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 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 Analysis**, 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**.

Statistical analysis of Appendix IV data identified the following SSL over GWPS at the listed well for both the first and second 2019 the semi-annual groundwater monitoring events:

- MW-12: Arsenic

**Table 7, First Semi-Annual Monitoring Event Analytical Summary** and **Table 8, Second Semi-Annual Monitoring Event Analytical Summary**, provides a summary of all constituent concentrations for the 2019 semi-annual sampling events.

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 revealed no GWPS during the second semi-annual sampling event. Details regarding the installation

and sampling of these wells, and future proposed actions as a result of these exceedances, were submitted to the Department in a delineation report on May 13, 2019.

#### **4.4 ALTERNATE SOURCE DEMONSTRATION**

In accordance with § 257.95(g)(3)(ii) and ADEM Admin Code r. 335-13-15-.06(6)(g)4.(ii) an ASD was prepared for arsenic and submitted to ADEM in June 2019. This ASD is included in **Appendix D, Alternate Source Demonstration**.

In summary, there are multiple lines of evidence that support the conclusion that the SSL of arsenic in well MW-12 is naturally occurring and not the result of impact by BALF. The ASD satisfies Federal rules and precludes the need to complete an ACM under § 257.96; however, ADEM has yet to approve the ASD for arsenic, consequently an ACM is required according to the State rules (ADEM Admin. Code r. 335-13-15-.06(6)(g)5.). APC will amend the current Plant Gorgas ACM that was prepared under § 257.96 and ADEM Admin. Code r. 335-13-15-.06(7) to include the BALF by February 28, 2020.

## **5.0 MONITORING PROGRAM STATUS**

In accordance with § 257.94(e) and ADEM Admin. Code r. 335-13-15-.06(5)(e), APC implemented assessment monitoring in January 2018. SSIs of Appendix III and an SSL of an Appendix IV parameter (arsenic) were identified at the Plant Gorgas BALF during sampling events conducted in 2019. An ASD was submitted to ADEM for arsenic SSLs above the GWPS in June of 2019. Pending Department action on the ASD, APC will amend the current Plant Gorgas ACM to include the BALF.

In accordance with § 257.95 and ADEM Admin. Code r. 335-13-15-.06(6), APC will continue semi-annual assessment monitoring including all monitoring wells in the certified groundwater monitoring system and any well installed to characterize the horizontal and vertical extent of SSLs. The Plant Gorgas ACM prepared under § 257.96 and ADEM Admin. Code r. 335-13-15-.06(7) will be amended by February 28, 2020 to include the BALF.



## 6.0 SUMMARY AND CONCLUSIONS

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

An Alternate Source Demonstration (ASD) was prepared to address historical arsenic GWPS exceedances at compliance well MW-12 in June 2019. This ASD was prepared in accordance with § 257.95(g)(3)(ii) and ADEM Admin Code r. 335-13-15-.06(6)(g)4.(ii) under the direction of a licensed professional engineer with Southern Company Services. ADEM has yet to approve the ASD for arsenic, consequently APC will amend the current Plant Gorgas ACM to include the BALF.

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

In accordance with § 257.95(d) and Alabama Admin. Code r. 335-13-15-.06(6)(d), APC will continue semi-annual assessment monitoring. The following future actions will be taken or are recommended for the site:

- The first semi-annual assessment monitoring event is planned for first quarter of 2020 and a groundwater monitoring report summarizing this event will be submitted by July 31, 2020.
- Pending Department action on the ASD, amend the current Plant Gorgas ACM to include the BALF by February 28, 2020.

## 7.0 REFERENCES

- Alabama Department of Environmental Management (ADEM), 2018, Solid Waste Program, Division 13, ADEM Admin. Code r. 335-13-15
- ASTM Standard D5092, 2004(2010)e1, Standard Practice for Design and Installation of Groundwater Monitoring Wells, ASTM International, West Conshohocken, PA, DOI 10.1520/D5092-04R10E01, [www.astm.org](http://www.astm.org)
- Bragg, L.J., Oman, J.K., Tewalt, S.J., Oman, C.L., Rega, N.H., Washington, P.M., and Finkelman, R.B., 1997, U.S. Geological Survey Coal Quality (COALQUAL) database; version 2.0, U.S.
- Diehl, S.F., Goldhaber, M.B., and Hatch, J.R., 2004, Modes of occurrence of mercury and other trace-elements in coals from the warrior field, Black Warrior Basin, Northwestern Alabama, *International Journal of Coal Geology*, v. 59, p. 193-208
- Geological Survey of Alabama (GSA), 2010b, Digital Geologic Map of Alabama, URL: <http://www.gsa.state.al.us/index.html>, accessed November, 2010.
- Goldhaber, M.B., Lee, R.C., Hatch, J.R., Pashin, J.C., and Treworgy, J., 2002, The role of large-scale fluid flow in subsurface arsenic enrichment, In: Welch, A., Stollenwerk, K (Eds.), *Arsenic in Ground Water: Occurrence and Geochemistry*, v. 5, p. 127-176
- Jennings, S.P., and Cook, M.R., 2010, A Report to the Hanceville Water Works and Sewer Board, Open File Report 1001
- Kolker, A., and Nordstrom, D.K. 1997, Occurrence and Micro-Distribution of Arsenic in Pyrite, U.S. Geological Survey
- O'Rear, D.M., Wahl, K.D., and Jefferson, P.O., 1972, Water availability and geology of Walker County, Alabama: Geological Survey of Alabama Map 120, 21p.
- Palmer, C.A., Oman, C.L., Park, A.J., and Luppens, J.A., 2015, The U.S. Geological Survey coal quality (COALQUAL) database version 3.0: U.S. Geological Survey Data Series 975, 43 p.with appendixes, <http://dx.doi.org/10.3133/ds975>.
- Pashin, J.C., and Raymond, D.E., 2004, Glacial-eustatic control of coalbed methane reservoir distribution (Pottsville Formation; Lower Pennsylvanian) in the Black Warrior Basin of Alabama: Tuscaloosa, Alabama, University of Alabama College of Continuing Studies, 2004 International Coalbed Methane Symposium Proceedings, Paper 0413, 15 p.
- Pashin, J.C., 2007, Hydrodynamics of Coalbed Methane Reservoirs in the Black Warrior Basin: Key to Understanding Reservoir Performance and Environmental Issues, *Applied Geochemistry*, v. 22, I. 10, p. 2257-2272
- Raymond, D.E., Osborne, W.E., Copeland, C.W. Jr, and Neathery, T.L., 1988, Alabama Stratigraphy: Alabama Geological Survey Circular, v. 140, p. 1-97
- Sapp, C.D., and Emplaincourt, J., 1975, Physiographic regions of Alabama, Special Map 168, Geological Survey of Alabama
- Stricklin, V.E., 1989, Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama: Area 3, U.S. Geological Survey, Water-Resources Investigations Report 88-4120
- USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance

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

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

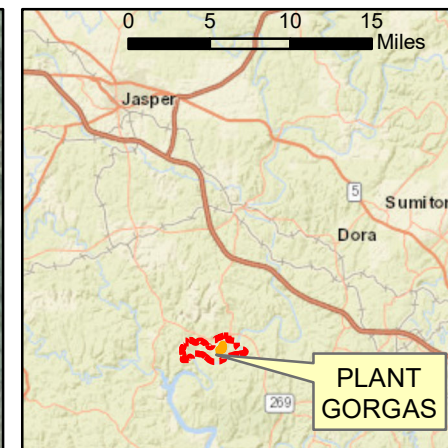
USEPA. 2015. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. *40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule.* [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER].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

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



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

# Figures





**Legend**

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



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DATE 12/18/2019

DRAWN BY KAR

CHECKED BY GBD

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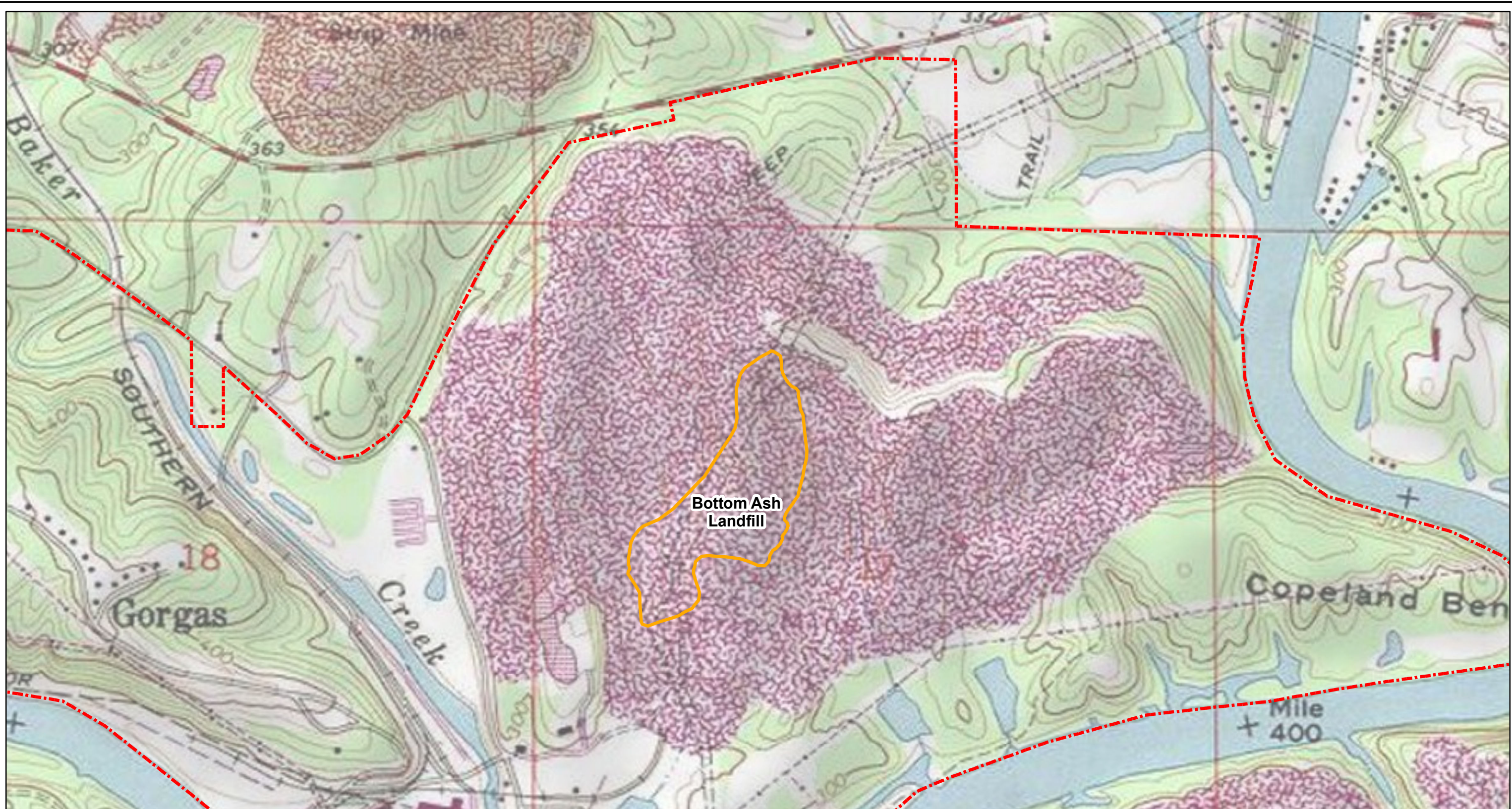
**SITE LOCATION MAP  
PLANT GORGAS BOTTOM ASH LANDFILL**



FIGURE NO

**FIGURE 1**








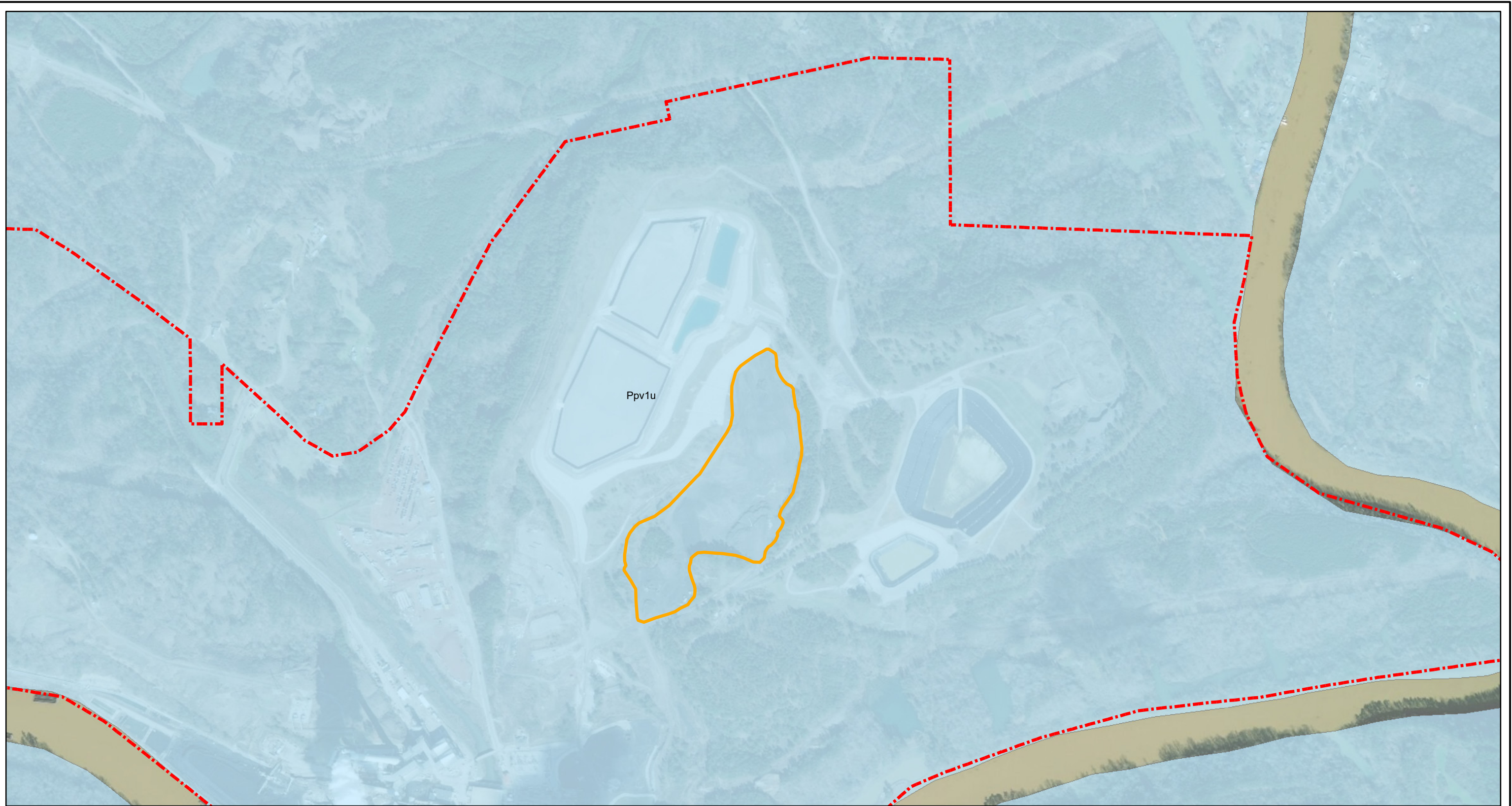
- Legend**
-  Property Boundary (Approximate)
  -  Bottom Ash Landfill Boundary (Approximate)



SCALE	1:9000
DATE	12/18/2019
DRAWN BY	KAR
CHECKED BY	GBD

DRAWING TITLE	
<b>SITE GEOLOGIC MAP PLANT GORGAS BOTTOM ASH LANDFILL</b>	
FIGURE NO	
<b>FIGURE 2</b>	





**Legend**

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

**Geologic Units**

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



SCALE	1:9000
DATE	1/27/2020
DRAWN BY	KAR
CHECKED BY	GBD

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<b>SITE GEOLOGIC MAP PLANT GORGAS BOTTOM ASH LANDFILL</b>	
FIGURE NO	<b>FIGURE 3</b>
Southern Company	

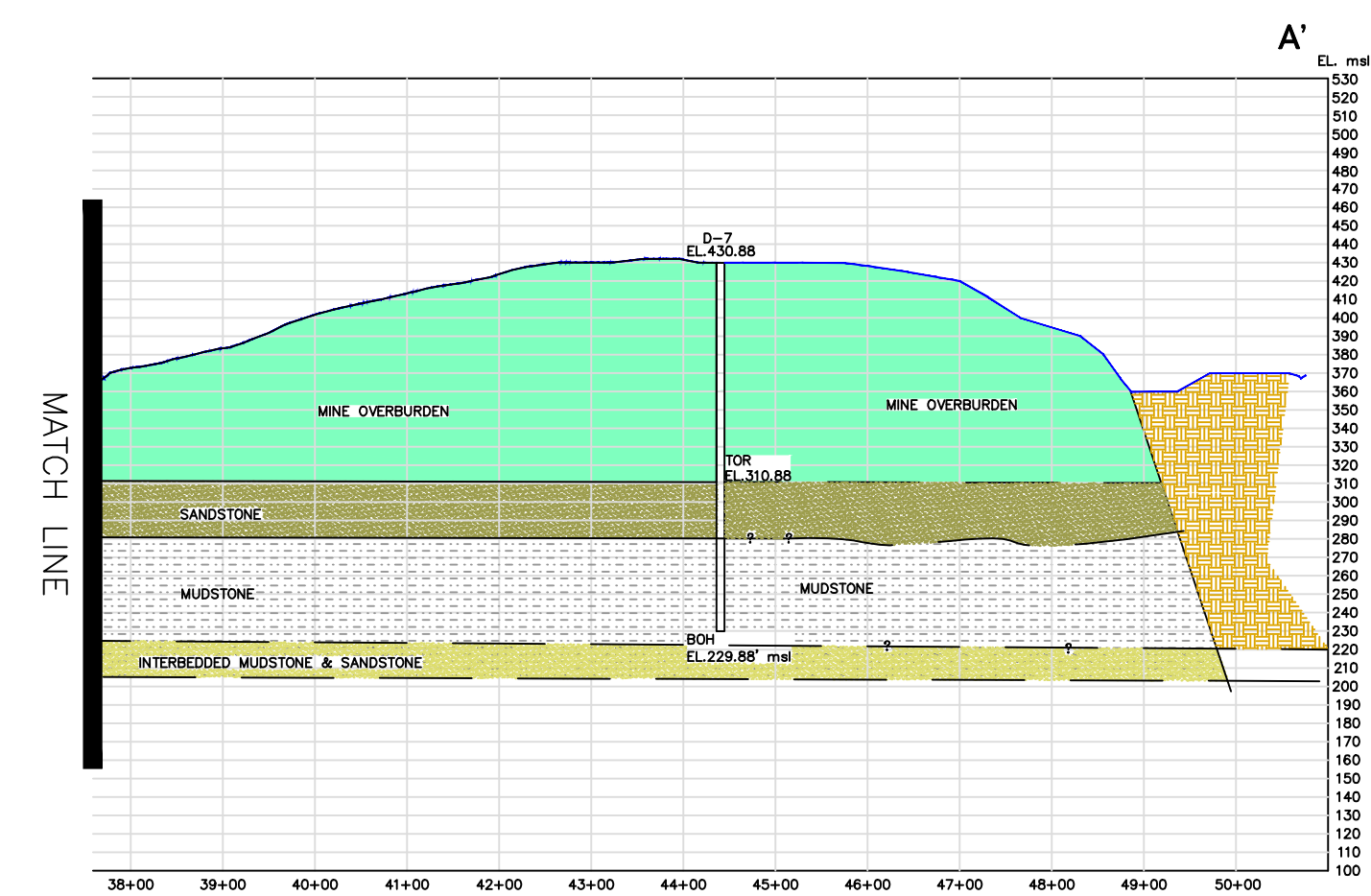
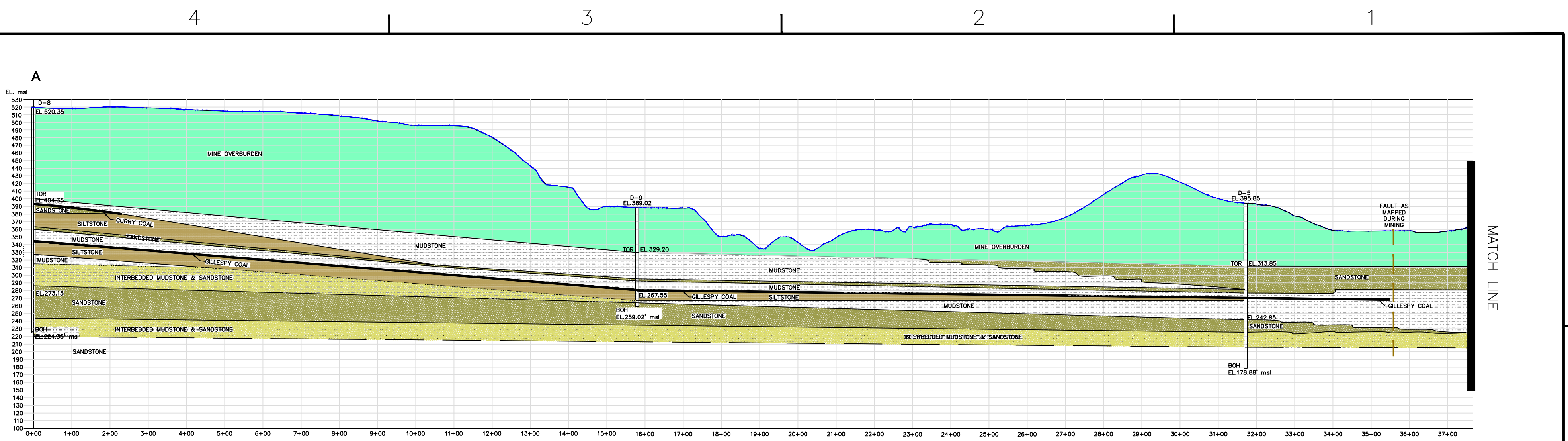


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Every day, every job, safely.

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Every day, every job, safely.

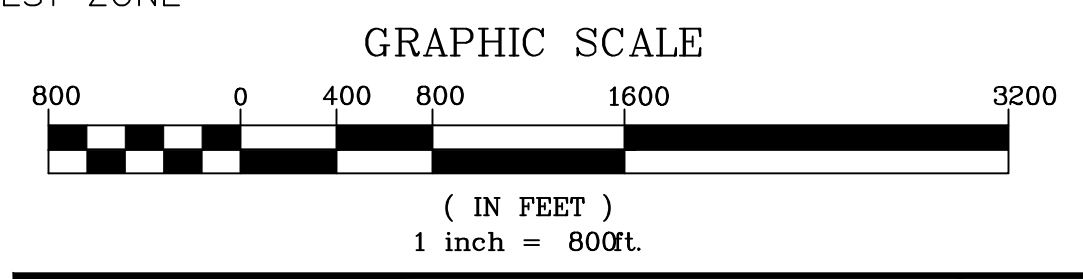
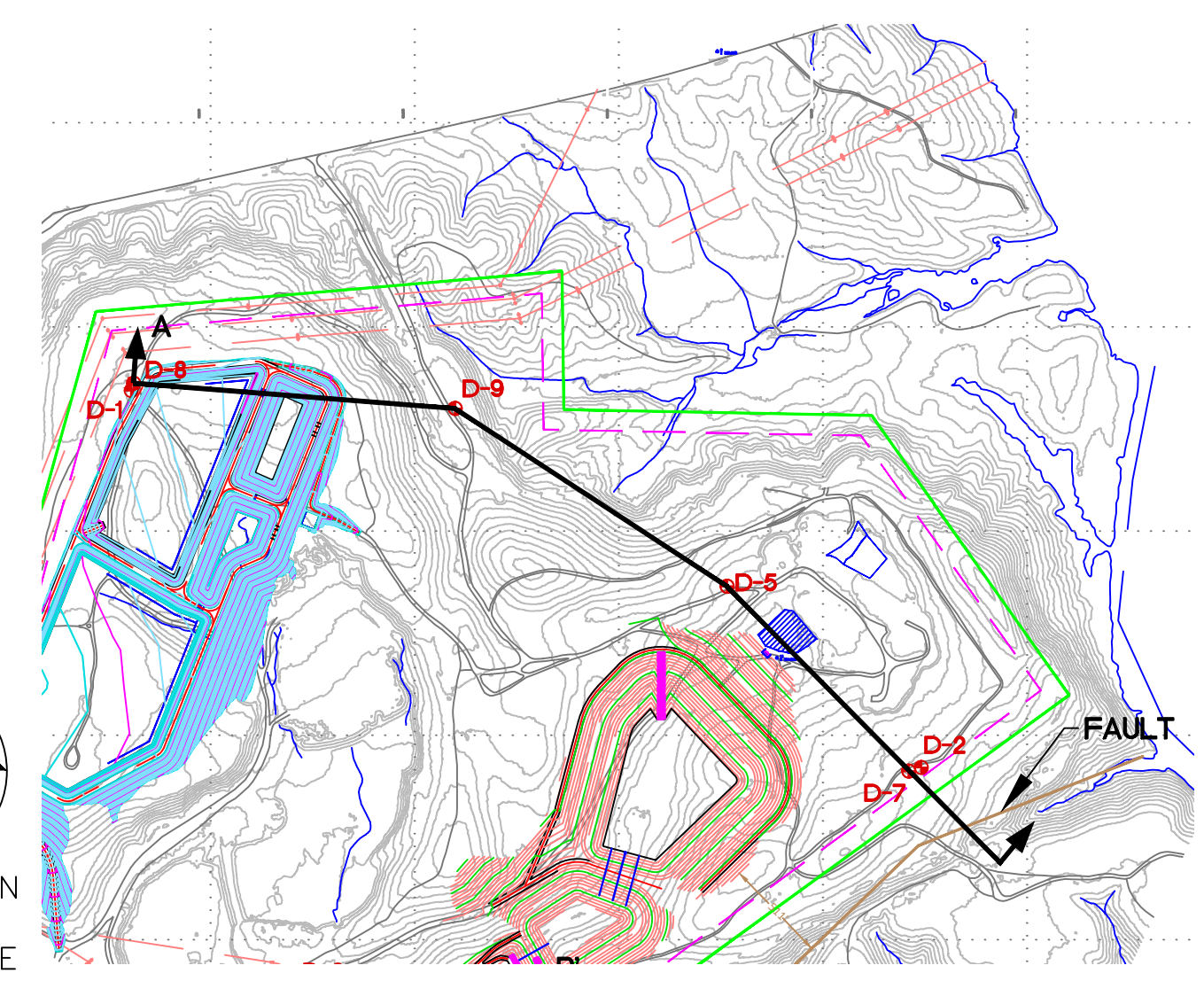
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Every day, every job, safely.



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HORIZ: 1" = 200'

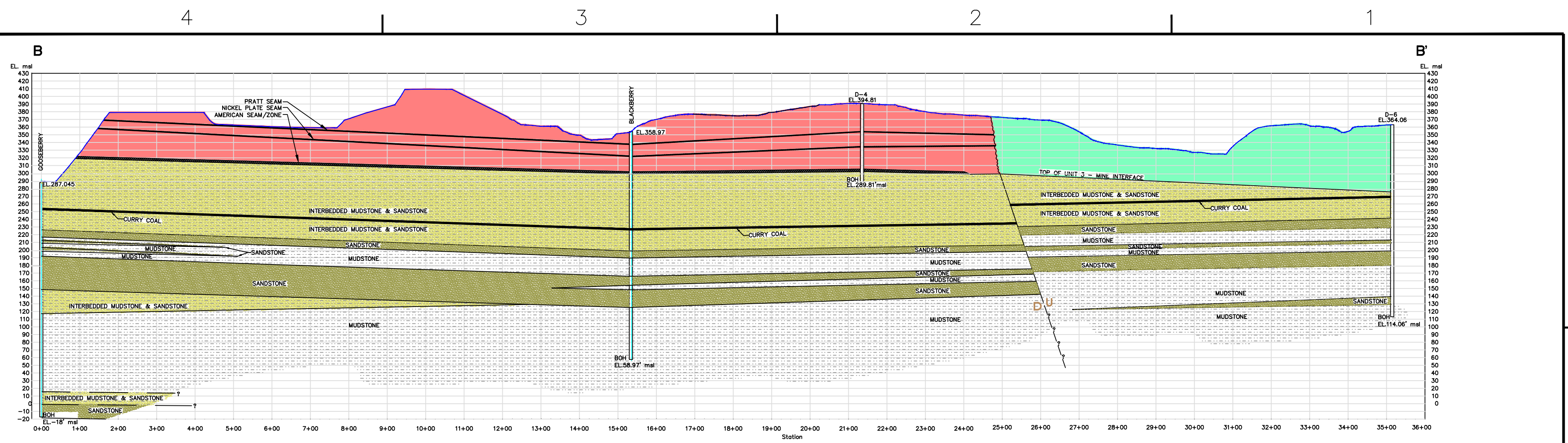
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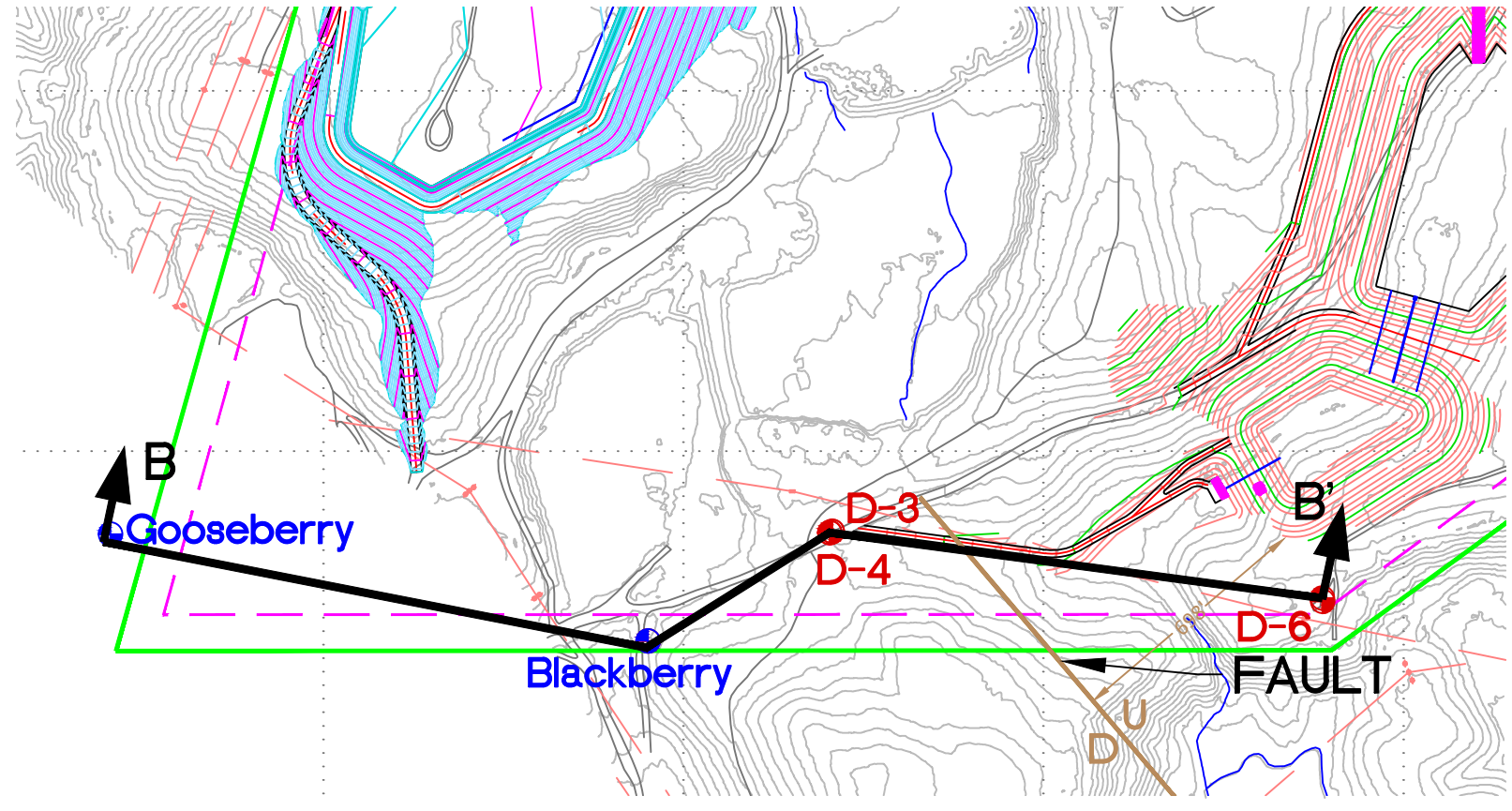
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REVISION 0      DATE 07/07/2017 ISSUED FOR REPORT					PLANT GORGAS UNIT 8, UNIT 9 AND UNIT 10 CCB STORAGE FACILITY GEOLOGIC CROSS SECTION A-A'													
BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR	BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR	SCALE	DRAWING NUMBER	SHEET	CONT'D	REV
GBD	GBD	SCB	XXX	XXX	XXX	XXX	GBD	GBD	SCB	XXX	XXX	XXX	XXX	AS SHOWN	<b>FIGURE 4a</b>	1	FINAL	0



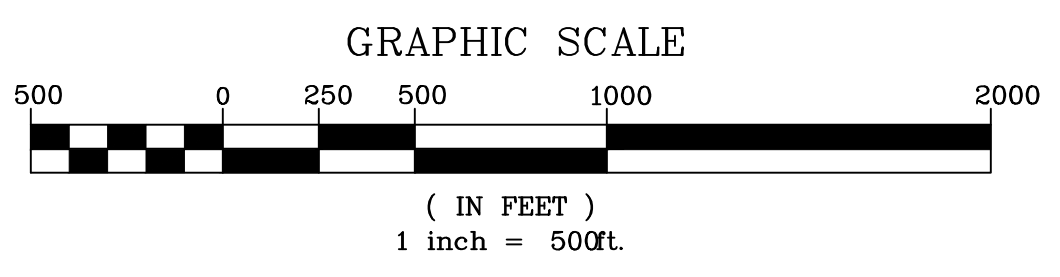
target ZER Every day, every job, safely.



SECTION B-B'  
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HORIZ: 1" = 200'



STATE PLAN  
NAD 27  
WEST ZONE



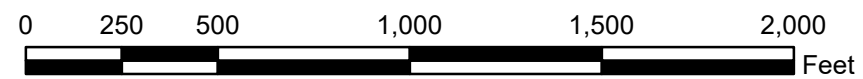
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REVISION 0							DATE 07/07/2017							PLANT GORGAS UNIT 8, UNIT 9 AND UNIT 10 CCB STORAGE FACILITY GEOLOGIC CROSS SECTION B-B'					
ISSUED FOR REPORT																			
BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR	BY	CHK'D	CIVIL APPR	ELECT APPR	I/C APPR	MECH APPR	DISC MGR	SCALE	DRAWING NUMBER		SHEET	CONT'D	REV
GBD	GBD	SCB	XXX	XXX	XXX	XXX	GBD	GBD	SCB	XXX	XXX	XXX	XXX	AS SHOWN	FIGURE 4b		1	FINAL	0





**Legend**

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



SCALE 1:6000

DATE 1/27/2020

DRAWN BY KAR

CHECKED BY GBD

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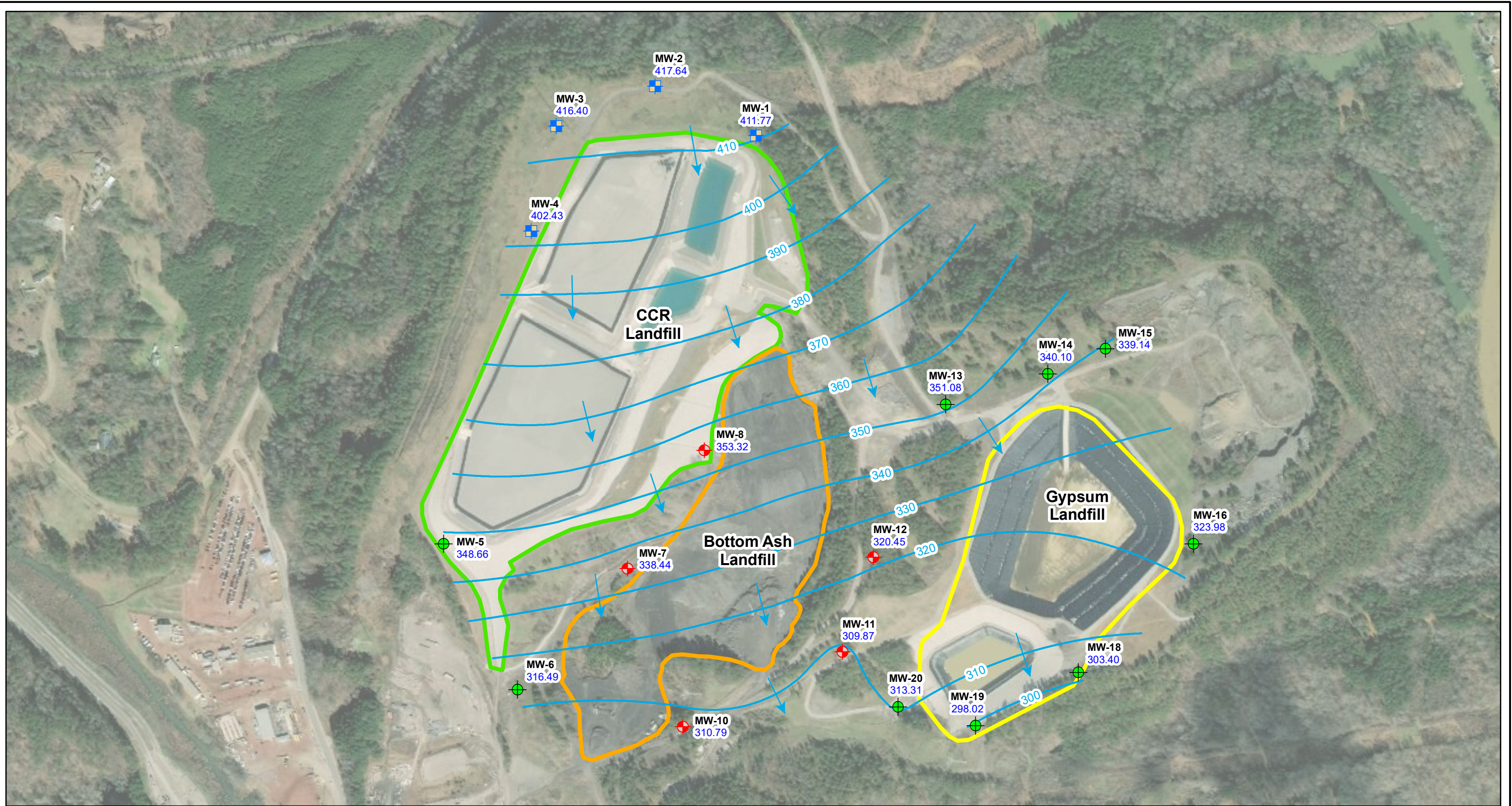
**MONITORING WELL LOCATION MAP  
PLANT GORGAS BOTTOM ASH LANDFILL**

FIGURE NO

**FIGURE 5**



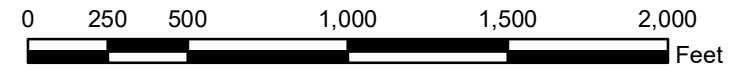




- Legend**
- Downgradient Monitoring Well
  - Upgradient Monitoring Well
  - Monitoring Well
  - Approximate Groundwater Flow Direction
  - Potentiometric Surface Contour (ft NAVD88)

- Bottom Ash Landfill Boundary (Approximate)
- CCR Landfill Boundary (Approximate)
- Gypsum Landfill Boundary (Approximate)

**MW-1** Well ID  
411.77 Groundwater Elevation



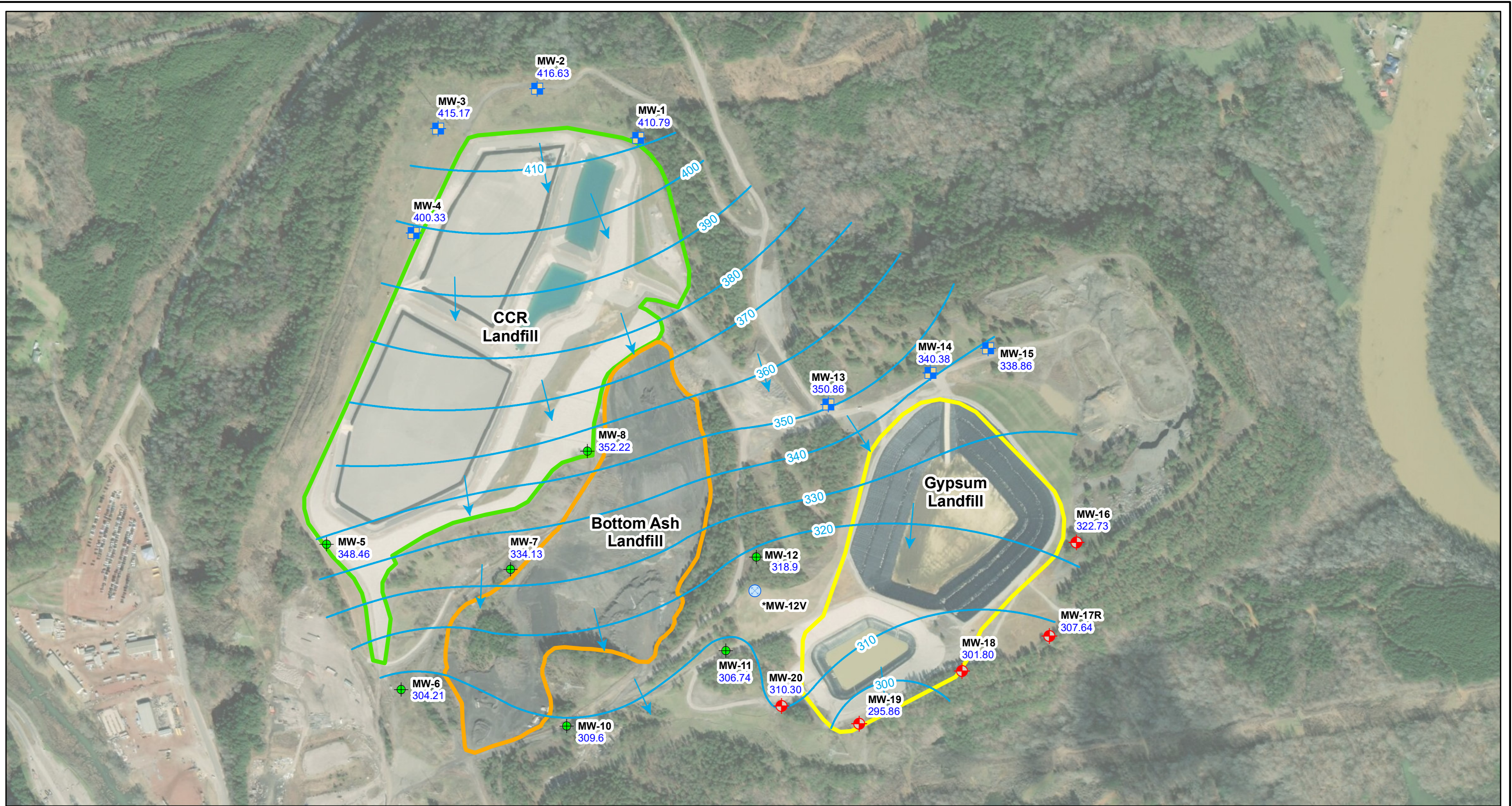
NOTES: 1. NAVD88 indicates North American Vertical Datum of 1988.  
2. NM indicates not measured.

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DATE	1/13/2020
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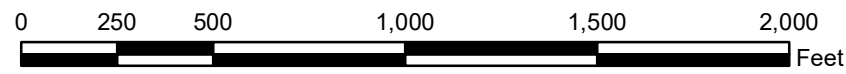
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POTENTIOMETRIC SURFACE CONTOUR MAP MAY 13, 2019 PLANT GORGAS BOTTOM ASH LANDFILL	
FIGURE NO	<b>FIGURE 6</b>







- Legend**
- ◆ Downgradient Monitoring Well
  - Upgradient Monitoring Well
  - ⊗ Vertical Delineation Monitoring Well
  - Monitoring Well
  - Approximate Groundwater Flow Direction
  - Potentiometric Surface Contour (ft NAVD88)
  - CCR Landfill Boundary (Approximate)
  - Gypsum Landfill Boundary (Approximate)
- |             |                       |
|-------------|-----------------------|
| <b>MW-1</b> | Well ID               |
| 410.79      | Groundwater Elevation |



NOTES: 1. NAVD88 indicates North American Vertical Datum of 1988.  
 2. \*MW-12V was screened at a different depth and was not factored into potentiometric contours.

SCALE	1:6000
DATE	1/27/2020
DRAWN BY	KAR
CHECKED BY	GBD

DRAWING TITLE	
POTENTIOMETRIC SURFACE CONTOUR MAP OCTOBER 7, 2019 PLANT GORGAS BOTTOM ASH LANDFILL	
FIGURE NO	<b>FIGURE 7</b>
Southern Company	



# Tables

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

<b>Well Name</b>	<b>Purpose</b>	<b>Northing</b>	<b>Easting</b>	<b>Ground Elevation</b>	<b>Top of Casing Elevation</b>	<b>Well Depth feet Below Top of Casing</b>	<b>Top of Screen Elevation (Ft. MSL)</b>	<b>Bottom of Screen Elevation (ft. MSL)</b>	<b>Screen Length feet</b>
MW-1	Upgradient	1330794.064	594082.361	499.19	502.25	107.56	405.09	395.09	10
MW-2	Upgradient	1331053.309	593548.802	498.54	502.12	94.58	417.94	407.94	10
MW-3	Upgradient	1330842.402	593025.397	522.23	525.90	119.07	417.23	407.23	10
MW-4	Upgradient	1330289.727	592896.414	516.67	518.63	128.66	400.37	390.37	10
MW-7	Downgradient	1328515.235	593408.341	391.59	394.59	74.00	330.99	320.99	10
MW-8	Downgradient	1329140.729	593813.964	413.15	416.10	72.25	354.25	344.25	10
MW-10	Downgradient	1327686.069	593704.952	391.66	395.10	108.64	306.86	286.86	20
MW-11	Downgradient	1328083.497	594546.311	403.69	406.96	135.00	282.36	272.36	10
MW-12	Downgradient	1328578.93	594708.212	470.70	474.24	169.04	315.60	305.60	10
MW-12V	Vertical Delineation	1328481.68	2063196.25	478.64	481.32	206.08	285.64	275.64	10

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. Top of screen and bottom of screen depths are calculated relative Top of Casing elevation and less the well sump length of 0.4'.

**Table 2.  
Monitoring Parameters and Reporting Limits**

<b>Parameter</b>	<b>Analytical Method</b>	<b>Reporting Limit (mg/L)</b>
<b>Appendix III Parameters</b>		
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
<b>Appendix IV Parameters</b>		
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 Elevation Summary**

Well Name	Top of Casing Elevation (ft. AMSL)	Groundwater Elevation (ft. AMSL)																								
		4/25/2016	6/20/2016	8/8/2016	10/3/2016	11/21/2016	1/17/2017	3/20/2017	4/10/2017	5/30/2017	8/23/2017	10/12/2017	10/13/2017	10/14/2017	10/15/2017	10/16/2017	10/17/2017	11/15/2017	2/12/2018	4/9/2018	5/21/2018	10/29/2018	11/19/2018	3/13/2019	5/13/2019	10/7/2019
MW-1	502.25	411.22	410.70	410.49	410.31	410.10	410.07	410.67	410.89	410.80	411.06	410.70	410.72	410.68	410.73	410.68	410.65	410.66	410.89	411.35	411.47	410.62	410.80	412.11	411.77	410.79
MW-2	502.12	417.36	416.76	416.60	416.21	415.98	416.62	417.24	417.66	416.94	417.02	416.50	416.54	416.49	416.53	416.50	416.51	416.74	419.29	417.32	417.33	416.30	417.67	417.70	417.64	416.63
MW-3	525.9	416.41	415.45	415.00	414.82	414.43	415.27	416.07	418.23	415.53	415.73	415.10	415.14	415.15	415.17	415.13	415.12	415.41	418.49	416.25	416.28	414.85	416.31	418.31	416.40	415.17
MW-4	518.63	402.31	401.79	400.61	400.09	399.53	400.51	402.02	402.50	401.68	401.77	400.79	400.76	400.67	400.67	400.59	400.62	400.60	402.67	402.22	402.24	400.18	402.08	402.68	402.43	400.33
MW-7	394.59	336.39	334.07	333.91	333.86	333.71	333.81	334.10	336.18	334.24	335.75	334.36	334.53	334.45	334.45	334.42	334.41	334.14	336.82	335.68	336.60	334.01	337.61	339.54	338.44	334.13
MW-8	416.1	351.49	351.75	351.95	352.15	352.16	353.56	352.92	353.12	353.12	353.29	353.39	353.32	353.31	353.40	353.34	353.31	353.30	353.44	353.50	353.55	353.08	353.37	353.47	353.32	352.22
MW-10	395.1	310.15	309.72	309.51	309.27	308.95	309.08	309.71	310.10	309.77	310.00	309.79	309.78	309.75	309.75	309.74	309.72	309.73	310.54	310.12	310.25	309.62	310.39	311.24	310.79	309.60
MW-11	406.96	303.90	302.76	303.71	303.50	302.82	303.39	304.10	306.13	305.04	306.62	307.31	307.23	307.18	307.22	307.29	307.20	308.71	310.49	311.06	310.75	308.52	310.79	311.11	309.87	306.74
MW-12	474.24	321.11	319.94	318.35	319.22	319.15	319.20	319.32	319.71	319.35	319.26	319.32	319.32	319.25	319.25	319.26	319.26	319.28	319.49	319.56	320.02	318.96	319.45	321.63	320.45	318.90
MW-12V	481.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	327.31	--	326.23

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



**Table 4.  
Horizontal Groundwater Flow Velocity Calculations**

Source	MW-2 h <sub>1</sub> (ft)	MW-20 h <sub>2</sub> (ft)	Distance Δl (ft)	Hydraulic Gradient Δh/Δl (ft/ft)	Hydraulic Conductivity K	Effective Porosity n	Calculated Groundwater Flow Velocity (ft/d)	Calculated Groundwater Flow Velocity (ft/yr)
5/13/2019	417.64	313.31	3507.0	0.030	8.01	0.15	1.59	579.80
10/7/2019	416.63	310.30	3507.0	0.030	8.01	0.15	1.62	591.00

Source	MW-3 h <sub>1</sub> (ft)	MW-6 h <sub>2</sub> (ft)	Distance Δl (ft)	Hydraulic Gradient Δh/Δl (ft/ft)	Hydraulic Conductivity K	Effective Porosity n	Calculated Groundwater Flow Velocity (ft/d)	Calculated Groundwater Flow Velocity (ft/yr)
5/13/2019	416.40	316.49	2970.0	0.034	8.01	0.15	1.80	655.70
10/7/2019	415.17	304.21	2970.0	0.037	8.01	0.15	2.00	728.20

Source	MW-14 h <sub>1</sub> (ft)	MW-19 h <sub>2</sub> (ft)	Distance Δl (ft)	Hydraulic Gradient Δh/Δl (ft/ft)	Hydraulic Conductivity K	Effective Porosity n	Calculated Groundwater Flow Velocity (ft/d)	Calculated Groundwater Flow Velocity (ft/yr)
5/13/2019	340.10	298.02	1890.0	0.022	8.01	0.15	1.19	434.00
10/7/2019	340.38	295.86	1890.0	0.024	8.01	0.15		459.10

Notes:

ft=feet

ft/d = feet/day

ft/ft = feet per foot

ft/yr = feet per year

**Table 5.  
Relative Percent Difference Calculations**

<b>2019 1st Semi-Annual Monitoring Event</b>				
<b>Parameter</b>	<b>Units</b>	<b>Monitoring Point Identification</b>		<b>Relative Percent Difference (RPD %)</b>
		<b>MW-2</b>	<b>MW-2 DUP</b>	
Calcium	mg/L	168	170	1.2
Chloride	mg/L	2.98	2.87	3.8
Fluoride	mg/L	0.170	0.164	3.6
Sulfate	mg/L	948	873	8.2
Barium	mg/L	0.0109	0.0112	2.7
Cobalt	mg/L	0.0222	0.0221	0.5
TDS	mg/L	1480	1540	4.0
Lithium	mg/L	0.0445	0.0443	0.5
<b>Parameter</b>	<b>Units</b>	<b>Monitoring Point Identification</b>		<b>Relative Percent Difference (RPD %)</b>
		<b>MW-20</b>	<b>MW-20 DUP</b>	
Calcium	mg/L	381	384	0.8
Chloride	mg/L	57.7	67.3	15.4
Fluoride	mg/L	0.120	0.124	3.3
Sulfate	mg/L	1560	1640	5.0
Barium	mg/L	0.0141	0.0145	2.8
TDS	mg/L	2600	2530	2.7
Lithium	mg/L	0.241	0.242	0.4

**Table 5.  
Relative Percent Difference Calculations**

<b>2019 2nd Semi-Annual Monitoring Event</b>				
<b>Parameter</b>	<b>Units</b>	<b>Monitoring Point Identification</b>		<b>Relative Percent Difference (RPD %)</b>
		<b>MW-2</b>	<b>MW-2 DUP</b>	
Calcium	mg/L	190	188	1.1
Chloride	mg/L	4.26	4.28	0.5
Fluoride	mg/L	0.164	0.159	3.1
Sulfate	mg/L	1230	1110	10.3
TDS	mg/L	1840	1820	1.1
Barium	mg/L	0.0151	0.0149	1.3
Cobalt	mg/L	0.0674	0.0684	1.5
Lithium	mg/L	0.0677	0.0681	0.6
<b>Parameter</b>	<b>Units</b>	<b>Monitoring Point Identification</b>		<b>Relative Percent Difference (RPD %)</b>
		<b>MW-16</b>	<b>MW-16 DUP</b>	
Calcium	mg/L	325	319	1.9
Chloride	mg/L	3.88	3.83	1.3
Fluoride	mg/L	0.161	0.166	3.1
Sulfate	mg/L	1490	1500	0.7
TDS	mg/L	2460	2380	3.3
Barium	mg/L	0.0140	0.0133	5.1
Cobalt	mg/L	0.0111	0.0113	1.8

**Table 6.**  
**Summary of Background Levels and Groundwater Protection Standards**

<b>Analyte</b>	<b>Units</b>	<b>Background</b>	<b>Federal GWPS</b>	<b>State GWPS</b>
Antimony	mg/L	0.003	0.006	0.006
Arsenic	mg/L	0.005	0.01	0.01
Barium	mg/L	0.01573; 0.01526	2	2
Beryllium	mg/L	0.00689; 0.0185	0.004	0.004
Cadmium	mg/L	0.00473; 0.00598	0.005	0.005
Chromium	mg/L	0.01; 0.0105	0.1	0.1
Cobalt	mg/L	0.692; 1.07	0.006	1.07
Combined Radium-226/228	pCi/L	1.018; 1.098	5	5
Fluoride	mg/L	0.5418; 0.5301	4	4
Lead	mg/L	0.00692	0.015	0.015
Lithium	mg/L	0.323; 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	0.0209; 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)(i)
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	Non-Detect	270	2.35	0.105	5.11	1760	2600
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
MW-7	5/15/2019	0.0678(J)	302	15.9	0.169	6.61	1510	2310
MW-8	5/15/2019	0.0689(J)	305	52	0.192	6.6	1640	2540
MW-10	5/15/2019	0.234	186	6.93	0.276	6.37	780	1230
MW-11	5/15/2019	0.101(J)	380	75.4	0.1	6.62	1510	2560
MW-12	5/15/2019	0.239	411	8.51	0.185	5.82	2800	3890

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\* - data validation flag associated with equipment blank detection; result treated as non-detect
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
<b>GWPS</b>		<b>0.006</b>	<b>0.01</b>	<b>2</b>	<b>0.004</b>	<b>0.005</b>	<b>0.1</b>	<b>0.49</b>
<b>UNITS</b>		<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>
<b>MW-1</b>	<b>4/10/2019</b>	0.00114(J), (+) U*	Non-Detect	0.0102	Non-Detect	0.00219	Non-Detect	0.0453
<b>MW-1</b>	<b>5/14/2019</b>	0.00137(J), (+) U*	Non-Detect	0.00913(J)	Non-Detect	0.00238	Non-Detect	0.0485
<b>MW-2</b>	<b>4/10/2019</b>	0.000993(J), (+) U*	Non-Detect	0.0111	Non-Detect	Non-Detect	Non-Detect	0.0152
<b>MW-2</b>	<b>5/14/2019</b>	0.000989(J), (+) U*	Non-Detect	0.0109	Non-Detect	Non-Detect	Non-Detect	0.0222
<b>MW-3</b>	<b>4/10/2019</b>	0.000978(J), (+) U*	Non-Detect	0.0101	Non-Detect	0.00337	Non-Detect	0.0144
<b>MW-3</b>	<b>5/14/2019</b>	Non-Detect	Non-Detect	0.00922(J)	Non-Detect	0.0013	Non-Detect	0.00536
<b>MW-4</b>	<b>4/10/2019</b>	0.00097(J), (+) U*	Non-Detect	0.0107	Non-Detect	Non-Detect	Non-Detect	Non-Detect
<b>MW-4</b>	<b>5/14/2019</b>	Non-Detect	Non-Detect	0.00949(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect
<b>MW-7</b>	<b>5/15/2019</b>	Non-Detect	0.00138(J)	0.0114	Non-Detect	Non-Detect	Non-Detect	0.00234(J)
<b>MW-8</b>	<b>5/15/2019</b>	Non-Detect	0.00136(J)	0.0122	Non-Detect	Non-Detect	Non-Detect	0.00643
<b>MW-10</b>	<b>5/15/2019</b>	0.000996(J), (+) U*	0.00162(J)	0.0189	0.00177(J)	Non-Detect	Non-Detect	0.0226
<b>MW-11</b>	<b>5/15/2019</b>	Non-Detect	Non-Detect	0.0132	Non-Detect	Non-Detect	Non-Detect	Non-Detect
<b>MW-12</b>	<b>5/15/2019</b>	0.000977(J), (+) U*	0.0511	0.0113	Non-Detect	Non-Detect	Non-Detect	0.0603

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\* - data validation flag associated with equipment blank detection; result treated as non-detect
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
<b>GWPS</b>		<b>5</b>	<b>4</b>	<b>0.015</b>	<b>0.384</b>	<b>0.002</b>	<b>0.1</b>	<b>0.05</b>	<b>0.002</b>
<b>UNITS</b>		<b>pCi/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>
<b>MW-1</b>	<b>4/10/2019</b>	n/a	0.105	Non-Detect	0.0294	Non-Detect	Non-Detect	0.00467(J)	Non-Detect
<b>MW-1</b>	<b>5/14/2019</b>	0.509	0.119	Non-Detect	0.026(J)	Non-Detect	Non-Detect	0.00316(J)	Non-Detect
<b>MW-2</b>	<b>4/10/2019</b>	n/a	0.262	Non-Detect	0.0574	Non-Detect	Non-Detect	0.00322(J)	Non-Detect
<b>MW-2</b>	<b>5/14/2019</b>	0.579	0.170	Non-Detect	0.0445	Non-Detect	Non-Detect	Non-Detect	Non-Detect
<b>MW-3</b>	<b>4/10/2019</b>	n/a	0.273	Non-Detect	0.0905	Non-Detect	Non-Detect	0.0113	Non-Detect
<b>MW-3</b>	<b>5/14/2019</b>	0.176(U)	0.281	Non-Detect	0.0828	Non-Detect	Non-Detect	0.0119	Non-Detect
<b>MW-4</b>	<b>4/10/2019</b>	n/a	0.384	Non-Detect	0.0504	Non-Detect	Non-Detect	Non-Detect	Non-Detect
<b>MW-4</b>	<b>5/14/2019</b>	0.352(U)	0.335	Non-Detect	0.0485	Non-Detect	Non-Detect	0.00201(J)	Non-Detect
<b>MW-7</b>	<b>5/15/2019</b>	0.61	0.169	Non-Detect	0.127	Non-Detect	Non-Detect	Non-Detect	Non-Detect
<b>MW-8</b>	<b>5/15/2019</b>	0.697	0.192	Non-Detect	0.16	Non-Detect	Non-Detect	Non-Detect	Non-Detect
<b>MW-10</b>	<b>5/15/2019</b>	0.421(U)	0.276	Non-Detect	0.23	Non-Detect	Non-Detect	0.00289(J)	Non-Detect
<b>MW-11</b>	<b>5/15/2019</b>	1.18	0.1	Non-Detect	0.251	Non-Detect	Non-Detect	Non-Detect	Non-Detect
<b>MW-12</b>	<b>5/15/2019</b>	1	0.185	Non-Detect	0.0736	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\* - data validation flag associated with equipment blank detection; result treated as non-detect
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)	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)	194	4.04	0.114	5.98	1170	1830
MW-3	10/8/2019	0.0537(J)	371	1.36	0.225	4.98	2950	4720
MW-3	10/16/2019	0.05(J)	346	1.4	0.106	4.51	2820	4210
MW-4	10/10/2019	0.0487(J)	302	1.93	0.304	6.15	2690	4000
MW-4	10/16/2019	0.0505(J)	356	1.92	0.302	6.19	3050	4060
MW-7	10/8/2019	0.073(J)	294	16.8	0.183	6.52	1570	2340
MW-8	10/9/2019	0.0723(J)	329	39.2	0.189	6.67	1550	2590
MW-10	10/9/2019	0.181	146	4.51	0.142	6.5	748	1120
MW-11	10/10/2019	0.109	373	84.6	0.0915(J)	6.69	719	2460
MW-12	10/9/2019	0.315	359	8.73	0.215	5.85	2550	4090

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. TDS - Total Dissolved Solids
5. 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.
6. 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	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt
<b>GWPS</b>		<b>0.006</b>	<b>0.01</b>	<b>2</b>	<b>0.004</b>	<b>0.005</b>	<b>0.1</b>	<b>1.07</b>
<b>UNITS</b>		<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>
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
MW-7	10/8/2019	Non-Detect	0.00145(J)	0.0145	Non-Detect	Non-Detect	Non-Detect	0.00408(J)
MW-8	10/9/2019	Non-Detect	0.00142(J)	0.0137	Non-Detect	Non-Detect	Non-Detect	0.00864
MW-10	10/9/2019	Non-Detect	Non-Detect	0.0204	0.00072(J)	Non-Detect	Non-Detect	0.00969
MW-11	10/10/2019	Non-Detect	Non-Detect	0.0154	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	10/9/2019	Non-Detect	0.0507	0.0126	Non-Detect	Non-Detect	Non-Detect	0.0512

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. TDS - Total Dissolved Solids

5. 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.

6. 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
<b>GWPS</b>		<b>5</b>	<b>4</b>	<b>0.015</b>	<b>0.419</b>	<b>0.002</b>	<b>0.1</b>	<b>0.05</b>	<b>0.002</b>
<b>UNITS</b>		<b>pCi/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>	<b>mg/L</b>
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
MW-7	10/8/2019	0.345(U)	0.183	Non-Detect	0.131	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	10/9/2019	0.416(U)	0.189	Non-Detect	0.163	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	10/9/2019	0.742(U)	0.142	Non-Detect	0.202	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	10/10/2019	0.902	0.0915(J)	0.00145(J)	0.275	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	10/9/2019	1.18	0.215	Non-Detect	0.0838	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. TDS - Total Dissolved Solids

5. 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.

6. 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																					
		April 26 - 29, 2016	June 20 - 28, 2016	August 8 - 12, 2016	October 3 - 7, 2016	November 21 - 23, 2016	January 17 - 19, 2017	March 20- 24, 2017	May 30 - June 1, 2017	August 23 - 25, 2017	October 12, 2017	October 13, 2017	October 14, 2017	October 15, 2017	October 16, 2017	October 17, 2017	November 15 - 17, 2017	February 13 -16, 2018	May 21 - 25, 2018	November 19 - 21, 2018	March 12, 2019	May 13 - 17, 2019	October 7 - 11, 2019
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Detection	Background Catch-up	Background Catch-up	Background Catch-up	Background Catch-up	Background Catch-up	Background Catch-up	Detection	Assessment	2018 Semi-Annual 01	2018 Semi-Annual 02	2019 Semi-Annual 01	2019 Semi-Annual 01	
MW-1	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	-	-	-	-	-	-	-	S01	ASM01	ASM02		ASM03	ASM04
MW-2	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	-	-	-	-	-	-	-	S01	ASM01	ASM02		ASM03	ASM04
MW-3	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	-	-	-	-	-	-	-	S01	ASM01	ASM02		ASM03	ASM04
MW-4	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	-	-	-	-	-	-	-	S01	ASM01	ASM02		ASM03	ASM04
MW-7	Downgradient	BG01	BG02	-	-	-	-	-	-	-	BG03	BG04	BG05	BG06	BG07	BG08	D01	S01	ASM01	ASM02		ASM03	ASM04
MW-8	Downgradient	BG01	BG02	-	-	-	-	-	-	-	BG03	BG04	BG05	BG06	BG07	BG08	D01	S01	ASM01	ASM02		ASM03	ASM04
MW-10	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	-	-	-	-	-	-	-	S01	ASM01	ASM02		ASM03	ASM04
MW-11	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	-	-	-	-	-	-	-	S01	ASM01	ASM02		ASM03	ASM04
MW-12	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	-	-	-	-	-	-	-	S01	ASM01	ASM02		ASM03	ASM04
MW-12V	Vertical Delineation	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	-	-	-	-	-	-	-	S01	ASM01	ASM02	ASM03	-	ASM04

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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 Bottom Ash Landfill

### Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	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	0.004	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	0.622	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	0.159(U)	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	0.511(U)	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	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	Non-Detect	270	2.35	0.105	5.11	1760	2600	0.00114(J)	Non-Detect	0.0102	Non-Detect	0.00219	Non-Detect	0.0453	n/a	0.105	Non-Detect	0.0294	Non-Detect	Non-Detect	0.00467(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 Bottom Ash Landfill

### Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	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	0.004	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	-0.0718(U)	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	0.231(U)	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	n/a	0.262	Non-Detect	0.0574	Non-Detect	Non-Detect	0.00322(J)	Non-Detect
MW-2	5/14/2019	Non-Detect	170	2.87	0.164	6.07	873	1540	0.000875(J)	Non-Detect	0.0112	Non-Detect	Non-Detect	Non-Detect	0.0221	0.579	0.164	Non-Detect	0.0443	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-2	10/8/2019	0.0354(J)	188	4.28	0.159	5.96	1110	1820	Non-Detect	Non-Detect	0.0149	Non-Detect	Non-Detect	Non-Detect	0.0684	0.493(U)	0.159	Non-Detect	0.0681	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 Bottom Ash Landfill

### Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	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	0.004	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(O)	0.00373(J)	0.232	0.484(U)	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	0.2(U)	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	0.378(U)	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(O)	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(O)	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(O)	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(E)	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	n/a	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 Bottom Ash Landfill

### Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	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	0.004	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	0.434(U)	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	0.287(U)	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	0.516(U)	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	n/a	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 Bottom Ash Landfill

### Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	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	0.004	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-7	4/27/2016	0.253	198	1.71	0.2(J)	6.6	1050	1640	Non-Detect	Non-Detect	0.0107	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.374(U)	0.2(J)	Non-Detect	0.163	Non-Detect	Non-Detect	0.00445(J)	Non-Detect
MW-7	6/21/2016	0.0768(J)	327	2.04	0.163(J)	6.62	1410	2460	Non-Detect	0.00165(J)	0.0129	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.151(U)	0.163(J)	Non-Detect	0.171	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	10/12/2017	0.0685(J)	317	31	0.17	6.64	1400	2460	Non-Detect	0.00188(J)	0.014	Non-Detect	Non-Detect	Non-Detect	0.00269(J)	0.182(U)	0.17	Non-Detect	0.134	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	10/13/2017	0.0674(J)	302	32	0.19	6.64	1400	2420	Non-Detect	0.00181(J)	0.0147	Non-Detect	Non-Detect	Non-Detect	0.00341(J)	0.517(U)	0.19	Non-Detect	0.127	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	10/14/2017	0.0756(J)	283	33	0.2	6.66	1300	2320	Non-Detect	0.00127(J)	0.0123	Non-Detect	Non-Detect	Non-Detect	0.00451(J)	0.43(U)	0.2	Non-Detect	0.112	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	10/15/2017	0.0719(J)	294	34	0.2	6.67	1300	1150	Non-Detect	0.00144(J)	0.0132	Non-Detect	Non-Detect	Non-Detect	0.00371(J)	0.45(U)	0.2	Non-Detect	0.129	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	10/16/2017	0.0726(J)	284	34	0.2	6.67	1300	2320	Non-Detect	0.00139(J)	0.0122	Non-Detect	Non-Detect	Non-Detect	0.00371(J)	0.55(U)	0.2	Non-Detect	0.122	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	10/17/2017	0.0716(J)	294	34	0.19	6.66	1300	2360	Non-Detect	0.00138(J)	0.0121	Non-Detect	Non-Detect	Non-Detect	0.0035(J)	0.474(U)	0.19	Non-Detect	0.122	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	11/16/2017	0.0644(J)	299	35	0.18	6.62	1300	2460	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
MW-7	2/14/2018	n/a	n/a	n/a	0.18	6.67	n/a	n/a	Non-Detect	0.00131(J)	0.0119	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.736	0.18	Non-Detect	0.131	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	5/23/2018	0.0715(J)	321	28	0.18	6.63	1900	2390	Non-Detect	0.00155(J)	0.0135	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.0192(U)	0.18	Non-Detect	0.129	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	11/20/2018	0.0772(J)	306	20	0.19	6.61	1100	2090	Non-Detect	0.00133(J)	0.0116	Non-Detect	Non-Detect	Non-Detect	0.00306(J)	0.494	0.19	Non-Detect	0.12	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	5/15/2019	0.0678(J)	302	15.9	0.169	6.61	1510	2310	Non-Detect	0.00138(J)	0.0114	Non-Detect	Non-Detect	Non-Detect	0.00234(J)	0.61	0.169	Non-Detect	0.127	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-7	10/8/2019	0.073(J)	294	16.8	0.183	6.52	1570	2340	Non-Detect	0.00145(J)	0.0145	Non-Detect	Non-Detect	Non-Detect	0.00408(J)	0.345(U)	0.183	Non-Detect	0.131	Non-Detect	Non-Detect	Non-Detect	Non-Detect

# Analytical Data Summary

## Plant Gorgas Bottom Ash Landfill

### Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	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	0.004	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-8	4/27/2016	0.0662(J)	282	2.34	0.212(J)	6.55	1550	2480	Non-Detect	Non-Detect	0.0108	Non-Detect	Non-Detect	Non-Detect	0.00436(J)	-0.207(U)	0.212(J)	Non-Detect	0.171	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	6/21/2016	0.0681(J)	291	2.29	0.211(J)	6.47	1470	2360	Non-Detect	0.00101(J)	0.0116	Non-Detect	Non-Detect	Non-Detect	0.00484(J)	0.529	0.211(J)	Non-Detect	0.181	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	10/12/2017	0.0687(J)	300	150	0.22	6.5	1400	2530	Non-Detect	0.00197(J)	0.0141	Non-Detect	Non-Detect	Non-Detect	0.005(J)	0.267(U)	0.22	Non-Detect	0.182	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	10/13/2017	0.0831(J)	298	130	0.23	6.51	1600	2740	Non-Detect	0.00159(J)	0.0148	Non-Detect	Non-Detect	Non-Detect	0.0052(J)	0.873(U)	0.23	Non-Detect	0.189	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	10/14/2017	0.0702(J)	299	140	0.22	6.53	1400	2630	Non-Detect	0.00126(J)	0.0134	Non-Detect	Non-Detect	Non-Detect	0.00513(J)	1.6(U)	0.22	Non-Detect	0.177	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	10/15/2017	0.0702(J)	307	130	0.22	6.53	1400	2530	Non-Detect	0.00106(J)	0.0139	Non-Detect	Non-Detect	Non-Detect	0.00518(J)	0.327(U)	0.22	Non-Detect	0.191	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	10/16/2017	0.0707(J)	299	140	0.22	6.54	1400	2740	Non-Detect	0.00106(J)	0.0129	Non-Detect	Non-Detect	Non-Detect	0.00453(J)	0.524(U)	0.22	Non-Detect	0.189	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	10/17/2017	0.0695(J)	294	140	0.21	6.54	1400	2650	Non-Detect	0.00103(J)	0.0126	Non-Detect	Non-Detect	Non-Detect	0.00463(J)	0.0455(U)	0.21	Non-Detect	0.184	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	11/16/2017	0.0675(J)	308	130	0.22	6.51	1400	2650	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.22	n/a	n/a	n/a	n/a	n/a	n/a
MW-8	2/14/2018	n/a	n/a	n/a	0.21	6.55	n/a	n/a	Non-Detect	0.00185(J)	0.0126	Non-Detect	Non-Detect	Non-Detect	0.00441(J)	0.633	0.21	Non-Detect	0.183	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	5/23/2018	0.0693(J)	344	75	0.21	6.52	2100	2750	Non-Detect	0.00157(J)	0.0137	Non-Detect	Non-Detect	Non-Detect	0.00466(J)	0.377(U)	0.21	Non-Detect	0.194	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	11/20/2018	0.0771(J)	327	45	0.21	6.58	1400	2520	Non-Detect	0.00173(J)	0.0123	Non-Detect	Non-Detect	Non-Detect	0.00551	0.28(U)	0.21	Non-Detect	0.181	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	5/15/2019	0.0689(J)	305	52	0.192	6.6	1640	2540	Non-Detect	0.00136(J)	0.0122	Non-Detect	Non-Detect	Non-Detect	0.00643	0.697	0.192	Non-Detect	0.16	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-8	10/9/2019	0.0723(J)	329	39.2	0.189	6.67	1550	2590	Non-Detect	0.00142(J)	0.0137	Non-Detect	Non-Detect	Non-Detect	0.00864	0.416(U)	0.189	Non-Detect	0.163	Non-Detect	Non-Detect	Non-Detect	Non-Detect

# Analytical Data Summary

## Plant Gorgas Bottom Ash Landfill

### Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	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	0.004	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-10	4/27/2016	0.371	279	1.46	0.337	5.8	1250	1940	Non-Detect	0.00196(J)	0.0187	0.00486	0.000452(J)	Non-Detect	0.0543	0.316(U)	0.337	Non-Detect	0.435	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	6/23/2016	0.251	256	1.49	0.155(J)	6.38	1010	1680	Non-Detect	Non-Detect	0.0181	Non-Detect	Non-Detect	Non-Detect	0.0106	0.451(U)	0.155(J)	Non-Detect	0.285	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	8/10/2016	0.216	245	1.55	0.123(J)	6.47	992	1660	Non-Detect	Non-Detect	0.0186	Non-Detect	Non-Detect	Non-Detect	0.00438(J)	0.368(U)	0.123(J)	Non-Detect	0.231	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	10/5/2016	0.187	225	1.58	0.086(J)	6.42	1010	1640	Non-Detect	Non-Detect	0.023	Non-Detect	Non-Detect	Non-Detect	0.00663(J)	0.515	0.086(J)	Non-Detect	0.231	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	11/21/2016	0.182	179	1.62	0.056(J)	6.38	834	1390	Non-Detect	Non-Detect	0.0219	Non-Detect	Non-Detect	Non-Detect	0.0109	0.489(U)	0.056(J)	Non-Detect	0.236	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	1/17/2017	0.2	168	1.61	0.103(J)	6.35	700	1300	Non-Detect	Non-Detect	0.0203	Non-Detect	Non-Detect	Non-Detect	0.0146	0.236(U)	0.103(J)	Non-Detect	0.3	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	3/21/2017	0.178	152	1.6(J)	0.15	6.38	660	1170	Non-Detect	Non-Detect	0.0203	0.000883(J)	Non-Detect	Non-Detect	0.013	0.101(U)	0.15	Non-Detect	0.218	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	5/31/2017	0.149	130	3.2	0.18	6.4	700	1210	Non-Detect	Non-Detect	0.0188	0.00123(J)	Non-Detect	Non-Detect	0.0086(J)	1.19	0.18	Non-Detect	0.194	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	8/23/2017	0.181	147	6.1	0.23	6.33	700	1160	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.23	n/a	n/a	n/a	n/a	n/a	n/a
MW-10	2/15/2018	n/a	n/a	n/a	0.23	6.26	n/a	n/a	Non-Detect	Non-Detect	0.0199	0.00235(J)	Non-Detect	Non-Detect	0.0199	0.55	0.23	Non-Detect	0.23	Non-Detect	Non-Detect	0.00272(J)	Non-Detect
MW-10	5/24/2018	0.159	159	5	0.13	6.45	560	1100	Non-Detect	Non-Detect	0.0198	0.001(J)	Non-Detect	Non-Detect	0.00905(J)	0.472	0.13	Non-Detect	0.192	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	11/19/2018	0.211	160	7.8	0.26	6.3	720	1220	Non-Detect	Non-Detect	0.0187	0.00203(J)	Non-Detect	Non-Detect	0.0147	0.167(U)	0.26	Non-Detect	0.211	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-10	5/15/2019	0.234	186	6.93	0.276	6.37	780	1230	0.000996(J)	0.00162(J)	0.0189	0.00177(J)	Non-Detect	Non-Detect	0.0226	0.421(U)	0.276	Non-Detect	0.23	Non-Detect	Non-Detect	0.00289(J)	Non-Detect
MW-10	10/9/2019	0.181	146	4.51	0.142	6.5	748	1120	Non-Detect	Non-Detect	0.0204	0.00072(J)	Non-Detect	Non-Detect	0.00969	0.742(U)	0.142	Non-Detect	0.202	Non-Detect	Non-Detect	Non-Detect	Non-Detect

# Analytical Data Summary

## Plant Gorgas Bottom Ash Landfill

### Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	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	0.004	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-11	4/26/2016	0.094(J)	400	2.16	0.084(J)	6.49	1750	2800	Non-Detect	0.00189(J)	0.011	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.57	0.084(J)	Non-Detect	0.212	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	6/22/2016	0.0959(J)	398	2.16	0.106(J)	6.51	1720	2550	Non-Detect	0.00213(J)	0.0122	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.724	0.106(J)	Non-Detect	0.232	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	8/9/2016	0.0964(J)	399	2.19	0.092(J)	6.49	1740	2860	Non-Detect	0.0021(J)	0.012	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.579	0.092(J)	Non-Detect	0.204	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	10/4/2016	0.0916(J)	389	2.21	0.049(J)	6.51	1750	2800	Non-Detect	0.00206(J)	0.0142	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.372(U)	0.049(J)	Non-Detect	0.198	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	11/21/2016	0.0929(J)	386	2.24	Non-Detect	6.48	1690	2920	Non-Detect	0.00182(J)	0.0114	Non-Detect	Non-Detect	Non-Detect	Non-Detect	1.19	Non-Detect	Non-Detect	0.206	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	1/17/2017	0.0963(J)	344	2.23	0.044(J)	6.46	1670	2750	Non-Detect	0.00201(J)	0.0119	Non-Detect	Non-Detect	Non-Detect	Non-Detect	-0.187(U)	0.044(J)	Non-Detect	0.295	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	3/21/2017	0.0947(J)	396	2.5	0.08(J)	6.47	1900	2750	Non-Detect	0.00183(J)	0.012	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.403(U)	0.08(J)	Non-Detect	0.234	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	5/30/2017	0.0926(J)	370	3.2	0.096(J)	6.48	1700	2890	Non-Detect	0.00214(J)	0.012	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.998	0.096(J)	Non-Detect	0.23	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	8/23/2017	0.0968(J)	374	2.8	0.11	6.48	1700	2760	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.11	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW-11	2/14/2018	n/a	n/a	n/a	0.1	6.6	n/a	n/a	Non-Detect	0.00171(J)	0.0139	Non-Detect	Non-Detect	Non-Detect	Non-Detect	1.74	0.1	Non-Detect	0.233	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	5/22/2018	0.102	375	24	0.1	6.54	2200	2610	Non-Detect	0.00168(J)	0.0148	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.276(U)	0.1	Non-Detect	0.24	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	11/20/2018	0.106	370	59	0.1	6.61	1400	2480	Non-Detect	Non-Detect	0.0127	Non-Detect	Non-Detect	Non-Detect	Non-Detect	1.04	0.1	Non-Detect	0.248	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	5/15/2019	0.101(J)	380	75.4	0.1	6.62	1510	2560	Non-Detect	Non-Detect	0.0132	Non-Detect	Non-Detect	Non-Detect	Non-Detect	1.18	0.1	Non-Detect	0.251	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-11	10/10/2019	0.109	373	84.6	0.0915(J)	6.69	719	2460	Non-Detect	Non-Detect	0.0154	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.902	0.0915(J)	0.00145(J)	0.275	Non-Detect	Non-Detect	Non-Detect	Non-Detect

# Analytical Data Summary

## Plant Gorgas Bottom Ash Landfill

### Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	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	0.004	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-12	4/27/2016	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	0.259(U)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW-12	4/28/2016	0.19	349	4.12	0.153(J)	5.78	2360	3730	Non-Detect	0.0444	0.0109	Non-Detect	Non-Detect	Non-Detect	0.0531	0.608	0.153(J)	Non-Detect	0.0735	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	6/22/2016	0.118	374	3.44	0.146(J)	6.41	1960	2760	Non-Detect	0.00953	0.0155	Non-Detect	Non-Detect	Non-Detect	0.0388	0.45(U)	0.146(J)	Non-Detect	0.118	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	8/10/2016	0.197	348	4.15	0.127(J)	5.82	2300	3710	Non-Detect	0.0416	0.0125	Non-Detect	Non-Detect	Non-Detect	0.0565	1.03	0.127(J)	Non-Detect	0.0805	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	10/5/2016	0.179	344	4.12	0.09(J)	5.82	2330	3580	Non-Detect	0.0431	0.0143	Non-Detect	Non-Detect	Non-Detect	0.0479	0.494(U)	0.09(J)	Non-Detect	0.0757	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	11/22/2016	0.197	342	3.98	0.012(J)	5.86	2220	3400	Non-Detect	0.0487	0.0118	Non-Detect	Non-Detect	Non-Detect	0.0453	0.578	0.012(J)	Non-Detect	0.0828	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	1/18/2017	0.186	359	3.6	0.071(J)	5.9	1950	3360	Non-Detect	0.0428	0.0112	Non-Detect	Non-Detect	Non-Detect	0.0431	0.216(U)	0.071(J)	Non-Detect	0.125	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	3/21/2017	0.183	352	3.6	0.09(J)	5.85	2400	3320	Non-Detect	0.0418	0.0108	Non-Detect	Non-Detect	Non-Detect	0.0414	0.101(U)	0.09(J)	Non-Detect	0.093	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	5/31/2017	0.193	313	3.9	0.11	5.84	2200	3440	Non-Detect	0.0466	0.0107	Non-Detect	Non-Detect	Non-Detect	0.0379	1.4	0.11	Non-Detect	0.0787	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	8/23/2017	0.185	349	4.2	0.13	5.91	2100	3250	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.13	n/a	n/a	n/a	n/a	n/a	n/a
MW-12	2/15/2018	n/a	n/a	n/a	0.12	5.98	n/a	n/a	Non-Detect	0.0346	0.0113	Non-Detect	Non-Detect	Non-Detect	0.0333	0.925	0.12	Non-Detect	0.104	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	5/24/2018	0.197	349	7.1	0.15	5.86	2300	3300	Non-Detect	0.0478	0.0122	Non-Detect	Non-Detect	Non-Detect	0.0399	0.756	0.15	Non-Detect	0.0819	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	11/19/2018	0.252	348	6.1	0.16	5.88	2100	3400	Non-Detect	0.0405	0.0108	Non-Detect	Non-Detect	Non-Detect	0.0485	0.648	0.16	Non-Detect	0.0816	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	5/15/2019	0.239	411	8.51	0.185	5.82	2800	3890	0.000977(J)	0.0511	0.0113	Non-Detect	Non-Detect	Non-Detect	0.0603	1	0.185	Non-Detect	0.0736	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12	10/9/2019	0.315	359	8.73	0.215	5.85	2550	4090	Non-Detect	0.0507	0.0126	Non-Detect	Non-Detect	Non-Detect	0.0512	1.18	0.215	Non-Detect	0.0838	Non-Detect	Non-Detect	Non-Detect	Non-Detect

# Analytical Data Summary

## Plant Gorgas Bottom Ash Landfill

### Alabama Power Company

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	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	0.004	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-12V	3/12/2019	0.146	342	85.3	0.177	6.7	1420	2420	0.00137(d)	0.00511	0.0321	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.369	0.177	Non-Detect	0.274	Non-Detect	Non-Detect	Non-Detect	Non-Detect
MW-12V	10/10/2019	0.15	319	79.3	0.163	6.77	1490	2360	Non-Detect	0.00827	0.0236	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.446(U)	0.163	Non-Detect	0.297	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***



# **Plant Gorgas Landfill**

## **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 :** WMWGORLF\_1210  
**Project/Site :** Gorgas Landfill  
Parrish, AL 35580  
**For :** Southern Company Services  
3535 Colonnade Parkway  
Birmingham, AL 35243  
**Attention :** Dustin Brooks & Greg Dyer  
**Released By :** Laura Midkiff  
lbmidkif@southernco.com  
(205) 664-6197

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 08:17:04 -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 11:39:10 -0500



Total Metals ICP

Gorgas Landfill

WMWGORLF\_1210

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>
AZ06448	641315	WMWGORLF_1210
AZ06449	641315	WMWGORLF_1210
AZ06450	641315	WMWGORLF_1210
AZ06451	641315	WMWGORLF_1210

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, except for sodium. Samples were reanalyzed for sodium only. All criteria were met on reanalysis.
- 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>
AZ06449	Magnesium & Sodium	x10.15
AZ06449	Calcium	x101.5
AZ06450	Magnesium & Sodium	x10.15
AZ06450	Calcium	x101.5

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



Dissolved Metals ICP

Gorgas Landfill

WMWGORLF\_1210

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>
AZ06448	641207	WMWGORLF_1210
AZ06449	641207	WMWGORLF_1210
AZ06450	641207	WMWGORLF_1210
AZ06451	641207	WMWGORLF_1210

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



Total Metals ICPMS

Gorgas Landfill

WMWGORLF\_1210

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>
AZ06448	641800	WMWGORLF_1210
AZ06449	641800	WMWGORLF_1210
AZ06450	641800	WMWGORLF_1210
AZ06451	641800	WMWGORLF_1210

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.



Dissolved Metals ICPMS

Gorgas Landfill

WMWGORLF\_1210

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>
AZ06448	641785	WMWGORLF_1210
AZ06449	641785	WMWGORLF_1210
AZ06450	641785	WMWGORLF_1210
AZ06451	641785	WMWGORLF_1210

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



Mercury

Gorgas Landfill

WMWGORLF\_1210

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>
AZ06448	642096	WMWGORLF_1210
AZ06449	642096	WMWGORLF_1210
AZ06450	642096	WMWGORLF_1210
AZ06451	642096	WMWGORLF_1210

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 Landfill

WMWGORLF\_1210

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>
AZ06448	641803	WMWGORLF_1210
AZ06449	641803	WMWGORLF_1210
AZ06450	641803	WMWGORLF_1210
AZ06451	641803	WMWGORLF_1210

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:
  - AZ06448
  - AZ06451



Alkalinity

Gorgas Landfill

WMWGORLF\_1210

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>
AZ06449	641439 & 641440	WMWGORLF_1210
AZ06450	641439 & 641440	WMWGORLF_1210

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 Landfill

WMWGORLF\_1210

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>
AZ06448	643065, 642207, & 643091	WMWGORLF_1210
AZ06449	643065, 642207, & 643091	WMWGORLF_1210
AZ06450	643065, 642207, & 643091	WMWGORLF_1210
AZ06451	643065, 642207, & 643091	WMWGORLF_1210

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>
AZ06449	Chloride	x10
AZ06449	Sulfate	x80
AZ06450	Chloride	x10
AZ06450	Sulfate	x80

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: WMWGORLFFB  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AZ06448

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	DLJ	3/19/2019	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	3/19/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.0008	0.003	J 0.00220	mg/L
* Molybdenum, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Cobalt, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Iron, Dissolved	GAS	3/18/2019	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	3/25/2019	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	3/19/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Manganese, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Potassium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.215	2.5	U Not Detected	mg/L
* Sodium, Total	GAS	3/19/2019	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Selenium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	3/19/2019	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 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:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. LBM 04/04/2019

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: WMWGORLFFB  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AZ06448

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
* Solids, Dissolved	CRB	3/20/2019	SM 2540C		1		25	U Not Detected	mg/L
Filter Completion Date	CES	3/18/2019	SM 2540C		1			3/18/2019	Date
* Chloride	JCC	4/1/2019	SM4500Cl E		1	0.50	1.0	U Not Detected	mg/L
* Fluoride	JCC	3/25/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	4/2/2019	SM4500SO4 E		1	0.50	1.0	U Not Detected	mg/L

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

Alabama Power General Test Laboratory  
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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFFB  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AZ06448

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ06451	Iron, Dissolved	mg/L	-0.000784	0.022	0.2	0.196	0.197	0.197	0.17 to 0.23	98.1	70 to 130	0.312	20
AZ06451	Barium, Total	mg/L	0.0000169	0.0044	0.10	0.0927	0.0953	0.0993	0.085 to 0.115	92.7	70 to 130	2.74	20
AZ06451	Beryllium, Total	mg/L	0.0000286	0.00132	0.10	0.0931	0.0935	0.0982	0.085 to 0.115	93.1	70 to 130	0.362	20
AZ06451	Cadmium, Total	mg/L	0.00000484	0.00066	0.10	0.0967	0.0982	0.103	0.085 to 0.115	96.7	70 to 130	1.51	20
AZ06451	Calcium, Total	mg/L	-0.00130	0.22	5.00	4.82	4.95	4.98	4.25 to 5.75	96.5	70 to 130	2.59	20
AZ06451	Lithium, Total	mg/L	-0.000260	0.022	0.20	0.195	0.196	0.198	0.17 to 0.23	97.4	70 to 130	0.585	20
AZ06451	Lead, Total	mg/L	0.00000254	0.0022	0.10	0.101	0.104	0.107	0.085 to 0.115	101	70 to 130	2.89	20
AZ06451	Selenium, Total	mg/L	0.0000932	0.0044	0.10	0.0968	0.100	0.102	0.085 to 0.115	96.8	70 to 130	3.60	20
AZ06451	Arsenic, Total	mg/L	0.00000215	0.0022	0.10	0.0950	0.0997	0.102	0.085 to 0.115	95.0	70 to 130	4.86	20
AZ06451	Iron, Total	mg/L	-0.000562	0.022	0.2	0.195	0.195	0.197	0.17 to 0.23	97.7	70 to 130	0.391	20
AZ06451	Mangenes, Total	mg/L	0.00000670	0.0022	0.10	0.0968	0.0983	0.100	0.085 to 0.115	96.8	70 to 130	1.52	20
AZ06451	Sodium, Total	mg/L	0.000997	0.22	5.00	4.82	4.98	5.02	4.25 to 5.75	96.5	70 to 130	3.09	20
AZ06451	Antimony, Total	mg/L	0.000284	0.00176	0.10	0.0926	0.0969	0.0970	0.085 to 0.115	91.3	70 to 130	4.56	20
AZ06451	Cobalt, Total	mg/L	-0.00000554	0.0044	0.10	0.0981	0.0998	0.103	0.085 to 0.115	98.1	70 to 130	1.77	20
AZ06451	Mercury, Total by CVAA	mg/L	0.00000283	0.0005	0.004	0.00382	0.00376	0.00385	0.0034 to 0.0046	95.5	70 to 130	1.59	20
AZ06451	Mangenes, Dissolved	mg/L	0.00000526	0.0022	0.10	0.0985	0.0977		0.085 to 0.115	98.5	70 to 130	0.804	20
AZ06451	Thallium, Total	mg/L	0.00000191	0.00044	0.10	0.101	0.103	0.106	0.085 to 0.115	101	70 to 130	2.28	20
AZ06451	Boron, Total	mg/L	-0.000477	0.044	1.00	0.952	0.955	0.964	0.85 to 1.15	95.2	70 to 130	0.397	20
AZ06451	Magnesium, Total	mg/L	0.00133	0.22	5.00	4.71	4.86	4.90	4.25 to 5.75	94.3	70 to 130	3.15	20
AZ06451	Molybdenum, Total	mg/L	0.00000445	0.0044	0.10	0.0959	0.100	0.100	0.085 to 0.115	95.9	70 to 130	4.35	20
AZ06451	Chromium, Total	mg/L	-0.0000956	0.0044	0.10	0.0964	0.0977	0.0982	0.085 to 0.115	96.4	70 to 130	1.31	20
AZ06451	Potassium, Total	mg/L	0.000559	0.473	10.0	9.36	9.78	9.68	8.5 to 11.5	93.6	70 to 130	4.43	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 04/04/2019

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: WMWGORLFFB  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AZ06448

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ06451	Fluoride	mg/L	0.0415	0.05	2.50	2.54	0.044	2.54	2.25 to 2.75	102	80 to 120	0.00	20
AZ06450	Solids, Dissolved	mg/L	-10.0	25			2400	52.0	40 to 60			0.311	5
AZ06451	Chloride	mg/L	0.0257	0.50	10.0	10.1	0.118	9.94	9 to 11	101	80 to 120	0.00	20
AZ06451	Sulfate	mg/L	-0.382	0.50	20.0	19.3	-0.382	19.5	18 to 22	96.5	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

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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: WMWGORLF  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill - MW-12V

Laboratory ID Number: AZ06449

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Arsenic, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	J	0.00486	mg/L
* Barium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01		0.0301	mg/L
* Beryllium, Total	DLJ	3/19/2019	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		0.147	mg/L
* Calcium, Total	GAS	3/18/2019	EPA 200.7		101.5	10.15	50.75		355	mg/L
* Cadmium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.0008	0.003	J	0.00159	mg/L
* Molybdenum, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Cobalt, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Iron, Dissolved	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.05	K	5.27	mg/L
* Iron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.05		5.44	mg/L
* Mercury, Total by CVAA	ABB	3/25/2019	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		0.275	mg/L
* Magnesium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		299	mg/L
* Manganese, Dissolved	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	K	0.647	mg/L
* Manganese, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005		0.679	mg/L
* Potassium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.215	2.5		7.43	mg/L
* Sodium, Total	GAS	3/19/2019	EPA 200.7		10.15	1.015	5.075		76.3	mg/L
* Selenium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	3/19/2019	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 04/04/2019

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: WMWGORLF  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill - MW-12V

Laboratory ID Number: AZ06449

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
pH for Alkalinity	HRG	3/15/2019	SM 4500H+ B		1		4.0	6.99	SU
Alkalinity, Total as CaCO3	HRG	3/15/2019	SM 2320 B		1		0.1	306	mg/L
Carbonate Alkalinity, as CaCO3	HRG	3/15/2019	SM 4500CO2 D		1			0.28	mg/L
Bicarbonate Alkalinity, as CaCO3	HRG	3/15/2019	SM 4500CO2 D		1			306	mg/L
* Solids, Dissolved	CRB	3/20/2019	SM 2540C		1		125	2440	mg/L
Filter Completion Date	CES	3/18/2019	SM 2540C		1			3/18/2019	Date
* Chloride	JCC	4/1/2019	SM4500CI E		10	5.00	10	84.8	mg/L
* Fluoride	JCC	3/25/2019	SM4500F C		1	0.05	0.1	0.177	mg/L
* Sulfate	JCC	4/2/2019	SM4500SO4 E		80	40.00	80	1370	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 04/04/2019

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: WMWGORLF  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill - MW-12V

Laboratory ID Number: AZ06449

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ06451	Iron, Dissolved	mg/L	-0.000784	0.022	0.2	0.196	0.197	0.197	0.17 to 0.23	98.1	70 to 130	0.312	20	
AZ06451	Chromium, Total	mg/L	-0.0000956	0.0044	0.10	0.0964	0.0977	0.0982	0.085 to 0.115	96.4	70 to 130	1.31	20	
AZ06451	Potassium, Total	mg/L	0.000559	0.473	10.0	9.36	9.78	9.68	8.5 to 11.5	93.6	70 to 130	4.43	20	
AZ06451	Barium, Total	mg/L	0.0000169	0.0044	0.10	0.0927	0.0953	0.0993	0.085 to 0.115	92.7	70 to 130	2.74	20	
AZ06451	Beryllium, Total	mg/L	0.0000286	0.00132	0.10	0.0931	0.0935	0.0982	0.085 to 0.115	93.1	70 to 130	0.362	20	
AZ06451	Cadmium, Total	mg/L	0.00000484	0.00066	0.10	0.0967	0.0982	0.103	0.085 to 0.115	96.7	70 to 130	1.51	20	
AZ06451	Calcium, Total	mg/L	-0.00130	0.22	5.00	4.82	4.95	4.98	4.25 to 5.75	96.5	70 to 130	2.59	20	
AZ06451	Lithium, Total	mg/L	-0.000260	0.022	0.20	0.195	0.196	0.198	0.17 to 0.23	97.4	70 to 130	0.585	20	
AZ06451	Lead, Total	mg/L	0.00000254	0.0022	0.10	0.101	0.104	0.107	0.085 to 0.115	101	70 to 130	2.89	20	
AZ06451	Selenium, Total	mg/L	0.0000932	0.0044	0.10	0.0968	0.100	0.102	0.085 to 0.115	96.8	70 to 130	3.60	20	
AZ06451	Arsenic, Total	mg/L	0.00000215	0.0022	0.10	0.0950	0.0997	0.102	0.085 to 0.115	95.0	70 to 130	4.86	20	
AZ06451	Iron, Total	mg/L	-0.000562	0.022	0.2	0.195	0.195	0.197	0.17 to 0.23	97.7	70 to 130	0.391	20	
AZ06451	Mangnese, Total	mg/L	0.00000670	0.0022	0.10	0.0968	0.0983	0.100	0.085 to 0.115	96.8	70 to 130	1.52	20	
AZ06451	Sodium, Total	mg/L	0.000997	0.22	5.00	4.82	4.98	5.02	4.25 to 5.75	96.5	70 to 130	3.09	20	
AZ06451	Antimony, Total	mg/L	0.000284	0.00176	0.10	0.0926	0.0969	0.0970	0.085 to 0.115	91.3	70 to 130	4.56	20	
AZ06451	Boron, Total	mg/L	-0.000477	0.044	1.00	0.952	0.955	0.964	0.85 to 1.15	95.2	70 to 130	0.397	20	
AZ06451	Magnesium, Total	mg/L	0.00133	0.22	5.00	4.71	4.86	4.90	4.25 to 5.75	94.3	70 to 130	3.15	20	
AZ06451	Molybdenum, Total	mg/L	0.00000445	0.0044	0.10	0.0959	0.100	0.100	0.085 to 0.115	95.9	70 to 130	4.35	20	
AZ06451	Cobalt, Total	mg/L	-0.00000554	0.0044	0.10	0.0981	0.0998	0.103	0.085 to 0.115	98.1	70 to 130	1.77	20	
AZ06451	Mercury, Total by CVAA	mg/L	0.00000283	0.0005	0.004	0.00382	0.00376	0.00385	0.0034 to 0.0046	95.5	70 to 130	1.59	20	
AZ06451	Mangnese, Dissolved	mg/L	0.00000526	0.0022	0.10	0.0985	0.0977		0.085 to 0.115	98.5	70 to 130	0.804	20	
AZ06451	Thallium, Total	mg/L	0.00000191	0.00044	0.10	0.101	0.103	0.106	0.085 to 0.115	101	70 to 130	2.28	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 04/04/2019

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: WMWGORLF  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill - MW-12V

Laboratory ID Number: AZ06449

Sample	Analysis	Units	MB	Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ06450	Alkalinity, Total as CaCO3	mg/L					301	50.2	45.0 to 55.0			0.213	10
AZ06450	Solids, Dissolved	mg/L	-10.0	25			2400	52.0	40 to 60			0.311	5
AZ06451	Fluoride	mg/L	0.0415	0.05	2.50	2.54	0.044	2.54	2.25 to 2.75	102	80 to 120	0.00	20
AZ06450	pH for Alkalinity	SU						7.04	6.95 to 7.05				
AZ06451	Chloride	mg/L	0.0257	0.50	10.0	10.1	0.118	9.94	9 to 11	101	80 to 120	0.00	20
AZ06451	Sulfate	mg/L	-0.382	0.50	20.0	19.3	-0.382	19.5	18 to 22	96.5	80 to 120	0.00	20

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**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill - MW-12VDUP

Laboratory ID Number: AZ06450

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Arsenic, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005		0.00511	mg/L
* Barium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01		0.0321	mg/L
* Beryllium, Total	DLJ	3/19/2019	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		0.146	mg/L
* Calcium, Total	GAS	3/18/2019	EPA 200.7		101.5	10.15	50.75		342	mg/L
* Cadmium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.0008	0.003	J	0.00137	mg/L
* Molybdenum, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Cobalt, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Iron, Dissolved	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.05	K	5.23	mg/L
* Iron, Total	GAS	3/18/2019	EPA 200.7		2.03	0.01	0.05		5.44	mg/L
* Mercury, Total by CVAA	ABB	3/25/2019	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		0.274	mg/L
* Magnesium, Total	GAS	3/18/2019	EPA 200.7		10.15	1.015	5.075		260	mg/L
* Manganese, Dissolved	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	K	0.660	mg/L
* Manganese, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005		0.649	mg/L
* Potassium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.215	2.5		7.17	mg/L
* Sodium, Total	GAS	3/19/2019	EPA 200.7		10.15	1.015	5.075		84.8	mg/L
* Selenium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	3/19/2019	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

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

# Certificate Of Analysis



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill - MW-12VDUP

Laboratory ID Number: AZ06450

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
pH for Alkalinity	HRG	3/15/2019	SM 4500H+ B		1		4.0	6.98	SU
Alkalinity, Total as CaCO3	HRG	3/15/2019	SM 2320 B		1		0.1	301	mg/L
Carbonate Alkalinity, as CaCO3	HRG	3/15/2019	SM 4500CO2 D		1			0.27	mg/L
Bicarbonate Alkalinity, as CaCO3	HRG	3/15/2019	SM 4500CO2 D		1			301	mg/L
* Solids, Dissolved	CRB	3/20/2019	SM 2540C		1		125	2420	mg/L
Filter Completion Date	CES	3/18/2019	SM 2540C		1			3/18/2019	Date
* Chloride	JCC	4/1/2019	SM4500CI E		10	5.00	10	85.3	mg/L
* Fluoride	JCC	3/25/2019	SM4500F C		1	0.05	0.1	0.177	mg/L
* Sulfate	JCC	4/2/2019	SM4500SO4 E		80	40.00	80	1420	mg/L

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Laboratory certification ID: E571114

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Expiration: June 30, 2019

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Alabama Power General Test Laboratory  
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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: WMWGORLF  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill - MW-12VDUP

Laboratory ID Number: AZ06450

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec Limit
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ06451	Iron, Dissolved	mg/L	-0.000784	0.022	0.2	0.196	0.197	0.197	0.17 to 0.23	98.1	70 to 130	0.312	20
AZ06451	Arsenic, Total	mg/L	0.00000215	0.0022	0.10	0.0950	0.0997	0.102	0.085 to 0.115	95.0	70 to 130	4.86	20
AZ06451	Iron, Total	mg/L	-0.000562	0.022	0.2	0.195	0.195	0.197	0.17 to 0.23	97.7	70 to 130	0.391	20
AZ06451	Manganese, Total	mg/L	0.00000670	0.0022	0.10	0.0968	0.0983	0.100	0.085 to 0.115	96.8	70 to 130	1.52	20
AZ06451	Sodium, Total	mg/L	0.000997	0.22	5.00	4.82	4.98	5.02	4.25 to 5.75	96.5	70 to 130	3.09	20
AZ06451	Antimony, Total	mg/L	0.000284	0.00176	0.10	0.0926	0.0969	0.0970	0.085 to 0.115	91.3	70 to 130	4.56	20
AZ06451	Barium, Total	mg/L	0.0000169	0.0044	0.10	0.0927	0.0953	0.0993	0.085 to 0.115	92.7	70 to 130	2.74	20
AZ06451	Beryllium, Total	mg/L	0.0000286	0.00132	0.10	0.0931	0.0935	0.0982	0.085 to 0.115	93.1	70 to 130	0.362	20
AZ06451	Cadmium, Total	mg/L	0.00000484	0.00066	0.10	0.0967	0.0982	0.103	0.085 to 0.115	96.7	70 to 130	1.51	20
AZ06451	Chromium, Total	mg/L	-0.0000956	0.0044	0.10	0.0964	0.0977	0.0982	0.085 to 0.115	96.4	70 to 130	1.31	20
AZ06451	Potassium, Total	mg/L	0.000559	0.473	10.0	9.36	9.78	9.68	8.5 to 11.5	93.6	70 to 130	4.43	20
AZ06451	Calcium, Total	mg/L	-0.00130	0.22	5.00	4.82	4.95	4.98	4.25 to 5.75	96.5	70 to 130	2.59	20
AZ06451	Lithium, Total	mg/L	-0.000260	0.022	0.20	0.195	0.196	0.198	0.17 to 0.23	97.4	70 to 130	0.585	20
AZ06451	Lead, Total	mg/L	0.00000254	0.0022	0.10	0.101	0.104	0.107	0.085 to 0.115	101	70 to 130	2.89	20
AZ06451	Selenium, Total	mg/L	0.0000932	0.0044	0.10	0.0968	0.100	0.102	0.085 to 0.115	96.8	70 to 130	3.60	20
AZ06451	Boron, Total	mg/L	-0.000477	0.044	1.00	0.952	0.955	0.964	0.85 to 1.15	95.2	70 to 130	0.397	20
AZ06451	Magnesium, Total	mg/L	0.00133	0.22	5.00	4.71	4.86	4.90	4.25 to 5.75	94.3	70 to 130	3.15	20
AZ06451	Molybdenum, Total	mg/L	0.00000445	0.0044	0.10	0.0959	0.100	0.100	0.085 to 0.115	95.9	70 to 130	4.35	20
AZ06451	Cobalt, Total	mg/L	-0.00000554	0.0044	0.10	0.0981	0.0998	0.103	0.085 to 0.115	98.1	70 to 130	1.77	20
AZ06451	Mercury, Total by CVAA	mg/L	0.00000283	0.0005	0.004	0.00382	0.00376	0.00385	0.0034 to 0.0046	95.5	70 to 130	1.59	20
AZ06451	Manganese, Dissolved	mg/L	0.00000526	0.0022	0.10	0.0985	0.0977		0.085 to 0.115	98.5	70 to 130	0.804	20
AZ06451	Thallium, Total	mg/L	0.00000191	0.00044	0.10	0.101	0.103	0.106	0.085 to 0.115	101	70 to 130	2.28	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 04/04/2019

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: WMWGORLF  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill - MW-12VDUP

Laboratory ID Number: AZ06450

Sample	Analysis	Units	MB	Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ06450	Alkalinity, Total as CaCO3	mg/L					301	50.2	45.0 to 55.0			0.213	10
AZ06451	Fluoride	mg/L	0.0415	0.05	2.50	2.54	0.044	2.54	2.25 to 2.75	102	80 to 120	0.00	20
AZ06450	Solids, Dissolved	mg/L	-10.0	25			2400	52.0	40 to 60			0.311	5
AZ06450	pH for Alkalinity	SU						7.04	6.95 to 7.05				
AZ06451	Chloride	mg/L	0.0257	0.50	10.0	10.1	0.118	9.94	9 to 11	101	80 to 120	0.00	20
AZ06451	Sulfate	mg/L	-0.382	0.50	20.0	19.3	-0.382	19.5	18 to 22	96.5	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**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AZ06451

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Beryllium, Total	DLJ	3/19/2019	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	3/19/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.0008	0.003	J 0.00130	mg/L
* Molybdenum, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Cobalt, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Iron, Dissolved	GAS	3/18/2019	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	3/25/2019	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	3/19/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Manganese, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Potassium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.215	2.5	U Not Detected	mg/L
* Sodium, Total	GAS	3/19/2019	EPA 200.7		2.03	0.1	0.5	U Not Detected	mg/L
* Selenium, Total	DLJ	3/19/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	3/19/2019	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

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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: WMWGORLFEB  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AZ06451

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
* Solids, Dissolved	CRB	3/20/2019	SM 2540C		1		25	U Not Detected	mg/L
Filter Completion Date	CES	3/18/2019	SM 2540C		1			3/18/2019	Date
* Chloride	JCC	4/1/2019	SM4500Cl E		1	0.50	1.0	U Not Detected	mg/L
* Fluoride	JCC	3/25/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	4/2/2019	SM4500SO4 E		1	0.50	1.0	U Not Detected	mg/L

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 Calera, AL 35040  
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 FAX (205) 257-1654

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AZ06451

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ06451	Iron, Dissolved	mg/L	-0.000784	0.022	0.2	0.196	0.197	0.197	0.17 to 0.23	98.1	70 to 130	0.312	20
AZ06451	Boron, Total	mg/L	-0.000477	0.044	1.00	0.952	0.955	0.964	0.85 to 1.15	95.2	70 to 130	0.397	20
AZ06451	Magnesium, Total	mg/L	0.00133	0.22	5.00	4.71	4.86	4.90	4.25 to 5.75	94.3	70 to 130	3.15	20
AZ06451	Molybdenum, Total	mg/L	0.00000445	0.0044	0.10	0.0959	0.100	0.100	0.085 to 0.115	95.9	70 to 130	4.35	20
AZ06451	Cobalt, Total	mg/L	-0.00000554	0.0044	0.10	0.0981	0.0998	0.103	0.085 to 0.115	98.1	70 to 130	1.77	20
AZ06451	Mercury, Total by CVAA	mg/L	0.00000283	0.0005	0.004	0.00382	0.00376	0.00385	0.0034 to 0.0046	95.5	70 to 130	1.59	20
AZ06451	Manganese, Dissolved	mg/L	0.00000526	0.0022	0.10	0.0985	0.0977		0.085 to 0.115	98.5	70 to 130	0.804	20
AZ06451	Thallium, Total	mg/L	0.00000191	0.00044	0.10	0.101	0.103	0.106	0.085 to 0.115	101	70 to 130	2.28	20
AZ06451	Calcium, Total	mg/L	-0.00130	0.22	5.00	4.82	4.95	4.98	4.25 to 5.75	96.5	70 to 130	2.59	20
AZ06451	Lithium, Total	mg/L	-0.000260	0.022	0.20	0.195	0.196	0.198	0.17 to 0.23	97.4	70 to 130	0.585	20
AZ06451	Lead, Total	mg/L	0.00000254	0.0022	0.10	0.101	0.104	0.107	0.085 to 0.115	101	70 to 130	2.89	20
AZ06451	Selenium, Total	mg/L	0.0000932	0.0044	0.10	0.0968	0.100	0.102	0.085 to 0.115	96.8	70 to 130	3.60	20
AZ06451	Chromium, Total	mg/L	-0.0000956	0.0044	0.10	0.0964	0.0977	0.0982	0.085 to 0.115	96.4	70 to 130	1.31	20
AZ06451	Potassium, Total	mg/L	0.000559	0.473	10.0	9.36	9.78	9.68	8.5 to 11.5	93.6	70 to 130	4.43	20
AZ06451	Arsenic, Total	mg/L	0.00000215	0.0022	0.10	0.0950	0.0997	0.102	0.085 to 0.115	95.0	70 to 130	4.86	20
AZ06451	Iron, Total	mg/L	-0.000562	0.022	0.2	0.195	0.195	0.197	0.17 to 0.23	97.7	70 to 130	0.391	20
AZ06451	Manganese, Total	mg/L	0.00000670	0.0022	0.10	0.0968	0.0983	0.100	0.085 to 0.115	96.8	70 to 130	1.52	20
AZ06451	Sodium, Total	mg/L	0.000997	0.22	5.00	4.82	4.98	5.02	4.25 to 5.75	96.5	70 to 130	3.09	20
AZ06451	Antimony, Total	mg/L	0.000284	0.00176	0.10	0.0926	0.0969	0.0970	0.085 to 0.115	91.3	70 to 130	4.56	20
AZ06451	Barium, Total	mg/L	0.0000169	0.0044	0.10	0.0927	0.0953	0.0993	0.085 to 0.115	92.7	70 to 130	2.74	20
AZ06451	Beryllium, Total	mg/L	0.0000286	0.00132	0.10	0.0931	0.0935	0.0982	0.085 to 0.115	93.1	70 to 130	0.362	20
AZ06451	Cadmium, Total	mg/L	0.00000484	0.00066	0.10	0.0967	0.0982	0.103	0.085 to 0.115	96.7	70 to 130	1.51	20

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Alabama Power General Test Laboratory  
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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: WMWGORLFEB  
 Sample Date: 12-Mar-19  
 Customer ID:  
 Delivery Date: 12-Mar-19

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AZ06451

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ06450	Solids, Dissolved	mg/L	-10.0	25			2400	52.0	40 to 60			0.311	5
AZ06451	Fluoride	mg/L	0.0415	0.05	2.50	2.54	0.044	2.54	2.25 to 2.75	102	80 to 120	0.00	20
AZ06451	Chloride	mg/L	0.0257	0.50	10.0	10.1	0.118	9.94	9 to 11	101	80 to 120	0.00	20
AZ06451	Sulfate	mg/L	-0.382	0.50	20.0	19.3	-0.382	19.5	18 to 22	96.5	80 to 120	0.00	20

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CC:





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.





## ANALYTICAL REPORT

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

Laboratory Job ID: 400-167635-1  
Laboratory Sample Delivery Group: Gorgas Landfill 1210  
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:  
5/1/2019 2:45:42 PM

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

### LINKS

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[www.testamericainc.com](http://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.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Method Summary . . . . .	4
Sample Summary . . . . .	5
Client Sample Results . . . . .	6
Definitions . . . . .	10
Chronicle . . . . .	11
QC Association . . . . .	12
QC Sample Results . . . . .	13
Chain of Custody . . . . .	15
Receipt Checklists . . . . .	16
Certification Summary . . . . .	18

# Case Narrative

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

Job ID: 400-167635-1  
SDG: Gorgas Landfill 1210

**Job ID: 400-167635-1**

**Laboratory: Eurofins TestAmerica, Pensacola**

## Narrative

### Job Narrative 400-167635-1

#### RAD

Method(s) 9315: Ra-226 Prep Batch 160-422964. 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. AZ06452 FB-1 (400-167635-1), AZ06453 MW-12V (400-167635-2), AZ06453 MW-12V (400-167635-2[DU]), AZ06454 MW-12V DUP (400-167635-3), AZ06455 EB-1 (400-167635-4), (LCS 160-422964/1-A) and (MB 160-422964/18-A)

Method(s) 9320: Ra-228 Prep Batch 160-422966. 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. AZ06452 FB-1 (400-167635-1), AZ06453 MW-12V (400-167635-2), AZ06453 MW-12V (400-167635-2[DU]), AZ06454 MW-12V DUP (400-167635-3), AZ06455 EB-1 (400-167635-4), (LCS 160-422966/1-A) and (MB 160-422966/18-A)



# Method Summary

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

Job ID: 400-167635-1  
SDG: Gorgas Landfill 1210

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: 400-167635-1  
SDG: Gorgas Landfill 1210

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-167635-1	AZ06452 FB-1	Water	03/12/19 11:35	03/21/19 16:36
400-167635-2	AZ06453 MW-12V	Water	03/12/19 11:44	03/21/19 16:36
400-167635-3	AZ06454 MW-12V DUP	Water	03/12/19 11:44	03/21/19 16:36
400-167635-4	AZ06455 EB-1	Water	03/12/19 12:40	03/21/19 16:36

- 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: 400-167635-1  
 SDG: Gorgas Landfill 1210

**Client Sample ID: AZ06452 FB-1**

**Lab Sample ID: 400-167635-1**

Date Collected: 03/12/19 11:35

Matrix: Water

Date Received: 03/21/19 16:36

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0239	U	0.0350	0.0350	1.00	0.0937	pCi/L	04/07/19 14:31	04/30/19 09:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/07/19 14:31	04/30/19 09:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.145	U	0.194	0.194	1.00	0.323	pCi/L	04/07/19 14:31	04/18/19 08:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/07/19 14:31	04/18/19 08:40	1
Y Carrier	84.1		40 - 110					04/07/19 14:31	04/18/19 08:40	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	0.121	U	0.197	0.197	5.00	0.323	pCi/L		05/01/19 09:26	1

# Client Sample Results

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

Job ID: 400-167635-1  
 SDG: Gorgas Landfill 1210

**Client Sample ID: AZ06453 MW-12V**

**Lab Sample ID: 400-167635-2**

Date Collected: 03/12/19 11:44

Matrix: Water

Date Received: 03/21/19 16:36

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.118		0.0725	0.0733	1.00	0.0908	pCi/L	04/07/19 14:31	04/30/19 09:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					04/07/19 14:31	04/30/19 09:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.250	U	0.221	0.222	1.00	0.354	pCi/L	04/07/19 14:31	04/18/19 08:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					04/07/19 14:31	04/18/19 08:40	1
Y Carrier	92.3		40 - 110					04/07/19 14:31	04/18/19 08:40	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	0.369		0.233	0.234	5.00	0.354	pCi/L		05/01/19 09:26	1

# Client Sample Results

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

Job ID: 400-167635-1  
 SDG: Gorgas Landfill 1210

**Client Sample ID: AZ06454 MW-12V DUP**

**Lab Sample ID: 400-167635-3**

Date Collected: 03/12/19 11:44

Matrix: Water

Date Received: 03/21/19 16:36

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.192		0.0876	0.0893	1.00	0.0951	pCi/L	04/07/19 14:31	04/30/19 09:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					04/07/19 14:31	04/30/19 09:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.539		0.249	0.253	1.00	0.353	pCi/L	04/07/19 14:31	04/18/19 08:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					04/07/19 14:31	04/18/19 08:41	1
Y Carrier	86.7		40 - 110					04/07/19 14:31	04/18/19 08:41	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	0.731		0.264	0.268	5.00	0.353	pCi/L		05/01/19 09:26	1

# Client Sample Results

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

Job ID: 400-167635-1  
 SDG: Gorgas Landfill 1210

**Client Sample ID: AZ06455 EB-1**

**Lab Sample ID: 400-167635-4**

Date Collected: 03/12/19 12:40

Matrix: Water

Date Received: 03/21/19 16:36

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00203	U	0.0532	0.0532	1.00	0.109	pCi/L	04/07/19 14:31	04/30/19 09:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					04/07/19 14:31	04/30/19 09:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.353		0.226	0.228	1.00	0.347	pCi/L	04/07/19 14:31	04/18/19 08:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					04/07/19 14:31	04/18/19 08:41	1
Y Carrier	86.7		40 - 110					04/07/19 14:31	04/18/19 08:41	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	0.351		0.232	0.234	5.00	0.347	pCi/L		05/01/19 09:26	1

## Definitions/Glossary

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

Job ID: 400-167635-1  
SDG: Gorgas Landfill 1210

### 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: 400-167635-1  
 SDG: Gorgas Landfill 1210

**Client Sample ID: AZ06452 FB-1**

**Lab Sample ID: 400-167635-1**

Date Collected: 03/12/19 11:35

Matrix: Water

Date Received: 03/21/19 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			422964	04/07/19 14:31	MMO	TAL SL
Total/NA	Analysis	9315		1	426116	04/30/19 09:43	CDR	TAL SL
Total/NA	Prep	PrecSep_0			422966	04/07/19 14:31	MMO	TAL SL
Total/NA	Analysis	9320		1	424351	04/18/19 08:40	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	426330	05/01/19 09:26	SMP	TAL SL

**Client Sample ID: AZ06453 MW-12V**

**Lab Sample ID: 400-167635-2**

Date Collected: 03/12/19 11:44

Matrix: Water

Date Received: 03/21/19 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			422964	04/07/19 14:31	MMO	TAL SL
Total/NA	Analysis	9315		1	426116	04/30/19 09:43	CDR	TAL SL
Total/NA	Prep	PrecSep_0			422966	04/07/19 14:31	MMO	TAL SL
Total/NA	Analysis	9320		1	424351	04/18/19 08:40	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	426330	05/01/19 09:26	SMP	TAL SL

**Client Sample ID: AZ06454 MW-12V DUP**

**Lab Sample ID: 400-167635-3**

Date Collected: 03/12/19 11:44

Matrix: Water

Date Received: 03/21/19 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			422964	04/07/19 14:31	MMO	TAL SL
Total/NA	Analysis	9315		1	426116	04/30/19 09:43	CDR	TAL SL
Total/NA	Prep	PrecSep_0			422966	04/07/19 14:31	MMO	TAL SL
Total/NA	Analysis	9320		1	424351	04/18/19 08:41	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	426330	05/01/19 09:26	SMP	TAL SL

**Client Sample ID: AZ06455 EB-1**

**Lab Sample ID: 400-167635-4**

Date Collected: 03/12/19 12:40

Matrix: Water

Date Received: 03/21/19 16:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			422964	04/07/19 14:31	MMO	TAL SL
Total/NA	Analysis	9315		1	426116	04/30/19 09:43	CDR	TAL SL
Total/NA	Prep	PrecSep_0			422966	04/07/19 14:31	MMO	TAL SL
Total/NA	Analysis	9320		1	424351	04/18/19 08:41	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	426330	05/01/19 09:26	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: 400-167635-1  
SDG: Gorgas Landfill 1210

## Rad

### Prep Batch: 422964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-167635-1	AZ06452 FB-1	Total/NA	Water	PrecSep-21	
400-167635-2	AZ06453 MW-12V	Total/NA	Water	PrecSep-21	
400-167635-3	AZ06454 MW-12V DUP	Total/NA	Water	PrecSep-21	
400-167635-4	AZ06455 EB-1	Total/NA	Water	PrecSep-21	
MB 160-422964/18-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-422964/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-167635-2 DU	AZ06453 MW-12V	Total/NA	Water	PrecSep-21	

### Prep Batch: 422966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-167635-1	AZ06452 FB-1	Total/NA	Water	PrecSep_0	
400-167635-2	AZ06453 MW-12V	Total/NA	Water	PrecSep_0	
400-167635-3	AZ06454 MW-12V DUP	Total/NA	Water	PrecSep_0	
400-167635-4	AZ06455 EB-1	Total/NA	Water	PrecSep_0	
MB 160-422966/18-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-422966/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-167635-2 DU	AZ06453 MW-12V	Total/NA	Water	PrecSep_0	

# QC Sample Results

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

Job ID: 400-167635-1  
 SDG: Gorgas Landfill 1210

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

**Lab Sample ID: MB 160-422964/18-A**  
**Matrix: Water**  
**Analysis Batch: 426116**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 422964**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.007536	U	0.0355	0.0355	1.00	0.0835	pCi/L	04/07/19 14:31	04/30/19 14:55	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	103		40 - 110		04/07/19 14:31	04/30/19 14:55	1			

**Lab Sample ID: LCS 160-422964/1-A**  
**Matrix: Water**  
**Analysis Batch: 426116**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 422964**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.722		1.03	1.00	0.0960	pCi/L	86	75 - 125
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	98.5		40 - 110						

**Lab Sample ID: 400-167635-2 DU**  
**Matrix: Water**  
**Analysis Batch: 426116**

**Client Sample ID: AZ06453 MW-12V**  
**Prep Type: Total/NA**  
**Prep Batch: 422964**

Analyte	Sample Sample		DU DU		Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.118		0.1178		0.0793	1.00	0.108	pCi/L	0	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	97.3		40 - 110							

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

**Lab Sample ID: MB 160-422966/18-A**  
**Matrix: Water**  
**Analysis Batch: 424353**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 422966**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1009	U	0.165	0.165	1.00	0.279	pCi/L	04/07/19 14:31	04/18/19 08:43	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	103		40 - 110		04/07/19 14:31	04/18/19 08:43	1			
Y Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Y Carrier	%Yield	Qualifier	Limits							
Y Carrier	91.2		40 - 110		04/07/19 14:31	04/18/19 08:43	1			

## QC Sample Results

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

Job ID: 400-167635-1  
 SDG: Gorgas Landfill 1210

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

**Lab Sample ID: LCS 160-422966/1-A**  
**Matrix: Water**  
**Analysis Batch: 424351**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 422966**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228	9.29	10.20		1.14	1.00	0.352	pCi/L	110	75 - 125		
		<b>LCS</b>	<b>LCS</b>								
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>								
Ba Carrier	98.5		40 - 110								
Y Carrier	86.7		40 - 110								

**Lab Sample ID: 400-167635-2 DU**  
**Matrix: Water**  
**Analysis Batch: 424351**

**Client Sample ID: AZ06453 MW-12V**  
**Prep Type: Total/NA**  
**Prep Batch: 422966**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit	
Radium-228	0.250	U	0.5271		0.240	1.00	0.333	pCi/L	0.60	1	
		<b>DU</b>	<b>DU</b>								
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>								
Ba Carrier	97.3		40 - 110								
Y Carrier	86.4		40 - 110								

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-167635-2 DU**  
**Matrix: Water**  
**Analysis Batch: 426330**

**Client Sample ID: AZ06453 MW-12V**  
**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	0.369		0.6449		0.253	5.00	0.333	pCi/L	0.57		

**Chain of Custody Record**

**Client Information**  
 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: lmidkiff@southernco.com  
 Project Name: COC  
 Site: Gorgas Landfill 1210

**Client Contact:** Laura Midkiff  
 Sample: Anthony Goggins  
 Lab PM: Whitmore, Chyenne R  
 Carrier Tracking No(s): 400-56525-24537.1  
 E-Mail: chyenne.whitmore@testamericainc.com  
 Page: Page 1 of 1  
 Job #:

**Analysis Requested**  
 Due Date Requested: TAT Requested (days): Routine  
 PO #: 40007143  
 WO #:  
 Project #: 40007143  
 SSOV#:

**Field Filtered Sample (Yes or No)**  
 Perform M5/M5D (Yes or No)  
 SM 4500 F\_C  
 SM 4500 C\_E  
 SM 4500 S04\_F  
 9315\_Ra226\_9320\_Ra228\_Ra228Ra228\_GFPc



Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soil, Sediment, Air, Fish, etc.)	Field Filtered Sample (Yes or No)	Perform M5/M5D (Yes or No)	SM 4500 F_C	SM 4500 C_E	SM 4500 S04_F	Total Number of Containers	Special Instructions/Note:
AZ06452	3/12/19	11:35	G	Water	X	X				1	FB-1 (Field Blank)
AZ06453	3/12/19	11:44	G	Water	X	X				3	MW-12V
AZ06454	3/12/19	11:44	G	Water	X	X				1	MW-12V DUJ (Sample Duplicate)
AZ06455	3/12/19	12:40	G	Water	X	X				1	EB-1 (Equipment Blank)

**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:**

Empty Kit Relinquished by: Relinquished by: Laura Midkiff  
 Date: 3/20/2019 7:55  
 Company: APC

Relinquished by: Relinquished by: \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

Relinquished by: Relinquished by: \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

Custody Seals Intact:  Yes  No  
 Custody Seal No.: 17.5°C 127

Received by: \_\_\_\_\_  
 Date/Time: 3/21/19 16:36  
 Company: TAPCO

Received by: \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

Received by: \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks: 17.5°C 127



## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-167635-1  
SDG Number: Gorgas Landfill 1210

**Login Number: 167635**

**List Number: 1**

**Creator: Brown, Nathan**

**List Source: Eurofins TestAmerica, Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	17.5°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	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: 400-167635-1  
SDG Number: Gorgas Landfill 1210

**Login Number: 167635**  
**List Number: 2**  
**Creator: Hellm, Michael**

**List Source: Eurofins TestAmerica, St. Louis**  
**List Creation: 03/25/19 08:46 AM**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	22.0
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 <6mm (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: 400-167635-1  
 SDG: Gorgas Landfill 1210

## 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	05-15-20
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: 400-167635-1  
 SDG: Gorgas Landfill 1210

### 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**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-12V	3/12/2019 11:21	Conductivity	2619.3	uS/cm
MW-12V	3/12/2019 11:21	DO	0.68	mg/L
MW-12V	3/12/2019 11:21	Depth to Water Detail	154.99	ft
MW-12V	3/12/2019 11:21	Oxidation Reduction Potention	-41	mv
MW-12V	3/12/2019 11:21	pH	6.7	pH
MW-12V	3/12/2019 11:21	Temperature	21.08	C
MW-12V	3/12/2019 11:21	Turbidity	5.31	NTU
MW-12V	3/12/2019 11:26	Conductivity	2606.8	uS/cm
MW-12V	3/12/2019 11:26	DO	0.63	mg/L
MW-12V	3/12/2019 11:26	Depth to Water Detail	154.99	ft
MW-12V	3/12/2019 11:26	Oxidation Reduction Potention	-39.4	mv
MW-12V	3/12/2019 11:26	pH	6.7	pH
MW-12V	3/12/2019 11:26	Temperature	21.13	C
MW-12V	3/12/2019 11:26	Turbidity	5.14	NTU
MW-12V	3/12/2019 11:31	Conductivity	2616.6	uS/cm
MW-12V	3/12/2019 11:31	DO	0.59	mg/L
MW-12V	3/12/2019 11:31	Depth to Water Detail	154.99	ft
MW-12V	3/12/2019 11:31	Oxidation Reduction Potention	-38.5	mv
MW-12V	3/12/2019 11:31	pH	6.7	pH
MW-12V	3/12/2019 11:31	Temperature	21.17	C
MW-12V	3/12/2019 11:31	Turbidity	4.11	NTU
MW-12V	3/12/2019 11:36	Conductivity	2617.5	uS/cm
MW-12V	3/12/2019 11:36	DO	0.56	mg/L
MW-12V	3/12/2019 11:36	Depth to Water Detail	154.99	ft
MW-12V	3/12/2019 11:36	Oxidation Reduction Potention	-37.8	mv
MW-12V	3/12/2019 11:36	pH	6.7	pH
MW-12V	3/12/2019 11:36	Temperature	21.17	C
MW-12V	3/12/2019 11:36	Turbidity	4.23	NTU
MW-12V	3/12/2019 11:41	Conductivity	2619	uS/cm
MW-12V	3/12/2019 11:41	DO	0.55	mg/L
MW-12V	3/12/2019 11:41	Depth to Water Detail	154.99	ft
MW-12V	3/12/2019 11:41	Oxidation Reduction Potention	-37.2	mv
MW-12V	3/12/2019 11:41	pH	6.7	pH
MW-12V	3/12/2019 11:41	Temperature	21.17	C
MW-12V	3/12/2019 11:41	Turbidity	3.74	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***



# **Plant Gorgas Landfill**

## **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).

There was heavy construction traffic and brush burning within approximately 100 yards of pumping and sampling MW-8.

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 :** WMWGORLF\_1224  
**Project/Site :** Gorgas Landfill  
Parrish, AL 35580  
**For :** Southern Company Services  
3535 Colonnade Parkway  
Birmingham, AL 35243  
**Attention :** Dustin Brooks & Greg Dyer  
**Released By :** Laura Midkiff  
lbmidkif@southernco.com  
(205) 664-6197

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: 2019.06.13 14:54:15 -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: 2019.06.18 16:08:22 -0500



Metals ICP

Gorgas Landfill

WMWGORLF\_1224

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>
AZ11847	646445	WMWGORLF_1224
AZ11848	646445	WMWGORLF_1224
AZ11849	646445	WMWGORLF_1224
AZ11850	646445	WMWGORLF_1224
AZ11851	646445	WMWGORLF_1224
AZ11852	646445	WMWGORLF_1224
AZ11853	646445	WMWGORLF_1224
AZ11854	646445	WMWGORLF_1224
AZ11855	646445	WMWGORLF_1224
AZ11856	646445	WMWGORLF_1224
AZ11857	646446	WMWGORLF_1224
AZ11858	646446	WMWGORLF_1224
AZ11859	646446	WMWGORLF_1224
AZ11860	646446	WMWGORLF_1224
AZ11861	646446	WMWGORLF_1224
AZ11862	646446	WMWGORLF_1224
AZ11863	646446	WMWGORLF_1224
AZ11864	646446	WMWGORLF_1224
AZ11865	646446	WMWGORLF_1224
AZ11866	646446	WMWGORLF_1224
AZ11867	646447	WMWGORLF_1224
AZ11868	646447	WMWGORLF_1224
AZ11869	646447	WMWGORLF_1224
AZ11870	646447	WMWGORLF_1224

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, except for the following:
  - AZ11856 and AZ11866 Calcium MS/MSD spike level was less than 30% of the sample nominal concentration.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All 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>
AZ11847	Calcium	x20.3
AZ11848	Calcium	x20.3
AZ11849	Calcium	x20.3
AZ11850	Calcium	x20.3
AZ11851	Calcium	x20.3
AZ11852	Calcium	x20.3
AZ11853	Calcium	x20.3
AZ11854	Calcium	x20.3
AZ11856	Calcium	x20.3
AZ11857	Calcium	x20.3
AZ11858	Calcium	x20.3
AZ11859	Calcium	x20.3
AZ11860	Calcium	x20.3
AZ11861	Calcium	x20.3
AZ11862	Calcium	x20.3
AZ11864	Calcium	x20.3
AZ11865	Calcium	x20.3
AZ11866	Calcium	x20.3
AZ11867	Calcium	x20.3
AZ11868	Calcium	x20.3
AZ11869	Calcium	x20.3

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



Metals ICPMS

Gorgas Landfill

WMWGORLF\_1224

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>
AZ11847	647639	WMWGORLF_1224
AZ11848	647639	WMWGORLF_1224
AZ11849	647639	WMWGORLF_1224
AZ11850	647639	WMWGORLF_1224
AZ11851	647639	WMWGORLF_1224
AZ11852	647639	WMWGORLF_1224
AZ11853	647639	WMWGORLF_1224
AZ11854	647639	WMWGORLF_1224
AZ11855	647639	WMWGORLF_1224
AZ11856	647639	WMWGORLF_1224
AZ11857	647640	WMWGORLF_1224
AZ11858	647640	WMWGORLF_1224
AZ11859	647640	WMWGORLF_1224
AZ11860	647640	WMWGORLF_1224
AZ11861	647640	WMWGORLF_1224
AZ11862	647640	WMWGORLF_1224
AZ11863	647640	WMWGORLF_1224
AZ11864	647640	WMWGORLF_1224
AZ11865	647640	WMWGORLF_1224
AZ11866	647640	WMWGORLF_1224
AZ11867	647641	WMWGORLF_1224
AZ11868	647641	WMWGORLF_1224
AZ11869	647641	WMWGORLF_1224
AZ11870	647641	WMWGORLF_1224

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 Landfill

WMWGORLF\_1224

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>
AZ11847	646540	WMWGORLF_1224
AZ11848	646540	WMWGORLF_1224
AZ11849	646540	WMWGORLF_1224
AZ11850	646540	WMWGORLF_1224
AZ11851	646540	WMWGORLF_1224
AZ11852	646540	WMWGORLF_1224
AZ11853	646540	WMWGORLF_1224
AZ11854	646540	WMWGORLF_1224
AZ11855	646540	WMWGORLF_1224
AZ11856	646540	WMWGORLF_1224
AZ11857	646541	WMWGORLF_1224
AZ11858	646541	WMWGORLF_1224
AZ11859	646541	WMWGORLF_1224
AZ11860	646541	WMWGORLF_1224
AZ11861	646541	WMWGORLF_1224
AZ11862	646541	WMWGORLF_1224
AZ11863	646541	WMWGORLF_1224
AZ11864	646541	WMWGORLF_1224
AZ11865	646541	WMWGORLF_1224
AZ11866	646541	WMWGORLF_1224
AZ11867	646542	WMWGORLF_1224
AZ11868	646542	WMWGORLF_1224
AZ11869	646542	WMWGORLF_1224
AZ11870	646542	WMWGORLF_1224

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 Landfill

WMWGORLF\_1224

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>
AZ11847	647322	WMWGORLF_1224
AZ11848	647322	WMWGORLF_1224
AZ11849	647322	WMWGORLF_1224
AZ11850	647322	WMWGORLF_1224
AZ11851	647322	WMWGORLF_1224
AZ11852	647322	WMWGORLF_1224
AZ11853	647322	WMWGORLF_1224
AZ11854	647322	WMWGORLF_1224
AZ11855	647323	WMWGORLF_1224
AZ11856	647323	WMWGORLF_1224
AZ11857	647323	WMWGORLF_1224
AZ11858	647323	WMWGORLF_1224
AZ11859	647323	WMWGORLF_1224
AZ11860	647323	WMWGORLF_1224
AZ11861	647323	WMWGORLF_1224
AZ11862	647323	WMWGORLF_1224
AZ11863	647323	WMWGORLF_1224
AZ11864	647323	WMWGORLF_1224
AZ11865	647446	WMWGORLF_1224
AZ11866	647446	WMWGORLF_1224
AZ11867	647446	WMWGORLF_1224
AZ11868	647446	WMWGORLF_1224
AZ11869	647446	WMWGORLF_1224
AZ11870	647446	WMWGORLF_1224

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:
  - AZ11855
  - AZ11863
  - AZ11870





Anions

Gorgas Landfill

WMWGORLF\_1224

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>
AZ11847	647179, 647182, & 647111	WMWGORLF_1224
AZ11848	647179, 647182, & 647111	WMWGORLF_1224
AZ11849	647179, 647182, & 647111	WMWGORLF_1224
AZ11850	647179, 647182, & 647111	WMWGORLF_1224
AZ11851	647179, 647182, & 647111	WMWGORLF_1224
AZ11852	647179, 647182, & 647111	WMWGORLF_1224
AZ11853	647179, 647182, & 647111	WMWGORLF_1224
AZ11854	647179, 647182, & 647111	WMWGORLF_1224
AZ11855	647179, 647182, & 647111	WMWGORLF_1224
AZ11856	647179, 647182, & 647112	WMWGORLF_1224
AZ11857	647180, 647183, & 647112	WMWGORLF_1224
AZ11858	647180, 647183, & 647112	WMWGORLF_1224
AZ11859	647180, 647183, & 647112	WMWGORLF_1224
AZ11860	647180, 647183, & 647112	WMWGORLF_1224
AZ11861	647180, 647183, & 647112	WMWGORLF_1224
AZ11862	647180, 647183, & 647112	WMWGORLF_1224
AZ11863	647180, 647183, & 647112	WMWGORLF_1224
AZ11864	647180, 647183, & 647113	WMWGORLF_1224
AZ11865	647180, 647183, & 647113	WMWGORLF_1224
AZ11866	647180, 647183, & 647113	WMWGORLF_1224
AZ11867	647181, 647184, & 647113	WMWGORLF_1224
AZ11868	647181, 647184, & 647113	WMWGORLF_1224
AZ11869	647181, 647184, & 647113	WMWGORLF_1224
AZ11870	647181, 647184, & 647113	WMWGORLF_1224

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, except for the following:
  - AZ11866 Matrix Spike Recovery for Chloride was outside of the specification limit.
- A sample duplicate was analyzed with each batch. Acceptance criteria for precision were met.



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

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AZ11847	Sulfate	x50
AZ11848	Sulfate	x50
AZ11849	Sulfate	x50
AZ11850	Sulfate	x80
AZ11851	Sulfate	x80
AZ11852	Sulfate	x80
AZ11853	Sulfate	x80
AZ11854	Sulfate	x50
AZ11856	Sulfate	x50
AZ11856	Chloride	x4
AZ11857	Sulfate	x50
AZ11857	Chloride	x10
AZ11858	Sulfate	x80
AZ11859	Sulfate	x80
AZ11860	Sulfate	x80
AZ11861	Sulfate	x50
AZ11862	Sulfate	x100
AZ11864	Sulfate	x100
AZ11865	Sulfate	x100
AZ11866	Sulfate	x80
AZ11866	Chloride	x10
AZ11867	Sulfate	x80
AZ11867	Chloride	x10
AZ11868	Sulfate	x50
AZ11869	Sulfate	x100

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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AZ11847

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	J 0.00913	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	167	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	0.00238	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	J 0.00137	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.0485	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	J 0.0260	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	J 0.00316	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	2340	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	2.28	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.119	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		50	25.00	50	1560	mg/L
<b>Field Measurements</b>									
pH	AWG	5/14/2019						FA 5.19	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AZ11847

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS	Rec		Prec	Limit
				Limit	Spike					Limit	Prec		
AZ11856	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.103	0.103	0.085 to 0.115	102	70 to 130	0.00	20
AZ11856	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.100	0.101	0.0906	0.085 to 0.115	87.8	70 to 130	0.995	20
AZ11856	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0951	0.0996	0.101	0.085 to 0.115	95.1	70 to 130	4.62	20
AZ11856	Boron, Total	mg/L	0.000862	0.065025	1.00	1.06	1.05	0.969	0.85 to 1.15	99.6	70 to 130	0.956	20
AZ11856	Calcium, Total	mg/L	0.00527	0.216749	5.00	323	345	5.00	4.25 to 5.75	362	70 to 130	6.62	20
AZ11856	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.104	0.104	0.085 to 0.115	102	70 to 130	1.94	20
AZ11856	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.106	0.106	0.106	0.085 to 0.115	99.6	70 to 130	0.00	20
AZ11856	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0986	0.0986	0.103	0.085 to 0.115	98.6	70 to 130	0.00	20
AZ11856	Mercury, Total by CVAA	mg/L	0.0000427	0.0005	0.004	0.00415	0.00505	0.00423	0.0034 to 0.0046	104	70 to 130	19.8	20
AZ11856	Lithium, Total	mg/L	-0.0000592	0.019704	0.20	0.388	0.387	0.197	0.17 to 0.23	114	70 to 130	0.219	20
AZ11856	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.101	0.102	0.100	0.085 to 0.115	101	70 to 130	0.985	20
AZ11856	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.103	0.104	0.108	0.085 to 0.115	103	70 to 130	0.966	20
AZ11856	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0946	0.0956	0.0910	0.085 to 0.115	94.6	70 to 130	1.05	20
AZ11856	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.105	0.108	0.107	0.085 to 0.115	105	70 to 130	2.82	20
AZ11856	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.102	0.104	0.085 to 0.115	101	70 to 130	0.985	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-1

Laboratory ID Number: AZ11847

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11854	Solids, Dissolved	mg/L	-2.00	25			2340	50.0	40 to 60			0.645	5
AZ11855	Sulfate	mg/L	-0.157	0.50	20.0	19.6	-0.183	20.8	18 to 22	98.0	80 to 120	0.00	20
AZ11856	Chloride	mg/L	0.0116	0.50	10.0	61.3	51.1	10.5	9 to 11	93.0	80 to 120	1.75	20
AZ11856	Fluoride	mg/L	0.0244	0.05	2.50	2.81	0.189	2.62	2.25 to 2.75	105	80 to 120	1.57	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AZ11848

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0109	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	168	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	J 0.000989	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.0222	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.0445	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		83.3	1480	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	2.98	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.170	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		50	25.00	50	948	mg/L
<b>Field Measurements</b>									
pH	AWG	5/14/2019						FA 6.07	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AZ11848

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS	Rec		Prec	Limit
				Limit	Spike					Limit	Prec		
AZ11856	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.103	0.103	0.085 to 0.115	102	70 to 130	0.00	20
AZ11856	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.100	0.101	0.0906	0.085 to 0.115	87.8	70 to 130	0.995	20
AZ11856	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0951	0.0996	0.101	0.085 to 0.115	95.1	70 to 130	4.62	20
AZ11856	Boron, Total	mg/L	0.000862	0.065025	1.00	1.06	1.05	0.969	0.85 to 1.15	99.6	70 to 130	0.956	20
AZ11856	Calcium, Total	mg/L	0.00527	0.216749	5.00	323	345	5.00	4.25 to 5.75	362	70 to 130	6.62	20
AZ11856	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.104	0.104	0.085 to 0.115	102	70 to 130	1.94	20
AZ11856	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.106	0.106	0.106	0.085 to 0.115	99.6	70 to 130	0.00	20
AZ11856	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0986	0.0986	0.103	0.085 to 0.115	98.6	70 to 130	0.00	20
AZ11856	Mercury, Total by CVAA	mg/L	0.0000427	0.0005	0.004	0.00415	0.00505	0.00423	0.0034 to 0.0046	104	70 to 130	19.8	20
AZ11856	Lithium, Total	mg/L	-0.0000592	0.019704	0.20	0.388	0.387	0.197	0.17 to 0.23	114	70 to 130	0.219	20
AZ11856	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.101	0.102	0.100	0.085 to 0.115	101	70 to 130	0.985	20
AZ11856	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.103	0.104	0.108	0.085 to 0.115	103	70 to 130	0.966	20
AZ11856	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0946	0.0956	0.0910	0.085 to 0.115	94.6	70 to 130	1.05	20
AZ11856	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.105	0.108	0.107	0.085 to 0.115	105	70 to 130	2.82	20
AZ11856	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.102	0.104	0.085 to 0.115	101	70 to 130	0.985	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-2

Laboratory ID Number: AZ11848

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11854	Solids, Dissolved	mg/L	-2.00	25			2340	50.0	40 to 60			0.645	5
AZ11855	Sulfate	mg/L	-0.157	0.50	20.0	19.6	-0.183	20.8	18 to 22	98.0	80 to 120	0.00	20
AZ11856	Chloride	mg/L	0.0116	0.50	10.0	61.3	51.1	10.5	9 to 11	93.0	80 to 120	1.75	20
AZ11856	Fluoride	mg/L	0.0244	0.05	2.50	2.81	0.189	2.62	2.25 to 2.75	105	80 to 120	1.57	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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AZ11849

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0112	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	170	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	J 0.000875	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.0221	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.0443	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		83.3	1540	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	2.87	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.164	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		50	25.00	50	873	mg/L
<b>Field Measurements</b>									
pH	AWG	5/14/2019						FA 6.07	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AZ11849

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ11856	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.103	0.103	0.085 to 0.115	102	70 to 130	0.00	20	
AZ11856	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.100	0.101	0.0906	0.085 to 0.115	87.8	70 to 130	0.995	20	
AZ11856	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0951	0.0996	0.101	0.085 to 0.115	95.1	70 to 130	4.62	20	
AZ11856	Boron, Total	mg/L	0.000862	0.065025	1.00	1.06	1.05	0.969	0.85 to 1.15	99.6	70 to 130	0.956	20	
AZ11856	Calcium, Total	mg/L	0.00527	0.216749	5.00	323	345	5.00	4.25 to 5.75	362	70 to 130	6.62	20	
AZ11856	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.104	0.104	0.085 to 0.115	102	70 to 130	1.94	20	
AZ11856	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.106	0.106	0.106	0.085 to 0.115	99.6	70 to 130	0.00	20	
AZ11856	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0986	0.0986	0.103	0.085 to 0.115	98.6	70 to 130	0.00	20	
AZ11856	Mercury, Total by CVAA	mg/L	0.0000427	0.0005	0.004	0.00415	0.00505	0.00423	0.0034 to 0.0046	104	70 to 130	19.8	20	
AZ11856	Lithium, Total	mg/L	-0.0000592	0.019704	0.20	0.388	0.387	0.197	0.17 to 0.23	114	70 to 130	0.219	20	
AZ11856	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.101	0.102	0.100	0.085 to 0.115	101	70 to 130	0.985	20	
AZ11856	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.103	0.104	0.108	0.085 to 0.115	103	70 to 130	0.966	20	
AZ11856	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0946	0.0956	0.0910	0.085 to 0.115	94.6	70 to 130	1.05	20	
AZ11856	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.105	0.108	0.107	0.085 to 0.115	105	70 to 130	2.82	20	
AZ11856	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.102	0.104	0.085 to 0.115	101	70 to 130	0.985	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-2 DUP

Laboratory ID Number: AZ11849

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11854	Solids, Dissolved	mg/L	-2.00	25			2340	50.0	40 to 60			0.645	5
AZ11855	Sulfate	mg/L	-0.157	0.50	20.0	19.6	-0.183	20.8	18 to 22	98.0	80 to 120	0.00	20
AZ11856	Chloride	mg/L	0.0116	0.50	10.0	61.3	51.1	10.5	9 to 11	93.0	80 to 120	1.75	20
AZ11856	Fluoride	mg/L	0.0244	0.05	2.50	2.81	0.189	2.62	2.25 to 2.75	105	80 to 120	1.57	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AZ11850

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	J 0.00922	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	254	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	0.00130	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.00536	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.0828	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0119	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	3580	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	2.28	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.281	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		80	40.00	80	2460	mg/L
<b>Field Measurements</b>									
pH	AWG	5/14/2019						FA 5.71	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AZ11850

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ11856	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.103	0.103	0.085 to 0.115	102	70 to 130	0.00	20	
AZ11856	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.100	0.101	0.0906	0.085 to 0.115	87.8	70 to 130	0.995	20	
AZ11856	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0951	0.0996	0.101	0.085 to 0.115	95.1	70 to 130	4.62	20	
AZ11856	Boron, Total	mg/L	0.000862	0.065025	1.00	1.06	1.05	0.969	0.85 to 1.15	99.6	70 to 130	0.956	20	
AZ11856	Calcium, Total	mg/L	0.00527	0.216749	5.00	323	345	5.00	4.25 to 5.75	362	70 to 130	6.62	20	
AZ11856	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.104	0.104	0.085 to 0.115	102	70 to 130	1.94	20	
AZ11856	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.106	0.106	0.106	0.085 to 0.115	99.6	70 to 130	0.00	20	
AZ11856	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0986	0.0986	0.103	0.085 to 0.115	98.6	70 to 130	0.00	20	
AZ11856	Mercury, Total by CVAA	mg/L	0.0000427	0.0005	0.004	0.00415	0.00505	0.00423	0.0034 to 0.0046	104	70 to 130	19.8	20	
AZ11856	Lithium, Total	mg/L	-0.0000592	0.019704	0.20	0.388	0.387	0.197	0.17 to 0.23	114	70 to 130	0.219	20	
AZ11856	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.101	0.102	0.100	0.085 to 0.115	101	70 to 130	0.985	20	
AZ11856	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.103	0.104	0.108	0.085 to 0.115	103	70 to 130	0.966	20	
AZ11856	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0946	0.0956	0.0910	0.085 to 0.115	94.6	70 to 130	1.05	20	
AZ11856	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.105	0.108	0.107	0.085 to 0.115	105	70 to 130	2.82	20	
AZ11856	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.102	0.104	0.085 to 0.115	101	70 to 130	0.985	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-3

Laboratory ID Number: AZ11850

Sample	Analysis	Units	MB	MB	Limit	Spike	MS	Sample	LCS	LCS	Limit	Rec	Prec	Prec	Limit
								Duplicate	LCS			Rec	Limit	Prec	Limit
AZ11854	Solids, Dissolved	mg/L	-2.00		25			2340	50.0		40 to 60			0.645	5
AZ11855	Sulfate	mg/L	-0.157		0.50	20.0	19.6	-0.183	20.8		18 to 22	98.0	80 to 120	0.00	20
AZ11856	Chloride	mg/L	0.0116		0.50	10.0	61.3	51.1	10.5		9 to 11	93.0	80 to 120	1.75	20
AZ11856	Fluoride	mg/L	0.0244		0.05	2.50	2.81	0.189	2.62		2.25 to 2.75	105	80 to 120	1.57	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AZ11851

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	J 0.00949	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	254	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.0485	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	J 0.00201	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	3130	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	1.82	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.335	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		80	40.00	80	2240	mg/L
<b>Field Measurements</b>									
pH	AWG	5/14/2019						FA 6.23	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AZ11851

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS	Rec		Prec	Limit
				Limit	Spike					Limit	Prec		
AZ11856	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.103	0.103	0.085 to 0.115	102	70 to 130	0.00	20
AZ11856	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.100	0.101	0.0906	0.085 to 0.115	87.8	70 to 130	0.995	20
AZ11856	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0951	0.0996	0.101	0.085 to 0.115	95.1	70 to 130	4.62	20
AZ11856	Boron, Total	mg/L	0.000862	0.065025	1.00	1.06	1.05	0.969	0.85 to 1.15	99.6	70 to 130	0.956	20
AZ11856	Calcium, Total	mg/L	0.00527	0.216749	5.00	323	345	5.00	4.25 to 5.75	362	70 to 130	6.62	20
AZ11856	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.104	0.104	0.085 to 0.115	102	70 to 130	1.94	20
AZ11856	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.106	0.106	0.106	0.085 to 0.115	99.6	70 to 130	0.00	20
AZ11856	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0986	0.0986	0.103	0.085 to 0.115	98.6	70 to 130	0.00	20
AZ11856	Mercury, Total by CVAA	mg/L	0.0000427	0.0005	0.004	0.00415	0.00505	0.00423	0.0034 to 0.0046	104	70 to 130	19.8	20
AZ11856	Lithium, Total	mg/L	-0.0000592	0.019704	0.20	0.388	0.387	0.197	0.17 to 0.23	114	70 to 130	0.219	20
AZ11856	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.101	0.102	0.100	0.085 to 0.115	101	70 to 130	0.985	20
AZ11856	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.103	0.104	0.108	0.085 to 0.115	103	70 to 130	0.966	20
AZ11856	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0946	0.0956	0.0910	0.085 to 0.115	94.6	70 to 130	1.05	20
AZ11856	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.105	0.108	0.107	0.085 to 0.115	105	70 to 130	2.82	20
AZ11856	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.102	0.104	0.085 to 0.115	101	70 to 130	0.985	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-4

Laboratory ID Number: AZ11851

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11854	Solids, Dissolved	mg/L	-2.00	25			2340	50.0	40 to 60			0.645	5
AZ11855	Sulfate	mg/L	-0.157	0.50	20.0	19.6	-0.183	20.8	18 to 22	98.0	80 to 120	0.00	20
AZ11856	Chloride	mg/L	0.0116	0.50	10.0	61.3	51.1	10.5	9 to 11	93.0	80 to 120	1.75	20
AZ11856	Fluoride	mg/L	0.0244	0.05	2.50	2.81	0.189	2.62	2.25 to 2.75	105	80 to 120	1.57	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:

CC:

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

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AZ11852

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	J 0.00153	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0111	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	441	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.116	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	3520	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	6.24	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.220	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		80	40.00	80	2380	mg/L
<b>Field Measurements</b>									
pH	AWG	5/14/2019						FA 6.34	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AZ11852

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS	Rec		Prec	Limit
				Limit	Spike					Limit	Prec		
AZ11856	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.103	0.103	0.085 to 0.115	102	70 to 130	0.00	20
AZ11856	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.100	0.101	0.0906	0.085 to 0.115	87.8	70 to 130	0.995	20
AZ11856	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0951	0.0996	0.101	0.085 to 0.115	95.1	70 to 130	4.62	20
AZ11856	Boron, Total	mg/L	0.000862	0.065025	1.00	1.06	1.05	0.969	0.85 to 1.15	99.6	70 to 130	0.956	20
AZ11856	Calcium, Total	mg/L	0.00527	0.216749	5.00	323	345	5.00	4.25 to 5.75	362	70 to 130	6.62	20
AZ11856	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.104	0.104	0.085 to 0.115	102	70 to 130	1.94	20
AZ11856	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.106	0.106	0.106	0.085 to 0.115	99.6	70 to 130	0.00	20
AZ11856	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0986	0.0986	0.103	0.085 to 0.115	98.6	70 to 130	0.00	20
AZ11856	Mercury, Total by CVAA	mg/L	0.0000427	0.0005	0.004	0.00415	0.00505	0.00423	0.0034 to 0.0046	104	70 to 130	19.8	20
AZ11856	Lithium, Total	mg/L	-0.0000592	0.019704	0.20	0.388	0.387	0.197	0.17 to 0.23	114	70 to 130	0.219	20
AZ11856	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.101	0.102	0.100	0.085 to 0.115	101	70 to 130	0.985	20
AZ11856	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.103	0.104	0.108	0.085 to 0.115	103	70 to 130	0.966	20
AZ11856	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0946	0.0956	0.0910	0.085 to 0.115	94.6	70 to 130	1.05	20
AZ11856	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.105	0.108	0.107	0.085 to 0.115	105	70 to 130	2.82	20
AZ11856	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.102	0.104	0.085 to 0.115	101	70 to 130	0.985	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-5

Laboratory ID Number: AZ11852

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11854	Solids, Dissolved	mg/L	-2.00	25			2340	50.0	40 to 60			0.645	5
AZ11855	Sulfate	mg/L	-0.157	0.50	20.0	19.6	-0.183	20.8	18 to 22	98.0	80 to 120	0.00	20
AZ11856	Chloride	mg/L	0.0116	0.50	10.0	61.3	51.1	10.5	9 to 11	93.0	80 to 120	1.75	20
AZ11856	Fluoride	mg/L	0.0244	0.05	2.50	2.81	0.189	2.62	2.25 to 2.75	105	80 to 120	1.57	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, 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



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AZ11853

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	J	0.00383	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01		0.0121	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	J	0.000677	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	J	0.0616	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15		345	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	J	0.000858	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005		0.265	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406		0.152	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
<b>General Characteristics</b>										
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125		3130	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1				05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1		4.45	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1		0.133	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		80	40.00	80		2110	mg/L
<b>Field Measurements</b>										
pH	AWG	5/15/2019							FA 5.72	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AZ11853

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
				Limit	Spike					Rec	Limit		
AZ11856	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.103	0.103	0.085 to 0.115	102	70 to 130	0.00	20
AZ11856	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.100	0.101	0.0906	0.085 to 0.115	87.8	70 to 130	0.995	20
AZ11856	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0951	0.0996	0.101	0.085 to 0.115	95.1	70 to 130	4.62	20
AZ11856	Boron, Total	mg/L	0.000862	0.065025	1.00	1.06	1.05	0.969	0.85 to 1.15	99.6	70 to 130	0.956	20
AZ11856	Calcium, Total	mg/L	0.00527	0.216749	5.00	323	345	5.00	4.25 to 5.75	362	70 to 130	6.62	20
AZ11856	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.104	0.104	0.085 to 0.115	102	70 to 130	1.94	20
AZ11856	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.106	0.106	0.106	0.085 to 0.115	99.6	70 to 130	0.00	20
AZ11856	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0986	0.0986	0.103	0.085 to 0.115	98.6	70 to 130	0.00	20
AZ11856	Mercury, Total by CVAA	mg/L	0.0000427	0.0005	0.004	0.00415	0.00505	0.00423	0.0034 to 0.0046	104	70 to 130	19.8	20
AZ11856	Lithium, Total	mg/L	-0.0000592	0.019704	0.20	0.388	0.387	0.197	0.17 to 0.23	114	70 to 130	0.219	20
AZ11856	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.101	0.102	0.100	0.085 to 0.115	101	70 to 130	0.985	20
AZ11856	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.103	0.104	0.108	0.085 to 0.115	103	70 to 130	0.966	20
AZ11856	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0946	0.0956	0.0910	0.085 to 0.115	94.6	70 to 130	1.05	20
AZ11856	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.105	0.108	0.107	0.085 to 0.115	105	70 to 130	2.82	20
AZ11856	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.102	0.104	0.085 to 0.115	101	70 to 130	0.985	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-6

Laboratory ID Number: AZ11853

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11854	Solids, Dissolved	mg/L	-2.00	25			2340	50.0	40 to 60			0.645	5
AZ11855	Sulfate	mg/L	-0.157	0.50	20.0	19.6	-0.183	20.8	18 to 22	98.0	80 to 120	0.00	20
AZ11856	Chloride	mg/L	0.0116	0.50	10.0	61.3	51.1	10.5	9 to 11	93.0	80 to 120	1.75	20
AZ11856	Fluoride	mg/L	0.0244	0.05	2.50	2.81	0.189	2.62	2.25 to 2.75	105	80 to 120	1.57	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AZ11854

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	J 0.00138	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0114	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	J 0.0678	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	302	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	J 0.00234	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.127	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	2310	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	15.9	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.169	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		50	25.00	50	1510	mg/L
<b>Field Measurements</b>									
pH	AWG	5/15/2019						FA 6.61	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AZ11854

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS Limit	Rec		Prec Limit	
				Limit	Spike					Rec	Limit		
AZ11856	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.103	0.103	0.085 to 0.115	102	70 to 130	0.00	20
AZ11856	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.100	0.101	0.0906	0.085 to 0.115	87.8	70 to 130	0.995	20
AZ11856	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0951	0.0996	0.101	0.085 to 0.115	95.1	70 to 130	4.62	20
AZ11856	Boron, Total	mg/L	0.000862	0.065025	1.00	1.06	1.05	0.969	0.85 to 1.15	99.6	70 to 130	0.956	20
AZ11856	Calcium, Total	mg/L	0.00527	0.216749	5.00	323	345	5.00	4.25 to 5.75	362	70 to 130	6.62	20
AZ11856	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.104	0.104	0.085 to 0.115	102	70 to 130	1.94	20
AZ11856	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.106	0.106	0.106	0.085 to 0.115	99.6	70 to 130	0.00	20
AZ11856	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0986	0.0986	0.103	0.085 to 0.115	98.6	70 to 130	0.00	20
AZ11856	Mercury, Total by CVAA	mg/L	0.0000427	0.0005	0.004	0.00415	0.00505	0.00423	0.0034 to 0.0046	104	70 to 130	19.8	20
AZ11856	Lithium, Total	mg/L	-0.0000592	0.019704	0.20	0.388	0.387	0.197	0.17 to 0.23	114	70 to 130	0.219	20
AZ11856	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.101	0.102	0.100	0.085 to 0.115	101	70 to 130	0.985	20
AZ11856	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.103	0.104	0.108	0.085 to 0.115	103	70 to 130	0.966	20
AZ11856	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0946	0.0956	0.0910	0.085 to 0.115	94.6	70 to 130	1.05	20
AZ11856	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.105	0.108	0.107	0.085 to 0.115	105	70 to 130	2.82	20
AZ11856	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.102	0.104	0.085 to 0.115	101	70 to 130	0.985	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-7

Laboratory ID Number: AZ11854

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11854	Solids, Dissolved	mg/L	-2.00	25			2340	50.0	40 to 60			0.645	5
AZ11855	Sulfate	mg/L	-0.157	0.50	20.0	19.6	-0.183	20.8	18 to 22	98.0	80 to 120	0.00	20
AZ11856	Chloride	mg/L	0.0116	0.50	10.0	61.3	51.1	10.5	9 to 11	93.0	80 to 120	1.75	20
AZ11856	Fluoride	mg/L	0.0244	0.05	2.50	2.81	0.189	2.62	2.25 to 2.75	105	80 to 120	1.57	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:

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: WMWGORLFFB  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AZ11855

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U	Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.203	1.015	U	Not Detected	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	U	Not Detected	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
<b>General Characteristics</b>										
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		25	U	Not Detected	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1				05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	U	Not Detected	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	U	Not Detected	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		1	0.50	1	U	Not Detected	mg/L

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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: WMWGORLFFB  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AZ11855

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ11856	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.103	0.103	0.085 to 0.115	102	70 to 130	0.00	20	
AZ11856	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.100	0.101	0.0906	0.085 to 0.115	87.8	70 to 130	0.995	20	
AZ11856	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0951	0.0996	0.101	0.085 to 0.115	95.1	70 to 130	4.62	20	
AZ11856	Boron, Total	mg/L	0.000862	0.065025	1.00	1.06	1.05	0.969	0.85 to 1.15	99.6	70 to 130	0.956	20	
AZ11856	Calcium, Total	mg/L	0.00527	0.216749	5.00	323	345	5.00	4.25 to 5.75	362	70 to 130	6.62	20	
AZ11856	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.104	0.104	0.085 to 0.115	102	70 to 130	1.94	20	
AZ11856	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.106	0.106	0.106	0.085 to 0.115	99.6	70 to 130	0.00	20	
AZ11856	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0986	0.0986	0.103	0.085 to 0.115	98.6	70 to 130	0.00	20	
AZ11856	Mercury, Total by CVAA	mg/L	0.0000427	0.0005	0.004	0.00415	0.00505	0.00423	0.0034 to 0.0046	104	70 to 130	19.8	20	
AZ11856	Lithium, Total	mg/L	-0.0000592	0.019704	0.20	0.388	0.387	0.197	0.17 to 0.23	114	70 to 130	0.219	20	
AZ11856	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.101	0.102	0.100	0.085 to 0.115	101	70 to 130	0.985	20	
AZ11856	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.103	0.104	0.108	0.085 to 0.115	103	70 to 130	0.966	20	
AZ11856	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0946	0.0956	0.0910	0.085 to 0.115	94.6	70 to 130	1.05	20	
AZ11856	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.105	0.108	0.107	0.085 to 0.115	105	70 to 130	2.82	20	
AZ11856	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.102	0.104	0.085 to 0.115	101	70 to 130	0.985	20	

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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:**

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: WMWGORLFFB  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AZ11855

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11855	Sulfate	mg/L	-0.157	0.50	20.0	19.6	-0.183	20.8	18 to 22	98.0	80 to 120	0.00	20
AZ11856	Chloride	mg/L	0.0116	0.50	10.0	61.3	51.1	10.5	9 to 11	93.0	80 to 120	1.75	20
AZ11856	Fluoride	mg/L	0.0244	0.05	2.50	2.81	0.189	2.62	2.25 to 2.75	105	80 to 120	1.57	20
AZ11864	Solids, Dissolved	mg/L	-2.00	25			2940	50.0	40 to 60			1.21	5

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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:

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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AZ11856

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	J	0.00136	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01		0.0122	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	J	0.0689	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15		305	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005		0.00643	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406		0.160	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
<b>General Characteristics</b>										
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125		2540	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1				05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		4	2.00	4		52.0	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1		0.192	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		50	25.00	50		1640	mg/L
<b>Field Measurements</b>										
pH	AWG	5/15/2019							FA 6.60	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** Matrix spike is invalid for Calcium due to sample concentration. LBM 6/12/19

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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AZ11856

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS	Rec		Prec	Limit
				Limit	Spike					Limit	Prec		
AZ11856	Arsenic, Total	mg/L	0.0000501	0.0022	0.100	0.103	0.103	0.103	0.085 to 0.115	102	70 to 130	0.00	20
AZ11856	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.100	0.101	0.0906	0.085 to 0.115	87.8	70 to 130	0.995	20
AZ11856	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0951	0.0996	0.101	0.085 to 0.115	95.1	70 to 130	4.62	20
AZ11856	Boron, Total	mg/L	0.000862	0.065025	1.00	1.06	1.05	0.969	0.85 to 1.15	99.6	70 to 130	0.956	20
AZ11856	Calcium, Total	mg/L	0.00527	0.216749	5.00	323	345	5.00	4.25 to 5.75	362	70 to 130	6.62	20
AZ11856	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.104	0.104	0.085 to 0.115	102	70 to 130	1.94	20
AZ11856	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.106	0.106	0.106	0.085 to 0.115	99.6	70 to 130	0.00	20
AZ11856	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0986	0.0986	0.103	0.085 to 0.115	98.6	70 to 130	0.00	20
AZ11856	Mercury, Total by CVAA	mg/L	0.0000427	0.0005	0.004	0.00415	0.00505	0.00423	0.0034 to 0.0046	104	70 to 130	19.8	20
AZ11856	Lithium, Total	mg/L	-0.0000592	0.019704	0.20	0.388	0.387	0.197	0.17 to 0.23	114	70 to 130	0.219	20
AZ11856	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.101	0.102	0.100	0.085 to 0.115	101	70 to 130	0.985	20
AZ11856	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.103	0.104	0.108	0.085 to 0.115	103	70 to 130	0.966	20
AZ11856	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0946	0.0956	0.0910	0.085 to 0.115	94.6	70 to 130	1.05	20
AZ11856	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.105	0.108	0.107	0.085 to 0.115	105	70 to 130	2.82	20
AZ11856	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.102	0.104	0.085 to 0.115	101	70 to 130	0.985	20

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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: Matrix spike is invalid for Calcium due to sample concentration. LBM 6/12/19

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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-8

Laboratory ID Number: AZ11856

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11856	Chloride	mg/L	0.0116	0.50	10.0	61.3	51.1	10.5	9 to 11	93.0	80 to 120	1.75	20
AZ11856	Fluoride	mg/L	0.0244	0.05	2.50	2.81	0.189	2.62	2.25 to 2.75	105	80 to 120	1.57	20
AZ11863	Sulfate	mg/L	-0.479	0.50	20.0	19.7	-0.308	20.8	18 to 22	98.5	80 to 120	0.00	20
AZ11864	Solids, Dissolved	mg/L	-2.00	25			2940	50.0	40 to 60			1.21	5

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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: Matrix spike is invalid for Calcium due to sample concentration. LBM 6/12/19

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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AZ11857

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0132	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	J 0.101	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	380	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.251	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	2560	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		10	5.00	10	75.4	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.100	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		50	25.00	50	1510	mg/L
<b>Field Measurements</b>									
pH	AWG	5/15/2019						FA 6.62	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AZ11857

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit	
				Limit	Spike				Limit	Rec	Limit	Prec			
AZ11866	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.102	0.103	0.085 to 0.115		103	70 to 130		0.976	20
AZ11866	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.0997	0.102	0.0906	0.085 to 0.115		85.6	70 to 130		2.28	20
AZ11866	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0971	0.0990	0.101	0.085 to 0.115		97.1	70 to 130		1.94	20
AZ11866	Boron, Total	mg/L	0.000483	0.065025	1.00	1.08	1.07	0.968	0.85 to 1.15		97.3	70 to 130		0.699	20
AZ11866	Calcium, Total	mg/L	0.00244	0.216749	5.00	422	390	5.13	4.25 to 5.75		816	70 to 130		7.91	20
AZ11866	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130		0.00	20
AZ11866	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.0986	0.101	0.106	0.085 to 0.115		98.6	70 to 130		2.40	20
AZ11866	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0966	0.0986	0.103	0.085 to 0.115		96.6	70 to 130		2.05	20
AZ11866	Mercury, Total by CVAA	mg/L	0.0000328	0.0005	0.004	0.00426	0.00415	0.00420	0.0034 to 0.0046		107	70 to 130		2.72	20
AZ11866	Lithium, Total	mg/L	-0.000114	0.019704	0.20	0.475	0.474	0.198	0.17 to 0.23		117	70 to 130		0.0194	20
AZ11866	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.104	0.106	0.100	0.085 to 0.115		104	70 to 130		1.90	20
AZ11866	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.104	0.100	0.108	0.085 to 0.115		104	70 to 130		3.92	20
AZ11866	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0903	0.0944	0.0910	0.085 to 0.115		90.3	70 to 130		4.44	20
AZ11866	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130		3.85	20
AZ11866	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.0977	0.104	0.085 to 0.115		101	70 to 130		3.32	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-11

Laboratory ID Number: AZ11857

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample		LCS Limit	Rec		Prec Limit	
							Duplicate	LCS		Rec	Limit		
AZ11863	Sulfate	mg/L	-0.479	0.50	20.0	19.7	-0.308	20.8	18 to 22	98.5	80 to 120	0.00	20
AZ11864	Solids, Dissolved	mg/L	-2.00	25			2940	50.0	40 to 60			1.21	5
AZ11866	Chloride	mg/L	0.0285	0.50	10.0	65.0	55.9	10.3	9 to 11	73.0	80 to 120	3.17	20
AZ11866	Fluoride	mg/L	0.035	0.05	2.50	2.67	0.110	2.64	2.25 to 2.75	102	80 to 120	8.70	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:**

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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AZ11858

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0115	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	302	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.00941	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	U Not Detected	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	2530	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	1.96	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.196	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		80	40.00	80	1600	mg/L
<b>Field Measurements</b>									
pH	SNP	5/14/2019						FA 6.41	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AZ11858

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS	Rec		Prec	Limit
				Limit	Spike					Limit	Prec		
AZ11866	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.102	0.103	0.085 to 0.115	103	70 to 130	0.976	20
AZ11866	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.0997	0.102	0.0906	0.085 to 0.115	85.6	70 to 130	2.28	20
AZ11866	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0971	0.0990	0.101	0.085 to 0.115	97.1	70 to 130	1.94	20
AZ11866	Boron, Total	mg/L	0.000483	0.065025	1.00	1.08	1.07	0.968	0.85 to 1.15	97.3	70 to 130	0.699	20
AZ11866	Calcium, Total	mg/L	0.00244	0.216749	5.00	422	390	5.13	4.25 to 5.75	816	70 to 130	7.91	20
AZ11866	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.00	20
AZ11866	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.0986	0.101	0.106	0.085 to 0.115	98.6	70 to 130	2.40	20
AZ11866	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0966	0.0986	0.103	0.085 to 0.115	96.6	70 to 130	2.05	20
AZ11866	Mercury, Total by CVAA	mg/L	0.0000328	0.0005	0.004	0.00426	0.00415	0.00420	0.0034 to 0.0046	107	70 to 130	2.72	20
AZ11866	Lithium, Total	mg/L	-0.000114	0.019704	0.20	0.475	0.474	0.198	0.17 to 0.23	117	70 to 130	0.0194	20
AZ11866	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.104	0.106	0.100	0.085 to 0.115	104	70 to 130	1.90	20
AZ11866	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.104	0.100	0.108	0.085 to 0.115	104	70 to 130	3.92	20
AZ11866	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0903	0.0944	0.0910	0.085 to 0.115	90.3	70 to 130	4.44	20
AZ11866	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.102	0.106	0.107	0.085 to 0.115	102	70 to 130	3.85	20
AZ11866	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.0977	0.104	0.085 to 0.115	101	70 to 130	3.32	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  
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 (205) 664-6247 or 6171  
 FAX (205) 664-6108

# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-13

Laboratory ID Number: AZ11858

Sample	Analysis	Units	MB	MB	Spike	MS	Sample	LCS	Rec	Prec	Prec		
			Limit	Limit			Duplicate	LCS	Limit	Rec	Limit	Limit	
AZ11863	Sulfate	mg/L	-0.479	0.50	20.0	19.7	-0.308	20.8	18 to 22	98.5	80 to 120	0.00	20
AZ11864	Solids, Dissolved	mg/L	-2.00	25			2940	50.0	40 to 60			1.21	5
AZ11866	Chloride	mg/L	0.0285	0.50	10.0	65.0	55.9	10.3	9 to 11	73.0	80 to 120	3.17	20
AZ11866	Fluoride	mg/L	0.035	0.05	2.50	2.67	0.110	2.64	2.25 to 2.75	102	80 to 120	8.70	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  
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 FAX (205) 664-6108

**Certificate Of Analysis**  **Alabama Power**



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AZ11859

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	J 0.00114	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0105	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	337	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.00850	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	J 0.0334	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	3150	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	1.97	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.225	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		80	40.00	80	2000	mg/L
<b>Field Measurements</b>									
pH	SNP	5/14/2019						FA 6.39	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AZ11859

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit	
				Limit	Spike				Limit	Rec	Limit	Prec			
AZ11866	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.102	0.103	0.085 to 0.115		103	70 to 130		0.976	20
AZ11866	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.0997	0.102	0.0906	0.085 to 0.115		85.6	70 to 130		2.28	20
AZ11866	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0971	0.0990	0.101	0.085 to 0.115		97.1	70 to 130		1.94	20
AZ11866	Boron, Total	mg/L	0.000483	0.065025	1.00	1.08	1.07	0.968	0.85 to 1.15		97.3	70 to 130		0.699	20
AZ11866	Calcium, Total	mg/L	0.00244	0.216749	5.00	422	390	5.13	4.25 to 5.75		816	70 to 130		7.91	20
AZ11866	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130		0.00	20
AZ11866	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.0986	0.101	0.106	0.085 to 0.115		98.6	70 to 130		2.40	20
AZ11866	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0966	0.0986	0.103	0.085 to 0.115		96.6	70 to 130		2.05	20
AZ11866	Mercury, Total by CVAA	mg/L	0.0000328	0.0005	0.004	0.00426	0.00415	0.00420	0.0034 to 0.0046		107	70 to 130		2.72	20
AZ11866	Lithium, Total	mg/L	-0.000114	0.019704	0.20	0.475	0.474	0.198	0.17 to 0.23		117	70 to 130		0.0194	20
AZ11866	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.104	0.106	0.100	0.085 to 0.115		104	70 to 130		1.90	20
AZ11866	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.104	0.100	0.108	0.085 to 0.115		104	70 to 130		3.92	20
AZ11866	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0903	0.0944	0.0910	0.085 to 0.115		90.3	70 to 130		4.44	20
AZ11866	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130		3.85	20
AZ11866	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.0977	0.104	0.085 to 0.115		101	70 to 130		3.32	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, 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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-14

Laboratory ID Number: AZ11859

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec		Prec	
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ11863	Sulfate	mg/L	-0.479	0.50	20.0	19.7	-0.308	20.8	18 to 22	98.5	80 to 120	0.00	20
AZ11864	Solids, Dissolved	mg/L	-2.00	25			2940	50.0	40 to 60			1.21	5
AZ11866	Chloride	mg/L	0.0285	0.50	10.0	65.0	55.9	10.3	9 to 11	73.0	80 to 120	3.17	20
AZ11866	Fluoride	mg/L	0.035	0.05	2.50	2.67	0.110	2.64	2.25 to 2.75	102	80 to 120	8.70	20

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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:**

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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AZ11860

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0101	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	280	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.0739	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.0679	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	2520	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	1.87	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.340	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		80	40.00	80	1940	mg/L
<b>Field Measurements</b>									
pH	SNP	5/14/2019						FA 6.1	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AZ11860

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec Limit	
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ11866	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.102	0.103	0.085 to 0.115		103	70 to 130	0.976	20
AZ11866	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.0997	0.102	0.0906	0.085 to 0.115		85.6	70 to 130	2.28	20
AZ11866	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0971	0.0990	0.101	0.085 to 0.115		97.1	70 to 130	1.94	20
AZ11866	Boron, Total	mg/L	0.000483	0.065025	1.00	1.08	1.07	0.968	0.85 to 1.15		97.3	70 to 130	0.699	20
AZ11866	Calcium, Total	mg/L	0.00244	0.216749	5.00	422	390	5.13	4.25 to 5.75		816	70 to 130	7.91	20
AZ11866	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130	0.00	20
AZ11866	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.0986	0.101	0.106	0.085 to 0.115		98.6	70 to 130	2.40	20
AZ11866	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0966	0.0986	0.103	0.085 to 0.115		96.6	70 to 130	2.05	20
AZ11866	Mercury, Total by CVAA	mg/L	0.0000328	0.0005	0.004	0.00426	0.00415	0.00420	0.0034 to 0.0046		107	70 to 130	2.72	20
AZ11866	Lithium, Total	mg/L	-0.000114	0.019704	0.20	0.475	0.474	0.198	0.17 to 0.23		117	70 to 130	0.0194	20
AZ11866	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.104	0.106	0.100	0.085 to 0.115		104	70 to 130	1.90	20
AZ11866	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.104	0.100	0.108	0.085 to 0.115		104	70 to 130	3.92	20
AZ11866	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0903	0.0944	0.0910	0.085 to 0.115		90.3	70 to 130	4.44	20
AZ11866	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130	3.85	20
AZ11866	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.0977	0.104	0.085 to 0.115		101	70 to 130	3.32	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-15

Laboratory ID Number: AZ11860

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11863	Sulfate	mg/L	-0.479	0.50	20.0	19.7	-0.308	20.8	18 to 22	98.5	80 to 120	0.00	20
AZ11864	Solids, Dissolved	mg/L	-2.00	25			2940	50.0	40 to 60			1.21	5
AZ11866	Chloride	mg/L	0.0285	0.50	10.0	65.0	55.9	10.3	9 to 11	73.0	80 to 120	3.17	20
AZ11866	Fluoride	mg/L	0.035	0.05	2.50	2.67	0.110	2.64	2.25 to 2.75	102	80 to 120	8.70	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AZ11861

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	J 0.00362	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0110	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	319	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.00943	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	U Not Detected	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	2350	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	4.12	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.153	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		50	25.00	50	1490	mg/L
<b>Field Measurements</b>									
pH	SNP	5/14/2019						FA 6.44	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AZ11861

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS	Rec		Prec	Limit
				Limit	Spike					Limit	Prec		
AZ11866	Arsenic, Total	mg/L	0.0000501	0.0022	0.100	0.103	0.102	0.103	0.085 to 0.115	103	70 to 130	0.976	20
AZ11866	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.0997	0.102	0.0906	0.085 to 0.115	85.6	70 to 130	2.28	20
AZ11866	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0971	0.0990	0.101	0.085 to 0.115	97.1	70 to 130	1.94	20
AZ11866	Boron, Total	mg/L	0.000483	0.065025	1.00	1.08	1.07	0.968	0.85 to 1.15	97.3	70 to 130	0.699	20
AZ11866	Calcium, Total	mg/L	0.00244	0.216749	5.00	422	390	5.13	4.25 to 5.75	816	70 to 130	7.91	20
AZ11866	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.00	20
AZ11866	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.0986	0.101	0.106	0.085 to 0.115	98.6	70 to 130	2.40	20
AZ11866	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0966	0.0986	0.103	0.085 to 0.115	96.6	70 to 130	2.05	20
AZ11866	Mercury, Total by CVAA	mg/L	0.0000328	0.0005	0.004	0.00426	0.00415	0.00420	0.0034 to 0.0046	107	70 to 130	2.72	20
AZ11866	Lithium, Total	mg/L	-0.000114	0.019704	0.20	0.475	0.474	0.198	0.17 to 0.23	117	70 to 130	0.0194	20
AZ11866	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.104	0.106	0.100	0.085 to 0.115	104	70 to 130	1.90	20
AZ11866	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.104	0.100	0.108	0.085 to 0.115	104	70 to 130	3.92	20
AZ11866	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0903	0.0944	0.0910	0.085 to 0.115	90.3	70 to 130	4.44	20
AZ11866	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.102	0.106	0.107	0.085 to 0.115	102	70 to 130	3.85	20
AZ11866	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.0977	0.104	0.085 to 0.115	101	70 to 130	3.32	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-16

Laboratory ID Number: AZ11861

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec		Prec	
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ11863	Sulfate	mg/L	-0.479	0.50	20.0	19.7	-0.308	20.8	18 to 22	98.5	80 to 120	0.00	20
AZ11864	Solids, Dissolved	mg/L	-2.00	25			2940	50.0	40 to 60			1.21	5
AZ11866	Chloride	mg/L	0.0285	0.50	10.0	65.0	55.9	10.3	9 to 11	73.0	80 to 120	3.17	20
AZ11866	Fluoride	mg/L	0.035	0.05	2.50	2.67	0.110	2.64	2.25 to 2.75	102	80 to 120	8.70	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AZ11862

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	J 0.00210	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0130	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	402	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.461	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.0456	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	3710	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	3.23	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.152	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		100	50.00	100	2640	mg/L
<b>Field Measurements</b>									
pH	SNP	5/14/2019						FA 6.02	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AZ11862

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec Limit	
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ11866	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.102	0.103	0.085 to 0.115		103	70 to 130	0.976	20
AZ11866	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.0997	0.102	0.0906	0.085 to 0.115		85.6	70 to 130	2.28	20
AZ11866	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0971	0.0990	0.101	0.085 to 0.115		97.1	70 to 130	1.94	20
AZ11866	Boron, Total	mg/L	0.000483	0.065025	1.00	1.08	1.07	0.968	0.85 to 1.15		97.3	70 to 130	0.699	20
AZ11866	Calcium, Total	mg/L	0.00244	0.216749	5.00	422	390	5.13	4.25 to 5.75		816	70 to 130	7.91	20
AZ11866	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130	0.00	20
AZ11866	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.0986	0.101	0.106	0.085 to 0.115		98.6	70 to 130	2.40	20
AZ11866	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0966	0.0986	0.103	0.085 to 0.115		96.6	70 to 130	2.05	20
AZ11866	Mercury, Total by CVAA	mg/L	0.0000328	0.0005	0.004	0.00426	0.00415	0.00420	0.0034 to 0.0046		107	70 to 130	2.72	20
AZ11866	Lithium, Total	mg/L	-0.000114	0.019704	0.20	0.475	0.474	0.198	0.17 to 0.23		117	70 to 130	0.0194	20
AZ11866	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.104	0.106	0.100	0.085 to 0.115		104	70 to 130	1.90	20
AZ11866	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.104	0.100	0.108	0.085 to 0.115		104	70 to 130	3.92	20
AZ11866	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0903	0.0944	0.0910	0.085 to 0.115		90.3	70 to 130	4.44	20
AZ11866	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130	3.85	20
AZ11866	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.0977	0.104	0.085 to 0.115		101	70 to 130	3.32	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: WMWGORLF  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-17R

Laboratory ID Number: AZ11862

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11863	Sulfate	mg/L	-0.479	0.50	20.0	19.7	-0.308	20.8	18 to 22	98.5	80 to 120	0.00	20
AZ11864	Solids, Dissolved	mg/L	-2.00	25			2940	50.0	40 to 60			1.21	5
AZ11866	Chloride	mg/L	0.0285	0.50	10.0	65.0	55.9	10.3	9 to 11	73.0	80 to 120	3.17	20
AZ11866	Fluoride	mg/L	0.035	0.05	2.50	2.67	0.110	2.64	2.25 to 2.75	102	80 to 120	8.70	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:**

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: WMWGORLFFB  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AZ11863

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U	Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.203	1.015	U	Not Detected	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	U	Not Detected	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
<b>General Characteristics</b>										
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		25	U	Not Detected	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1				05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500Cl E		1	0.50	1	U	Not Detected	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	U	Not Detected	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		1	0.50	1	U	Not Detected	mg/L

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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: WMWGORLFFB  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AZ11863

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec Limit		
			MB	Limit					Rec	Limit			
AZ11866	Arsenic, Total	mg/L	0.0000501	0.0022	0.100	0.103	0.102	0.103	0.085 to 0.115	103	70 to 130	0.976	20
AZ11866	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.0997	0.102	0.0906	0.085 to 0.115	85.6	70 to 130	2.28	20
AZ11866	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0971	0.0990	0.101	0.085 to 0.115	97.1	70 to 130	1.94	20
AZ11866	Boron, Total	mg/L	0.000483	0.065025	1.00	1.08	1.07	0.968	0.85 to 1.15	97.3	70 to 130	0.699	20
AZ11866	Calcium, Total	mg/L	0.00244	0.216749	5.00	422	390	5.13	4.25 to 5.75	816	70 to 130	7.91	20
AZ11866	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.00	20
AZ11866	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.0986	0.101	0.106	0.085 to 0.115	98.6	70 to 130	2.40	20
AZ11866	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0966	0.0986	0.103	0.085 to 0.115	96.6	70 to 130	2.05	20
AZ11866	Mercury, Total by CVAA	mg/L	0.0000328	0.0005	0.004	0.00426	0.00415	0.00420	0.0034 to 0.0046	107	70 to 130	2.72	20
AZ11866	Lithium, Total	mg/L	-0.000114	0.019704	0.20	0.475	0.474	0.198	0.17 to 0.23	117	70 to 130	0.0194	20
AZ11866	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.104	0.106	0.100	0.085 to 0.115	104	70 to 130	1.90	20
AZ11866	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.104	0.100	0.108	0.085 to 0.115	104	70 to 130	3.92	20
AZ11866	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0903	0.0944	0.0910	0.085 to 0.115	90.3	70 to 130	4.44	20
AZ11866	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.102	0.106	0.107	0.085 to 0.115	102	70 to 130	3.85	20
AZ11866	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.0977	0.104	0.085 to 0.115	101	70 to 130	3.32	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: WMWGORLFFB  
 Sample Date: 14-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill Field Blank

Laboratory ID Number: AZ11863

Sample	Analysis	Units	MB	MB	Limit	Spike	MS	Sample	LCS	LCS	Limit	Rec	Prec	Prec	Limit
								Duplicate	LCS			Rec	Limit	Prec	Limit
AZ11863	Sulfate	mg/L	-0.479	0.50	20.0	19.7	-0.308	20.8	18 to 22	98.5	80 to 120	0.00	20		
AZ11864	Solids, Dissolved	mg/L	-2.00	25			2940	50.0	40 to 60			1.21	5		
AZ11866	Chloride	mg/L	0.0285	0.50	10.0	65.0	55.9	10.3	9 to 11	73.0	80 to 120	3.17	20		
AZ11866	Fluoride	mg/L	0.035	0.05	2.50	2.67	0.110	2.64	2.25 to 2.75	102	80 to 120	8.70	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AZ11864

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	J 0.00875	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	337	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.0593	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	J 0.00280	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/24/2019	SM 2540C		1		125	2860	mg/L
Filter Completion Date	CRB	5/20/2019	SM 2540C		1			05/20/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	1.61	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.270	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		100	50.00	100	1800	mg/L
<b>Field Measurements</b>									
pH	SNP	5/15/2019						FA 6.48	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AZ11864

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit	
				Limit	Spike				Limit	Rec	Limit	Prec			
AZ11866	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.102	0.103	0.085 to 0.115		103	70 to 130		0.976	20
AZ11866	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.0997	0.102	0.0906	0.085 to 0.115		85.6	70 to 130		2.28	20
AZ11866	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0971	0.0990	0.101	0.085 to 0.115		97.1	70 to 130		1.94	20
AZ11866	Boron, Total	mg/L	0.000483	0.065025	1.00	1.08	1.07	0.968	0.85 to 1.15		97.3	70 to 130		0.699	20
AZ11866	Calcium, Total	mg/L	0.00244	0.216749	5.00	422	390	5.13	4.25 to 5.75		816	70 to 130		7.91	20
AZ11866	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130		0.00	20
AZ11866	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.0986	0.101	0.106	0.085 to 0.115		98.6	70 to 130		2.40	20
AZ11866	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0966	0.0986	0.103	0.085 to 0.115		96.6	70 to 130		2.05	20
AZ11866	Mercury, Total by CVAA	mg/L	0.0000328	0.0005	0.004	0.00426	0.00415	0.00420	0.0034 to 0.0046		107	70 to 130		2.72	20
AZ11866	Lithium, Total	mg/L	-0.000114	0.019704	0.20	0.475	0.474	0.198	0.17 to 0.23		117	70 to 130		0.0194	20
AZ11866	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.104	0.106	0.100	0.085 to 0.115		104	70 to 130		1.90	20
AZ11866	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.104	0.100	0.108	0.085 to 0.115		104	70 to 130		3.92	20
AZ11866	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0903	0.0944	0.0910	0.085 to 0.115		90.3	70 to 130		4.44	20
AZ11866	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.102	0.106	0.107	0.085 to 0.115		102	70 to 130		3.85	20
AZ11866	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.0977	0.104	0.085 to 0.115		101	70 to 130		3.32	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-18

Laboratory ID Number: AZ11864

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11864	Solids, Dissolved	mg/L	-2.00	25			2940	50.0	40 to 60			1.21	5
AZ11866	Chloride	mg/L	0.0285	0.50	10.0	65.0	55.9	10.3	9 to 11	73.0	80 to 120	3.17	20
AZ11866	Fluoride	mg/L	0.035	0.05	2.50	2.67	0.110	2.64	2.25 to 2.75	102	80 to 120	8.70	20
AZ11870	Sulfate	mg/L	-0.130	0.50	20.0	19.9	-0.278	20.4	18 to 22	99.5	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AZ11865

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	J 0.00909	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	372	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.0454	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.0590	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/28/2019	SM 2540C		1		125	2990	mg/L
Filter Completion Date	TJW	5/21/2019	SM 2540C		1			05/21/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	2.22	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.277	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		100	50.00	100	1900	mg/L
<b>Field Measurements</b>									
pH	SNP	5/15/2019						FA 6.21	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  
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 (205) 664-6247 or 6171  
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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AZ11865

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Limit	
			MB	Limit					Rec	Limit			
AZ11866	Arsenic, Total	mg/L	0.0000501	0.0022	0.100	0.103	0.102	0.103	0.085 to 0.115	103	70 to 130	0.976	20
AZ11866	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.0997	0.102	0.0906	0.085 to 0.115	85.6	70 to 130	2.28	20
AZ11866	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0971	0.0990	0.101	0.085 to 0.115	97.1	70 to 130	1.94	20
AZ11866	Boron, Total	mg/L	0.000483	0.065025	1.00	1.08	1.07	0.968	0.85 to 1.15	97.3	70 to 130	0.699	20
AZ11866	Calcium, Total	mg/L	0.00244	0.216749	5.00	422	390	5.13	4.25 to 5.75	816	70 to 130	7.91	20
AZ11866	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.00	20
AZ11866	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.0986	0.101	0.106	0.085 to 0.115	98.6	70 to 130	2.40	20
AZ11866	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0966	0.0986	0.103	0.085 to 0.115	96.6	70 to 130	2.05	20
AZ11866	Mercury, Total by CVAA	mg/L	0.0000328	0.0005	0.004	0.00426	0.00415	0.00420	0.0034 to 0.0046	107	70 to 130	2.72	20
AZ11866	Lithium, Total	mg/L	-0.000114	0.019704	0.20	0.475	0.474	0.198	0.17 to 0.23	117	70 to 130	0.0194	20
AZ11866	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.104	0.106	0.100	0.085 to 0.115	104	70 to 130	1.90	20
AZ11866	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.104	0.100	0.108	0.085 to 0.115	104	70 to 130	3.92	20
AZ11866	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0903	0.0944	0.0910	0.085 to 0.115	90.3	70 to 130	4.44	20
AZ11866	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.102	0.106	0.107	0.085 to 0.115	102	70 to 130	3.85	20
AZ11866	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.0977	0.104	0.085 to 0.115	101	70 to 130	3.32	20

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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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 Calera, AL 35040  
 (205) 664-6247 or 6171  
 FAX (205) 664-6108

## Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-19

Laboratory ID Number: AZ11865

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec		Prec	
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ11866	Chloride	mg/L	0.0285	0.50	10.0	65.0	55.9	10.3	9 to 11	73.0	80 to 120	3.17	20
AZ11866	Fluoride	mg/L	0.035	0.05	2.50	2.67	0.110	2.64	2.25 to 2.75	102	80 to 120	8.70	20
AZ11869	Solids, Dissolved	mg/L	1.00	25			3800	57.0	40 to 60			1.10	5
AZ11870	Sulfate	mg/L	-0.130	0.50	20.0	19.9	-0.278	20.4	18 to 22	99.5	80 to 120	0.00	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:**

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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AZ11866

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01		0.0141	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	J	0.103	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15		381	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406		0.241	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
<b>General Characteristics</b>										
* Solids, Dissolved	CRB	5/28/2019	SM 2540C		1		125		2600	mg/L
Filter Completion Date	TJW	5/21/2019	SM 2540C		1				05/21/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		10	5.00	10		57.7	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1		0.120	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		80	40.00	80		1560	mg/L
<b>Field Measurements</b>										
pH	SNP	5/15/2019							FA 6.76	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:** Matrix spike is invalid for Calcium due to sample concentration. Recovery for Chloride is outside of specification limits. LBM 6/12/19

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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AZ11866

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ11866	Arsenic, Total	mg/L	0.00000501	0.0022	0.100	0.103	0.102	0.103	0.085 to 0.115	103	70 to 130	0.976	20	
AZ11866	Barium, Total	mg/L	0.0000140	0.0044	0.100	0.0997	0.102	0.0906	0.085 to 0.115	85.6	70 to 130	2.28	20	
AZ11866	Beryllium, Total	mg/L	-0.0000123	0.00132	0.100	0.0971	0.0990	0.101	0.085 to 0.115	97.1	70 to 130	1.94	20	
AZ11866	Boron, Total	mg/L	0.000483	0.065025	1.00	1.08	1.07	0.968	0.85 to 1.15	97.3	70 to 130	0.699	20	
AZ11866	Calcium, Total	mg/L	0.00244	0.216749	5.00	422	390	5.13	4.25 to 5.75	816	70 to 130	7.91	20	
AZ11866	Cadmium, Total	mg/L	-0.00000002	0.00066	0.100	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.00	20	
AZ11866	Cobalt, Total	mg/L	-0.00000218	0.0044	0.100	0.0986	0.101	0.106	0.085 to 0.115	98.6	70 to 130	2.40	20	
AZ11866	Chromium, Total	mg/L	0.000103	0.0044	0.100	0.0966	0.0986	0.103	0.085 to 0.115	96.6	70 to 130	2.05	20	
AZ11866	Mercury, Total by CVAA	mg/L	0.0000328	0.0005	0.004	0.00426	0.00415	0.00420	0.0034 to 0.0046	107	70 to 130	2.72	20	
AZ11866	Lithium, Total	mg/L	-0.000114	0.019704	0.20	0.475	0.474	0.198	0.17 to 0.23	117	70 to 130	0.0194	20	
AZ11866	Molybdenum, Total	mg/L	0.00000898	0.0044	0.100	0.104	0.106	0.100	0.085 to 0.115	104	70 to 130	1.90	20	
AZ11866	Lead, Total	mg/L	0.00000490	0.0022	0.100	0.104	0.100	0.108	0.085 to 0.115	104	70 to 130	3.92	20	
AZ11866	Antimony, Total	mg/L	0.000205	0.00176	0.100	0.0903	0.0944	0.0910	0.085 to 0.115	90.3	70 to 130	4.44	20	
AZ11866	Selenium, Total	mg/L	0.0000447	0.0044	0.100	0.102	0.106	0.107	0.085 to 0.115	102	70 to 130	3.85	20	
AZ11866	Thallium, Total	mg/L	0.00000286	0.00044	0.100	0.101	0.0977	0.104	0.085 to 0.115	101	70 to 130	3.32	20	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Matrix spike is invalid for Calcium due to sample concentration. Recovery for Chloride is outside of specification limits. LBM 6/12/19

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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-20

Laboratory ID Number: AZ11866

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11866	Chloride	mg/L	0.0285	0.50	10.0	65.0	55.9	10.3	9 to 11	73.0	80 to 120	3.17	20
AZ11866	Fluoride	mg/L	0.035	0.05	2.50	2.67	0.110	2.64	2.25 to 2.75	102	80 to 120	8.70	20
AZ11869	Solids, Dissolved	mg/L	1.00	25			3800	57.0	40 to 60			1.10	5
AZ11870	Sulfate	mg/L	-0.130	0.50	20.0	19.9	-0.278	20.4	18 to 22	99.5	80 to 120	0.00	20

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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:** Matrix spike is invalid for Calcium due to sample concentration. Recovery for Chloride is outside of specification limits. LBM 6/12/19

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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-20 DUP

Laboratory ID Number: AZ11867

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0145	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	J 0.107	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	384	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	J 0.00124	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.242	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/28/2019	SM 2540C		1		125	2530	mg/L
Filter Completion Date	TJW	5/21/2019	SM 2540C		1			05/21/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		10	5.00	10	67.3	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.124	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		80	40.00	80	1640	mg/L
<b>Field Measurements</b>									
pH	SNP	5/15/2019						FA 6.76	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-20 DUP

Laboratory ID Number: AZ11867

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Limit
			MB	Limit					Rec	Limit		
AZ11870	Arsenic, Total	mg/L	0.00000611	0.0022	0.100	0.0990	0.105	0.085 to 0.115	99.0	70 to 130	5.88	20
AZ11870	Barium, Total	mg/L	0.0000174	0.0044	0.100	0.0886	0.0886	0.085 to 0.115	88.6	70 to 130	0.00	20
AZ11870	Beryllium, Total	mg/L	0.0000278	0.00132	0.100	0.0995	0.102	0.085 to 0.115	99.5	70 to 130	0.501	20
AZ11870	Boron, Total	mg/L	0.000863	0.065025	1.00	0.927	0.933	0.85 to 1.15	92.7	70 to 130	0.693	20
AZ11870	Calcium, Total	mg/L	0.00668	0.216749	5.00	5.27	5.42	4.25 to 5.75	105	70 to 130	2.73	20
AZ11870	Cadmium, Total	mg/L	-0.00000003	0.00066	0.100	0.102	0.107	0.085 to 0.115	102	70 to 130	4.78	20
AZ11870	Cobalt, Total	mg/L	-0.00000166	0.0044	0.100	0.102	0.105	0.085 to 0.115	102	70 to 130	2.90	20
AZ11870	Chromium, Total	mg/L	0.0000640	0.0044	0.100	0.0998	0.102	0.085 to 0.115	99.8	70 to 130	2.18	20
AZ11870	Mercury, Total by CVAA	mg/L	0.0000314	0.0005	0.004	0.00433	0.00445	0.0034 to 0.0046	108	70 to 130	2.68	20
AZ11870	Lithium, Total	mg/L	-0.000161	0.019704	0.20	0.207	0.209	0.17 to 0.23	103	70 to 130	0.989	20
AZ11870	Molybdenum, Total	mg/L	0.0000102	0.0044	0.100	0.103	0.106	0.085 to 0.115	103	70 to 130	2.87	20
AZ11870	Lead, Total	mg/L	0.00000456	0.0022	0.100	0.106	0.107	0.085 to 0.115	106	70 to 130	0.00	20
AZ11870	Antimony, Total	mg/L	0.000182	0.00176	0.100	0.0908	0.0907	0.085 to 0.115	89.9	70 to 130	0.110	20
AZ11870	Selenium, Total	mg/L	0.000103	0.0044	0.100	0.105	0.107	0.085 to 0.115	105	70 to 130	3.88	20
AZ11870	Thallium, Total	mg/L	0.00000425	0.00044	0.100	0.102	0.103	0.085 to 0.115	102	70 to 130	0.976	20

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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:**

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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-20 DUP

Laboratory ID Number: AZ11867

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11869	Solids, Dissolved	mg/L	1.00	25			3800	57.0	40 to 60			1.10	5
AZ11870	Chloride	mg/L	0.0312	0.50	10.0	10.4	0.197	10.4	9 to 11	104	80 to 120	0.00	20
AZ11870	Fluoride	mg/L	0.0287	0.05	2.50	2.56	0.0235	2.65	2.25 to 2.75	102	80 to 120	0.00	20
AZ11870	Sulfate	mg/L	-0.130	0.50	20.0	19.9	-0.278	20.4	18 to 22	99.5	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AZ11868

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	J	0.00162	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01		0.0189	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	J	0.00177	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203		0.234	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15		186	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	J	0.000996	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005		0.0226	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406		0.230	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	J	0.00289	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
<b>General Characteristics</b>										
* Solids, Dissolved	CRB	5/28/2019	SM 2540C		1		83.3		1230	mg/L
Filter Completion Date	TJW	5/21/2019	SM 2540C		1				05/21/2019	Date
* Chloride	JCC	5/22/2019	SM4500Cl E		1	0.50	1		6.93	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1		0.276	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		50	25.00	50		780	mg/L
<b>Field Measurements</b>										
pH	SNP	5/15/2019							FA 6.37	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AZ11868

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Prec Limit
			MB	Limit					Rec	Limit		
AZ11870	Arsenic, Total	mg/L	0.00000611	0.0022	0.100	0.0990	0.105	0.085 to 0.115	99.0	70 to 130	5.88	20
AZ11870	Barium, Total	mg/L	0.0000174	0.0044	0.100	0.0886	0.0886	0.085 to 0.115	88.6	70 to 130	0.00	20
AZ11870	Beryllium, Total	mg/L	0.0000278	0.00132	0.100	0.0995	0.102	0.085 to 0.115	99.5	70 to 130	0.501	20
AZ11870	Boron, Total	mg/L	0.000863	0.065025	1.00	0.927	0.933	0.85 to 1.15	92.7	70 to 130	0.693	20
AZ11870	Calcium, Total	mg/L	0.00668	0.216749	5.00	5.27	5.42	4.25 to 5.75	105	70 to 130	2.73	20
AZ11870	Cadmium, Total	mg/L	-0.00000003	0.00066	0.100	0.102	0.107	0.085 to 0.115	102	70 to 130	4.78	20
AZ11870	Cobalt, Total	mg/L	-0.00000166	0.0044	0.100	0.102	0.105	0.085 to 0.115	102	70 to 130	2.90	20
AZ11870	Chromium, Total	mg/L	0.0000640	0.0044	0.100	0.0998	0.102	0.085 to 0.115	99.8	70 to 130	2.18	20
AZ11870	Mercury, Total by CVAA	mg/L	0.0000314	0.0005	0.004	0.00433	0.00445	0.0034 to 0.0046	108	70 to 130	2.68	20
AZ11870	Lithium, Total	mg/L	-0.000161	0.019704	0.20	0.207	0.209	0.17 to 0.23	103	70 to 130	0.989	20
AZ11870	Molybdenum, Total	mg/L	0.0000102	0.0044	0.100	0.103	0.106	0.085 to 0.115	103	70 to 130	2.87	20
AZ11870	Lead, Total	mg/L	0.00000456	0.0022	0.100	0.106	0.107	0.085 to 0.115	106	70 to 130	0.00	20
AZ11870	Antimony, Total	mg/L	0.000182	0.00176	0.100	0.0908	0.0907	0.085 to 0.115	89.9	70 to 130	0.110	20
AZ11870	Selenium, Total	mg/L	0.000103	0.0044	0.100	0.105	0.107	0.085 to 0.115	105	70 to 130	3.88	20
AZ11870	Thallium, Total	mg/L	0.00000425	0.00044	0.100	0.102	0.103	0.085 to 0.115	102	70 to 130	0.976	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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-10

Laboratory ID Number: AZ11868

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11869	Solids, Dissolved	mg/L	1.00	25			3800	57.0	40 to 60			1.10	5
AZ11870	Chloride	mg/L	0.0312	0.50	10.0	10.4	0.197	10.4	9 to 11	104	80 to 120	0.00	20
AZ11870	Fluoride	mg/L	0.0287	0.05	2.50	2.56	0.0235	2.65	2.25 to 2.75	102	80 to 120	0.00	20
AZ11870	Sulfate	mg/L	-0.130	0.50	20.0	19.9	-0.278	20.4	18 to 22	99.5	80 to 120	0.00	20

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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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AZ11869

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
<b>Metals, Cyanide, Total Phenols</b>									
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	0.0511	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	0.0113	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	0.239	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		20.3	2.03	10.15	411	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	J 0.000977	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	0.0603	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	0.0736	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
<b>General Characteristics</b>									
* Solids, Dissolved	CRB	5/28/2019	SM 2540C		1		125	3890	mg/L
Filter Completion Date	TJW	5/21/2019	SM 2540C		1			05/21/2019	Date
* Chloride	JCC	5/22/2019	SM4500CI E		1	0.50	1	8.51	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	0.185	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		100	50.00	100	2800	mg/L
<b>Field Measurements</b>									
pH	SNP	5/15/2019						FA 5.82	SU

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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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AZ11869

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Limit
			MB	Limit					Rec	Limit		
AZ11870	Arsenic, Total	mg/L	0.00000611	0.0022	0.100	0.0990	0.105	0.085 to 0.115	99.0	70 to 130	5.88	20
AZ11870	Barium, Total	mg/L	0.0000174	0.0044	0.100	0.0886	0.0886	0.085 to 0.115	88.6	70 to 130	0.00	20
AZ11870	Beryllium, Total	mg/L	0.0000278	0.00132	0.100	0.0995	0.102	0.085 to 0.115	99.5	70 to 130	0.501	20
AZ11870	Boron, Total	mg/L	0.000863	0.065025	1.00	0.927	0.933	0.85 to 1.15	92.7	70 to 130	0.693	20
AZ11870	Calcium, Total	mg/L	0.00668	0.216749	5.00	5.27	5.42	4.25 to 5.75	105	70 to 130	2.73	20
AZ11870	Cadmium, Total	mg/L	-0.00000003	0.00066	0.100	0.102	0.107	0.085 to 0.115	102	70 to 130	4.78	20
AZ11870	Cobalt, Total	mg/L	-0.00000166	0.0044	0.100	0.102	0.105	0.085 to 0.115	102	70 to 130	2.90	20
AZ11870	Chromium, Total	mg/L	0.0000640	0.0044	0.100	0.0998	0.102	0.085 to 0.115	99.8	70 to 130	2.18	20
AZ11870	Mercury, Total by CVAA	mg/L	0.0000314	0.0005	0.004	0.00433	0.00445	0.0034 to 0.0046	108	70 to 130	2.68	20
AZ11870	Lithium, Total	mg/L	-0.000161	0.019704	0.20	0.207	0.209	0.17 to 0.23	103	70 to 130	0.989	20
AZ11870	Molybdenum, Total	mg/L	0.0000102	0.0044	0.100	0.103	0.106	0.085 to 0.115	103	70 to 130	2.87	20
AZ11870	Lead, Total	mg/L	0.00000456	0.0022	0.100	0.106	0.107	0.085 to 0.115	106	70 to 130	0.00	20
AZ11870	Antimony, Total	mg/L	0.000182	0.00176	0.100	0.0908	0.0907	0.085 to 0.115	89.9	70 to 130	0.110	20
AZ11870	Selenium, Total	mg/L	0.000103	0.0044	0.100	0.105	0.107	0.085 to 0.115	105	70 to 130	3.88	20
AZ11870	Thallium, Total	mg/L	0.00000425	0.00044	0.100	0.102	0.103	0.085 to 0.115	102	70 to 130	0.976	20

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**Comments:**

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 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: WMWGORLF  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill - MW-12

Laboratory ID Number: AZ11869

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11869	Solids, Dissolved	mg/L	1.00	25			3800	57.0	40 to 60			1.10	5
AZ11870	Chloride	mg/L	0.0312	0.50	10.0	10.4	0.197	10.4	9 to 11	104	80 to 120	0.00	20
AZ11870	Fluoride	mg/L	0.0287	0.05	2.50	2.56	0.0235	2.65	2.25 to 2.75	102	80 to 120	0.00	20
AZ11870	Sulfate	mg/L	-0.130	0.50	20.0	19.9	-0.278	20.4	18 to 22	99.5	80 to 120	0.00	20

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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: WMWGORLFEB  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AZ11870

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Arsenic, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Beryllium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0609	0.203	U	Not Detected	mg/L
* Calcium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.203	1.015	U	Not Detected	mg/L
* Cadmium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0008	0.003	J	0.000858	mg/L
* Cobalt, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	5/17/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	5/17/2019	EPA 200.7		2.03	0.0203	0.0406	U	Not Detected	mg/L
* Molybdenum, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	DLJ	5/23/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
<b>General Characteristics</b>										
* Solids, Dissolved	CRB	5/28/2019	SM 2540C		1		25	U	Not Detected	mg/L
Filter Completion Date	CRB	5/21/2019	SM 2540C		1				05/21/2019	Date
* Chloride	JCC	5/22/2019	SM4500Cl E		1	0.50	1	U	Not Detected	mg/L
* Fluoride	JCC	5/22/2019	SM4500F C		1	0.05	0.1	U	Not Detected	mg/L
* Sulfate	JCC	5/21/2019	SM4500SO4 E		1	0.50	1	U	Not Detected	mg/L

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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: WMWGORLFEB  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AZ11870

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Limit
			MB	Limit					Rec	Limit		
AZ11870	Arsenic, Total	mg/L	0.00000611	0.0022	0.100	0.0990	0.105	0.085 to 0.115	99.0	70 to 130	5.88	20
AZ11870	Barium, Total	mg/L	0.0000174	0.0044	0.100	0.0886	0.0886	0.085 to 0.115	88.6	70 to 130	0.00	20
AZ11870	Beryllium, Total	mg/L	0.0000278	0.00132	0.100	0.0995	0.102	0.085 to 0.115	99.5	70 to 130	0.501	20
AZ11870	Boron, Total	mg/L	0.000863	0.065025	1.00	0.927	0.933	0.85 to 1.15	92.7	70 to 130	0.693	20
AZ11870	Calcium, Total	mg/L	0.00668	0.216749	5.00	5.27	5.42	4.25 to 5.75	105	70 to 130	2.73	20
AZ11870	Cadmium, Total	mg/L	-0.00000003	0.00066	0.100	0.102	0.107	0.085 to 0.115	102	70 to 130	4.78	20
AZ11870	Cobalt, Total	mg/L	-0.00000166	0.0044	0.100	0.102	0.105	0.085 to 0.115	102	70 to 130	2.90	20
AZ11870	Chromium, Total	mg/L	0.0000640	0.0044	0.100	0.0998	0.102	0.085 to 0.115	99.8	70 to 130	2.18	20
AZ11870	Mercury, Total by CVAA	mg/L	0.0000314	0.0005	0.004	0.00433	0.00445	0.0034 to 0.0046	108	70 to 130	2.68	20
AZ11870	Lithium, Total	mg/L	-0.000161	0.019704	0.20	0.207	0.209	0.17 to 0.23	103	70 to 130	0.989	20
AZ11870	Molybdenum, Total	mg/L	0.0000102	0.0044	0.100	0.103	0.106	0.085 to 0.115	103	70 to 130	2.87	20
AZ11870	Lead, Total	mg/L	0.00000456	0.0022	0.100	0.106	0.107	0.085 to 0.115	106	70 to 130	0.00	20
AZ11870	Antimony, Total	mg/L	0.000182	0.00176	0.100	0.0908	0.0907	0.085 to 0.115	89.9	70 to 130	0.110	20
AZ11870	Selenium, Total	mg/L	0.000103	0.0044	0.100	0.105	0.107	0.085 to 0.115	105	70 to 130	3.88	20
AZ11870	Thallium, Total	mg/L	0.00000425	0.00044	0.100	0.102	0.103	0.085 to 0.115	102	70 to 130	0.976	20

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# Batch QC Summary



To: Dustin Brooks  
 Greg Dyer

Customer Account: WMWGORLFEB  
 Sample Date: 15-May-19  
 Customer ID:  
 Delivery Date: 16-May-19

Description: Gorgas Landfill Equipment Blank

Laboratory ID Number: AZ11870

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ11869	Solids, Dissolved	mg/L	1.00	25			3800	57.0	40 to 60			1.10	5
AZ11870	Chloride	mg/L	0.0312	0.50	10.0	10.4	0.197	10.4	9 to 11	104	80 to 120	0.00	20
AZ11870	Fluoride	mg/L	0.0287	0.05	2.50	2.56	0.0235	2.65	2.25 to 2.75	102	80 to 120	0.00	20
AZ11870	Sulfate	mg/L	-0.130	0.50	20.0	19.9	-0.278	20.4	18 to 22	99.5	80 to 120	0.00	20

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Expiration: June 30, 2019

**Comments:**

CC:



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 **05/16/2019 11:00**

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

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-1	5/14/19	10:16	4	Groundwater		AZ11847
MW-2	05/14/2019	11:04	4	Groundwater		AZ11848
MW-2DUP	05/14/2019	11:04	4	Sample Duplicate		AZ11849
MW-3	05/14/2019	12:02	4	Groundwater		AZ11850
MW-4	05/14/2019	13:06	4	Groundwater		AZ11851
MW-5	05/14/2019	14:17	4	Groundwater		AZ11852
MW-6	05/15/2019	10:27	4	Groundwater		AZ11853
MW-7	05/15/2019	11:13	4	Groundwater		AZ11854
FB-1	05/15/2019	11:20	4	Field Blank		AZ11855
MW-8	05/15/2019	12:32	4	Groundwater		AZ11856
MW-11	05/15/2019	14:11	4	Groundwater		AZ11857

Relinquished By	Received By	Date/Time
		05/16/2019 09:38

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	1224	
Cooler Temp	0.3 degrees C	
Thermometer ID	5408-27568-2-2	
pH Strip ID	7260-39349-1-1	





# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA 05/16/2019 10:00

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Nick Pitts	Location	Gorgas Landfill

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-13	5/14/19	09:17	4	Groundwater		AZ11858
MW-14	05/14/2019	10:15	4	Groundwater		AZ11859
MW-15	05/14/2019	11:10	4	Groundwater		AZ11860
MW-16	05/14/2019	12:02	4	Groundwater		AZ11861
MW-17R	05/14/2019	13:10	4	Groundwater		AZ11862
FB-2	05/14/2019	13:35	4	Field Blank		AZ11863
MW-18	05/15/2019	09:30	4	Groundwater		AZ11864
MW-19	05/15/2019	10:55	4	Groundwater		AZ11865
MW-20	05/15/2019	12:00	4	Groundwater		AZ11866
MW-20 Dup	05/15/2019	12:00	4	Sample Duplicate		AZ11867
MW-10	05/15/2019	13:30	4	Groundwater		AZ11868
MW-12	05/15/2019	14:45	4	Groundwater		AZ11869
EB-1	05/15/2019	15:10	4	Equipment Blank		AZ11870

Relinquished By	Received By	Date/Time
		05/16/2019 10:06

SmarTroll ID	7151-38850-2-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	Cooler Temp
Sample Event	1224	4.0 degrees C
		Thermometer ID
		5408-27568-2-2
		pH Strip ID
		7260-39349-1-1



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA **05/16/2019 11:00**

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

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

Comments	Radium Duplicate at MW-4
----------	--------------------------

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	5/14/19	10:16	1	Groundwater		AZ11871
MW-2	05/14/2019	11:04	1	Groundwater		AZ11872
MW-2DUP	05/14/2019	11:04	1	Sample Duplicate		AZ11873
MW-3	05/14/2019	12:02	1	Groundwater		AZ11874
MW-4	05/14/2019	13:06	3	Groundwater		AZ11875
MW-5	05/14/2019	14:17	1	Groundwater		AZ11876
MW-6	05/15/2019	10:27	1	Groundwater		AZ11877
MW-7	05/15/2019	11:13	1	Groundwater		AZ11878
FB-1	05/15/2019	11:20	1	Field Blank		AZ11879
MW-8	05/15/2019	12:32	1	Groundwater		AZ11880
MW-11	05/15/2019	14:11	1	Groundwater		AZ11881

Relinquished By	Received By	Date/Time
		05/16/2019 09:39

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	1224	
	Cooler Temp	N/A
	Thermometer ID	N/A
	pH Strip ID	7260-39349-1-1



**Chain of Custody**  
**Groundwater**  
 APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA **05/16/2019 10:00**

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
Site Representative	Che George	Requested By	Greg Dyer
Collector	Nick Pitts	Location	Gorgas Landfill

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

Comments	Rad Dup on MW-16
----------	------------------

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	5/14/19	09:17	1	Groundwater		AZ11882
MW-14	05/14/2019	10:15	1	Groundwater		AZ11883
MW-15	05/14/2019	11:10	1	Groundwater		AZ11884
MW-16	05/14/2019	12:02	3	Groundwater		AZ11885
MW-17R	05/14/2019	13:10	1	Groundwater		AZ11886
FB-2	05/14/2019	13:35	1	Field Blank		AZ11887
MW-18	05/15/2019	09:30	1	Groundwater		AZ11888
MW-19	05/15/2019	10:55	1	Groundwater		AZ11889
MW-20	05/15/2019	12:00	1	Groundwater		AZ11890
MW-20 Dup	05/15/2019	12:00	1	Sample Duplicate		AZ11891
MW-10	05/15/2019	13:30	1	Groundwater		AZ11892
MW-12	05/15/2019	14:45	1	Groundwater		AZ11893
EB-1	05/15/2019	15:10	1	Equipment Blank		AZ11894

Relinquished By	Received By	Date/Time
		05/16/2019 10:06

SmarTroll ID	7151-38850-2-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>	
Turbidity ID	4677-23342-4-1		
Sample Event	1224		
		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: 400-170472-1

Laboratory Sample Delivery Group: Gorgas Landfill 1224  
Client Project/Site: CCR Plant Gorgas  
Revision: 1

**For:**

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

Attn: Laura Midkiff



Authorized for release by:  
8/25/2019 1:37:00 PM

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

### LINKS

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



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Method Summary . . . . .	4
Sample Summary . . . . .	5
Client Sample Results . . . . .	6
Definitions . . . . .	30
Chronicle . . . . .	31
QC Association . . . . .	37
QC Sample Results . . . . .	39
Chain of Custody . . . . .	43
Receipt Checklists . . . . .	45
Certification Summary . . . . .	47

# Case Narrative

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

Job ID: 400-170472-1  
SDG: Gorgas Landfill 1224

## Job ID: 400-170472-1

Laboratory: Eurofins TestAmerica, Pensacola

### Narrative

#### Job Narrative 400-170472-1

#### RAD

Method(s) 9315: Ra-226 Prep Batch 160-430556. 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. AZ11871 MW-1 (400-170472-1), AZ11872 MW-2 (400-170472-2), AZ11873 MW-2 DUP (400-170472-3), AZ11874 MW-3 (400-170472-4), AZ11875 MW-4 (400-170472-5), AZ11875 MW-4 (400-170472-5[DUJ]), AZ11876 MW-5 (400-170472-6), AZ11877 MW-6 (400-170472-7), AZ11878 MW-7 (400-170472-8), AZ11879 FB-1 (400-170472-9), AZ11880 MW-8 (400-170472-10), AZ11881 MW-11 (400-170472-11), AZ11882 MW-13 (400-170472-12), AZ11883 MW-14 (400-170472-13), AZ11884 MW-15 (400-170472-14), AZ11891 MW-20 DUP (400-170472-21), AZ11892 MW-10 (400-170472-22), AZ11893 MW-12 (400-170472-23), AZ11894 EB-1 (400-170472-24), (LCS 160-430556/1-A) and (MB 160-430556/23-A)

Method(s) 9315: Ra-226 Prep Batch 160-430313. 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. AZ11885 MW-16 (400-170472-15), AZ11885 MW-16 (400-170472-15[DUJ]), AZ11886 MW-17R (400-170472-16), AZ11887 FB-2 (400-170472-17), AZ11888 MW-18 (400-170472-18), AZ11889 MW-19 (400-170472-19), AZ11890 MW-20 (400-170472-20), (LCS 160-430313/1-A) and (MB 160-430313/23-A)

Method(s) 9320: Radium-228 Prep Batch 160-430557. 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. AZ11871 MW-1 (400-170472-1), AZ11872 MW-2 (400-170472-2), AZ11873 MW-2 DUP (400-170472-3), AZ11874 MW-3 (400-170472-4), AZ11875 MW-4 (400-170472-5), AZ11875 MW-4 (400-170472-5[DUJ]), AZ11876 MW-5 (400-170472-6), AZ11877 MW-6 (400-170472-7), AZ11878 MW-7 (400-170472-8), AZ11879 FB-1 (400-170472-9), AZ11880 MW-8 (400-170472-10), AZ11881 MW-11 (400-170472-11), AZ11882 MW-13 (400-170472-12), AZ11883 MW-14 (400-170472-13), AZ11884 MW-15 (400-170472-14), AZ11891 MW-20 DUP (400-170472-21), AZ11892 MW-10 (400-170472-22), AZ11893 MW-12 (400-170472-23), AZ11894 EB-1 (400-170472-24), (LCS 160-430557/1-A) and (MB 160-430557/23-A)

Method(s) 9320: Ra-228 Prep Batch 160-430321. 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. AZ11885 MW-16 (400-170472-15), AZ11885 MW-16 (400-170472-15[DUJ]), AZ11886 MW-17R (400-170472-16), AZ11887 FB-2 (400-170472-17), AZ11888 MW-18 (400-170472-18), AZ11889 MW-19 (400-170472-19), AZ11890 MW-20 (400-170472-20), (LCS 160-430321/1-A) and (MB 160-430321/23-A)

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-430321. The following samples were prepared at a reduced aliquot due to limited volume: AZ11885 MW-16 (400-170472-15), AZ11885 MW-16 (400-170472-15[DUJ]), AZ11886 MW-17R (400-170472-16), AZ11887 FB-2 (400-170472-17), AZ11888 MW-18 (400-170472-18), AZ11889 MW-19 (400-170472-19) and AZ11890 MW-20 (400-170472-20).

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-430557. The following samples had yellow and white discoloration: AZ11893 MW-12 (400-170472-23).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-430313. The following samples were prepared at a reduced aliquot due to limited volume: AZ11885 MW-16 (400-170472-15), AZ11885 MW-16 (400-170472-15[DUJ]), AZ11886 MW-17R (400-170472-16), AZ11887 FB-2 (400-170472-17), AZ11888 MW-18 (400-170472-18), AZ11889 MW-19 (400-170472-19) and AZ11890 MW-20 (400-170472-20).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-430556. The following samples had yellow and white discoloration: AZ11893 MW-12 (400-170472-23).

Client requesting changes to the IDs are that different from the coc. Report is revised accordingly.

# Method Summary

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

Job ID: 400-170472-1  
SDG: Gorgas Landfill 1224

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: 400-170472-1  
SDG: Gorgas Landfill 1224

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
400-170472-1	AZ11871 MW-1	Water	05/14/19 10:16	05/20/19 16:50	
400-170472-2	AZ11872 MW-2	Water	05/14/19 11:04	05/20/19 16:50	
400-170472-3	AZ11873 MW-2 DUP	Water	05/14/19 11:04	05/20/19 16:50	
400-170472-4	AZ11874 MW-3	Water	05/14/19 12:02	05/20/19 16:50	
400-170472-5	AZ11875 MW-4	Water	05/14/19 13:06	05/20/19 16:50	
400-170472-6	AZ11876 MW-5	Water	05/14/19 14:17	05/20/19 16:50	
400-170472-7	AZ11877 MW-6	Water	05/15/19 10:27	05/20/19 16:50	
400-170472-8	AZ11878 MW-7	Water	05/15/19 11:13	05/20/19 16:50	
400-170472-9	AZ11879 FB-1	Water	05/15/19 11:20	05/20/19 16:50	
400-170472-10	AZ11880 MW-8	Water	05/15/19 12:32	05/20/19 16:50	
400-170472-11	AZ11881 MW-11	Water	05/15/19 14:11	05/20/19 16:50	
400-170472-12	AZ11882 MW-13	Water	05/14/19 09:17	05/20/19 16:50	
400-170472-13	AZ11883 MW-14	Water	05/14/19 10:15	05/20/19 16:50	
400-170472-14	AZ11884 MW-15	Water	05/14/19 11:10	05/20/19 16:50	
400-170472-15	AZ11885 MW-16	Water	05/14/19 12:02	05/20/19 16:50	
400-170472-16	AZ11886 MW-17R	Water	05/14/19 13:10	05/20/19 16:50	
400-170472-17	AZ11887 FB-2	Water	05/14/19 13:35	05/20/19 16:50	
400-170472-18	AZ11888 MW-18	Water	05/15/19 09:30	05/20/19 16:50	
400-170472-19	AZ11889 MW-19	Water	05/15/19 10:55	05/20/19 16:50	
400-170472-20	AZ11890 MW-20	Water	05/15/19 12:00	05/20/19 16:50	
400-170472-21	AZ11891 MW-20 DUP	Water	05/15/19 12:00	05/20/19 16:50	
400-170472-22	AZ11892 MW-10	Water	05/15/19 13:30	05/20/19 16:50	
400-170472-23	AZ11893 MW-12	Water	05/15/19 14:45	05/20/19 16:50	
400-170472-24	AZ11894 EB-1	Water	05/15/19 15:10	05/20/19 16:50	

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11871 MW-1**

**Lab Sample ID: 400-170472-1**

Date Collected: 05/14/19 10:16

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0283	U	0.0341	0.0342	1.00	0.0542	pCi/L	06/03/19 11:50	08/15/19 12:03	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	98.0		40 - 110					06/03/19 11:50	08/15/19 12:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.481		0.257	0.261	1.00	0.383	pCi/L	06/03/19 12:01	07/24/19 08:56	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	98.0		40 - 110					06/03/19 12:01	07/24/19 08:56	1
Y Carrier	84.9		40 - 110					06/03/19 12:01	07/24/19 08:56	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	0.509		0.259	0.263	5.00	0.383	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11872 MW-2**

**Lab Sample ID: 400-170472-2**

Date Collected: 05/14/19 11:04

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.110</b>		0.0560	0.0569	1.00	0.0539	pCi/L	06/03/19 11:50	08/15/19 12:03	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	94.1		40 - 110					06/03/19 11:50	08/15/19 12:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.469</b>		0.247	0.251	1.00	0.364	pCi/L	06/03/19 12:01	07/24/19 08:56	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	94.1		40 - 110					06/03/19 12:01	07/24/19 08:56	1
Y Carrier	90.1		40 - 110					06/03/19 12:01	07/24/19 08:56	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
<b>Combined Radium 226 + 228</b>	<b>0.579</b>		0.253	0.257	5.00	0.364	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11873 MW-2 DUP**

**Lab Sample ID: 400-170472-3**

Date Collected: 05/14/19 11:04

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.103</b>		0.0570	0.0578	1.00	0.0589	pCi/L	06/03/19 11:50	08/15/19 12:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.4		40 - 110					06/03/19 11:50	08/15/19 12:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.626</b>		0.285	0.291	1.00	0.411	pCi/L	06/03/19 12:01	07/24/19 08:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.4		40 - 110					06/03/19 12:01	07/24/19 08:56	1
Y Carrier	87.5		40 - 110					06/03/19 12:01	07/24/19 08:56	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
<b>Combined Radium 226 + 228</b>	<b>0.729</b>		0.291	0.297	5.00	0.411	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11874 MW-3**

**Lab Sample ID: 400-170472-4**

Date Collected: 05/14/19 12:02

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0488	U	0.0419	0.0421	1.00	0.0579	pCi/L	06/03/19 11:50	08/15/19 12:03	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	100		40 - 110					06/03/19 11:50	08/15/19 12:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.127	U	0.212	0.213	1.00	0.359	pCi/L	06/03/19 12:01	07/24/19 08:56	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	100		40 - 110					06/03/19 12:01	07/24/19 08:56	1
Y Carrier	91.2		40 - 110					06/03/19 12:01	07/24/19 08:56	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	0.176	U	0.216	0.217	5.00	0.359	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11875 MW-4**

**Lab Sample ID: 400-170472-5**

Date Collected: 05/14/19 13:06

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0680		0.0505	0.0508	1.00	0.0676	pCi/L	06/03/19 11:50	08/15/19 12:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.0		40 - 110					06/03/19 11:50	08/15/19 12:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.284	U	0.238	0.239	1.00	0.379	pCi/L	06/03/19 12:01	07/24/19 09:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.0		40 - 110					06/03/19 12:01	07/24/19 09:01	1
Y Carrier	87.9		40 - 110					06/03/19 12:01	07/24/19 09:01	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	0.352	U	0.243	0.244	5.00	0.379	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11876 MW-5**

**Lab Sample ID: 400-170472-6**

Date Collected: 05/14/19 14:17

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.106</b>		0.0588	0.0596	1.00	0.0672	pCi/L	06/03/19 11:50	08/15/19 12:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.9		40 - 110					06/03/19 11:50	08/15/19 12:07	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.557</b>		0.256	0.261	1.00	0.371	pCi/L	06/03/19 12:01	07/24/19 09:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.9		40 - 110					06/03/19 12:01	07/24/19 09:01	1
Y Carrier	92.0		40 - 110					06/03/19 12:01	07/24/19 09:01	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
<b>Combined Radium 226 + 228</b>	<b>0.663</b>		0.263	0.268	5.00	0.371	pCi/L		08/20/19 07:42	1



# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11877 MW-6**

**Lab Sample ID: 400-170472-7**

Date Collected: 05/15/19 10:27

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.163</b>		0.0669	0.0685	1.00	0.0615	pCi/L	06/03/19 11:50	08/15/19 12:08	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	102		40 - 110					06/03/19 11:50	08/15/19 12:08	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>1.40</b>		0.303	0.329	1.00	0.344	pCi/L	06/03/19 12:01	07/24/19 09:01	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	102		40 - 110					06/03/19 12:01	07/24/19 09:01	1
Y Carrier	88.6		40 - 110					06/03/19 12:01	07/24/19 09:01	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
<b>Combined Radium 226 + 228</b>	<b>1.56</b>		0.310	0.336	5.00	0.344	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11878 MW-7**

**Lab Sample ID: 400-170472-8**

Date Collected: 05/15/19 11:13

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.0877</b>		0.0519	0.0525	1.00	0.0588	pCi/L	06/03/19 11:50	08/15/19 13:48	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	98.3		40 - 110					06/03/19 11:50	08/15/19 13:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.522</b>		0.233	0.238	1.00	0.332	pCi/L	06/03/19 12:01	07/24/19 09:02	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	98.3		40 - 110					06/03/19 12:01	07/24/19 09:02	1
Y Carrier	93.1		40 - 110					06/03/19 12:01	07/24/19 09:02	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
<b>Combined Radium 226 + 228</b>	<b>0.610</b>		0.239	0.244	5.00	0.332	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11879 FB-1**

**Lab Sample ID: 400-170472-9**

Date Collected: 05/15/19 11:20

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0499	U	0.0420	0.0423	1.00	0.0582	pCi/L	06/03/19 11:50	08/15/19 13:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.2		40 - 110					06/03/19 11:50	08/15/19 13:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0921	U	0.216	0.216	1.00	0.371	pCi/L	06/03/19 12:01	07/24/19 09:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.2		40 - 110					06/03/19 12:01	07/24/19 09:02	1
Y Carrier	87.5		40 - 110					06/03/19 12:01	07/24/19 09:02	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	0.142	U	0.220	0.220	5.00	0.371	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11880 MW-8**

**Lab Sample ID: 400-170472-10**

Date Collected: 05/15/19 12:32

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.0794</b>		0.0490	0.0495	1.00	0.0556	pCi/L	06/03/19 11:50	08/15/19 13:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					06/03/19 11:50	08/15/19 13:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.617</b>		0.256	0.262	1.00	0.359	pCi/L	06/03/19 12:01	07/24/19 09:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					06/03/19 12:01	07/24/19 09:02	1
Y Carrier	86.7		40 - 110					06/03/19 12:01	07/24/19 09:02	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
<b>Combined Radium 226 + 228</b>	<b>0.697</b>		0.261	0.267	5.00	0.359	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11881 MW-11**

**Lab Sample ID: 400-170472-11**

Date Collected: 05/15/19 14:11

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.256		0.0816	0.0848	1.00	0.0596	pCi/L	06/03/19 11:50	08/15/19 13:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.6		40 - 110					06/03/19 11:50	08/15/19 13:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.923		0.264	0.277	1.00	0.322	pCi/L	06/03/19 12:01	07/24/19 09:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.6		40 - 110					06/03/19 12:01	07/24/19 09:02	1
Y Carrier	86.0		40 - 110					06/03/19 12:01	07/24/19 09:02	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	1.18		0.276	0.290	5.00	0.322	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11882 MW-13**

**Lab Sample ID: 400-170472-12**

Date Collected: 05/14/19 09:17

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0419	U	0.0417	0.0418	1.00	0.0627	pCi/L	06/03/19 11:50	08/15/19 13:49	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	98.3		40 - 110					06/03/19 11:50	08/15/19 13:49	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		0.255	0.259	1.00	0.377	pCi/L	06/03/19 12:01	07/24/19 09:02	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	98.3		40 - 110					06/03/19 12:01	07/24/19 09:02	1
Y Carrier	86.0		40 - 110					06/03/19 12:01	07/24/19 09:02	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	0.529		0.258	0.262	5.00	0.377	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11883 MW-14**

**Lab Sample ID: 400-170472-13**

Date Collected: 05/14/19 10:15

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.113</b>		0.0564	0.0573	1.00	0.0524	pCi/L	06/03/19 11:50	08/15/19 13:49	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	94.6		40 - 110					06/03/19 11:50	08/15/19 13:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.405</b>		0.247	0.250	1.00	0.375	pCi/L	06/03/19 12:01	07/24/19 09:03	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	94.6		40 - 110					06/03/19 12:01	07/24/19 09:03	1
Y Carrier	84.5		40 - 110					06/03/19 12:01	07/24/19 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
<b>Combined Radium 226 + 228</b>	<b>0.518</b>		0.253	0.256	5.00	0.375	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11884 MW-15**

**Lab Sample ID: 400-170472-14**

Date Collected: 05/14/19 11:10

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.0788</b>		0.0497	0.0502	1.00	0.0565	pCi/L	06/03/19 11:50	08/15/19 13:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					06/03/19 11:50	08/15/19 13:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.739</b>		0.283	0.291	1.00	0.392	pCi/L	06/03/19 12:01	07/24/19 09:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					06/03/19 12:01	07/24/19 09:03	1
Y Carrier	87.1		40 - 110					06/03/19 12:01	07/24/19 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
<b>Combined Radium 226 + 228</b>	<b>0.817</b>		0.287	0.295	5.00	0.392	pCi/L		08/20/19 07:42	1



# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11885 MW-16**

**Lab Sample ID: 400-170472-15**

Date Collected: 05/14/19 12:02

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.141</b>		0.0834	0.0844	1.00	0.108	pCi/L	05/31/19 06:15	08/15/19 12:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					05/31/19 06:15	08/15/19 12:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.389	U	0.265	0.267	1.00	0.411	pCi/L	05/31/19 08:11	07/25/19 08:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					05/31/19 08:11	07/25/19 08:57	1
Y Carrier	94.6		40 - 110					05/31/19 08:11	07/25/19 08:57	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
<b>Combined Radium 226 + 228</b>	<b>0.530</b>		0.278	0.280	5.00	0.411	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11886 MW-17R**

**Lab Sample ID: 400-170472-16**

Date Collected: 05/14/19 13:10

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.159</b>		0.0861	0.0873	1.00	0.105	pCi/L	05/31/19 06:15	08/15/19 12:31	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	103		40 - 110					05/31/19 06:15	08/15/19 12:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.730</b>		0.291	0.298	1.00	0.404	pCi/L	05/31/19 08:11	07/25/19 08:57	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	103		40 - 110					05/31/19 08:11	07/25/19 08:57	1
Y Carrier	96.4		40 - 110					05/31/19 08:11	07/25/19 08:57	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
<b>Combined Radium 226 + 228</b>	<b>0.889</b>		0.303	0.311	5.00	0.404	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11887 FB-2**

**Lab Sample ID: 400-170472-17**

Date Collected: 05/14/19 13:35

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0173	U	0.0463	0.0463	1.00	0.110	pCi/L	05/31/19 06:15	08/15/19 12:32	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	105		40 - 110					05/31/19 06:15	08/15/19 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	0.0879	U	0.274	0.274	1.00	0.474	pCi/L	05/31/19 08:11	07/25/19 08:50	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	105		40 - 110					05/31/19 08:11	07/25/19 08:50	1
Y Carrier	87.9		40 - 110					05/31/19 08:11	07/25/19 08:50	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	0.0706	U	0.278	0.278	5.00	0.474	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11888 MW-18**

**Lab Sample ID: 400-170472-18**

Date Collected: 05/15/19 09:30

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0238	U	0.0700	0.0700	1.00	0.130	pCi/L	05/31/19 06:15	08/15/19 13:18	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	102		40 - 110					05/31/19 06:15	08/15/19 13:18	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	0.277	0.278	1.00	0.452	pCi/L	05/31/19 08:11	07/25/19 08:50	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	102		40 - 110					05/31/19 08:11	07/25/19 08:50	1
Y Carrier	87.1		40 - 110					05/31/19 08:11	07/25/19 08:50	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	0.287	U	0.286	0.287	5.00	0.452	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11889 MW-19**

**Lab Sample ID: 400-170472-19**

Date Collected: 05/15/19 10:55

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0810	U	0.0826	0.0829	1.00	0.131	pCi/L	05/31/19 06:15	08/15/19 13:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					05/31/19 06:15	08/15/19 13:19	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.205	U	0.270	0.271	1.00	0.449	pCi/L	05/31/19 08:11	07/25/19 08:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					05/31/19 08:11	07/25/19 08:50	1
Y Carrier	88.6		40 - 110					05/31/19 08:11	07/25/19 08:50	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	0.286	U	0.282	0.283	5.00	0.449	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11890 MW-20**

**Lab Sample ID: 400-170472-20**

Date Collected: 05/15/19 12:00

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.145</b>		0.0852	0.0862	1.00	0.110	pCi/L	05/31/19 06:15	08/15/19 13:19	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	107		40 - 110					05/31/19 06:15	08/15/19 13:19	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.273	U	0.248	0.250	1.00	0.400	pCi/L	05/31/19 08:11	07/25/19 08:50	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	107		40 - 110					05/31/19 08:11	07/25/19 08:50	1
Y Carrier	94.2		40 - 110					05/31/19 08:11	07/25/19 08:50	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
<b>Combined Radium 226 + 228</b>	<b>0.418</b>		0.262	0.264	5.00	0.400	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11891 MW-20 DUP**

**Lab Sample ID: 400-170472-21**

Date Collected: 05/15/19 12:00

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.268</b>		0.0859	0.0893	1.00	0.0597	pCi/L	06/03/19 11:50	08/15/19 12:00	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.2		40 - 110					06/03/19 11:50	08/15/19 12:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.789</b>		0.308	0.317	1.00	0.438	pCi/L	06/03/19 12:01	07/24/19 08:55	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.2		40 - 110					06/03/19 12:01	07/24/19 08:55	1
Y Carrier	89.7		40 - 110					06/03/19 12:01	07/24/19 08:55	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
<b>Combined Radium 226 + 228</b>	<b>1.06</b>		0.320	0.329	5.00	0.438	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11892 MW-10**

**Lab Sample ID: 400-170472-22**

Date Collected: 05/15/19 13:30

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0827		0.0518	0.0524	1.00	0.0613	pCi/L	06/03/19 11:50	08/15/19 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					06/03/19 11:50	08/15/19 12:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.338	U	0.268	0.269	1.00	0.425	pCi/L	06/03/19 12:01	07/24/19 08:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					06/03/19 12:01	07/24/19 08:55	1
Y Carrier	86.0		40 - 110					06/03/19 12:01	07/24/19 08:55	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	0.421	U	0.273	0.274	5.00	0.425	pCi/L		08/20/19 07:42	1



# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11893 MW-12**

**Lab Sample ID: 400-170472-23**

Date Collected: 05/15/19 14:45

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.132</b>		0.0642	0.0653	1.00	0.0663	pCi/L	06/03/19 11:50	08/15/19 12:00	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.8		40 - 110					06/03/19 11:50	08/15/19 12:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.868</b>		0.316	0.326	1.00	0.439	pCi/L	06/03/19 12:01	07/24/19 08:56	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.8		40 - 110					06/03/19 12:01	07/24/19 08:56	1
Y Carrier	85.6		40 - 110					06/03/19 12:01	07/24/19 08:56	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
<b>Combined Radium 226 + 228</b>	<b>1.00</b>		0.322	0.332	5.00	0.439	pCi/L		08/20/19 07:42	1

# Client Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11894 EB-1**

**Lab Sample ID: 400-170472-24**

Date Collected: 05/15/19 15:10

Matrix: Water

Date Received: 05/20/19 16:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0323	U	0.0344	0.0345	1.00	0.0513	pCi/L	06/03/19 11:50	08/15/19 12:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.2		40 - 110					06/03/19 11:50	08/15/19 12:00	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		0.296	0.303	1.00	0.426	pCi/L	06/03/19 12:01	07/24/19 08:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.2		40 - 110					06/03/19 12:01	07/24/19 08:56	1
Y Carrier	87.5		40 - 110					06/03/19 12:01	07/24/19 08:56	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	0.732		0.298	0.305	5.00	0.426	pCi/L		08/20/19 07:42	1

# Definitions/Glossary

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

Job ID: 400-170472-1  
SDG: Gorgas Landfill 1224

## 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: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11871 MW-1**

**Lab Sample ID: 400-170472-1**

**Date Collected: 05/14/19 10:16**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:03	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436307	07/24/19 08:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11872 MW-2**

**Lab Sample ID: 400-170472-2**

**Date Collected: 05/14/19 11:04**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:03	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436307	07/24/19 08:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11873 MW-2 DUP**

**Lab Sample ID: 400-170472-3**

**Date Collected: 05/14/19 11:04**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:03	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436307	07/24/19 08:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11874 MW-3**

**Lab Sample ID: 400-170472-4**

**Date Collected: 05/14/19 12:02**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:03	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436307	07/24/19 08:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

# Lab Chronicle

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11875 MW-4**

**Lab Sample ID: 400-170472-5**

**Date Collected: 05/14/19 13:06**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:03	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436187	07/24/19 09:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11876 MW-5**

**Lab Sample ID: 400-170472-6**

**Date Collected: 05/14/19 14:17**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:07	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436187	07/24/19 09:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11877 MW-6**

**Lab Sample ID: 400-170472-7**

**Date Collected: 05/15/19 10:27**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:08	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436187	07/24/19 09:01	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11878 MW-7**

**Lab Sample ID: 400-170472-8**

**Date Collected: 05/15/19 11:13**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 13:48	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436187	07/24/19 09:02	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

# Lab Chronicle

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11879 FB-1**

**Lab Sample ID: 400-170472-9**

**Date Collected: 05/15/19 11:20**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 13:49	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436187	07/24/19 09:02	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11880 MW-8**

**Lab Sample ID: 400-170472-10**

**Date Collected: 05/15/19 12:32**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 13:49	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436187	07/24/19 09:02	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11881 MW-11**

**Lab Sample ID: 400-170472-11**

**Date Collected: 05/15/19 14:11**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 13:49	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436187	07/24/19 09:02	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11882 MW-13**

**Lab Sample ID: 400-170472-12**

**Date Collected: 05/14/19 09:17**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 13:49	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436187	07/24/19 09:02	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

# Lab Chronicle

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

**Client Sample ID: AZ11883 MW-14**

**Lab Sample ID: 400-170472-13**

**Date Collected: 05/14/19 10:15**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 13:49	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436188	07/24/19 09:03	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11884 MW-15**

**Lab Sample ID: 400-170472-14**

**Date Collected: 05/14/19 11:10**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 13:50	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436188	07/24/19 09:03	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11885 MW-16**

**Lab Sample ID: 400-170472-15**

**Date Collected: 05/14/19 12:02**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430313	05/31/19 06:15	EJQ	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 12:31	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430321	05/31/19 08:11	EJQ	TAL SL
Total/NA	Analysis	9320		1	436343	07/25/19 08:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

**Client Sample ID: AZ11886 MW-17R**

**Lab Sample ID: 400-170472-16**

**Date Collected: 05/14/19 13:10**

**Matrix: Water**

**Date Received: 05/20/19 16:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430313	05/31/19 06:15	EJQ	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 12:31	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430321	05/31/19 08:11	EJQ	TAL SL
Total/NA	Analysis	9320		1	436343	07/25/19 08:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

# Lab Chronicle

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

## Client Sample ID: AZ11887 FB-2

## Lab Sample ID: 400-170472-17

Date Collected: 05/14/19 13:35

Matrix: Water

Date Received: 05/20/19 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430313	05/31/19 06:15	EJQ	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 12:32	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430321	05/31/19 08:11	EJQ	TAL SL
Total/NA	Analysis	9320		1	436505	07/25/19 08:50	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

## Client Sample ID: AZ11888 MW-18

## Lab Sample ID: 400-170472-18

Date Collected: 05/15/19 09:30

Matrix: Water

Date Received: 05/20/19 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430313	05/31/19 06:15	EJQ	TAL SL
Total/NA	Analysis	9315		1	439663	08/15/19 13:18	KLS	TAL SL
Total/NA	Prep	PrecSep_0			430321	05/31/19 08:11	EJQ	TAL SL
Total/NA	Analysis	9320		1	436505	07/25/19 08:50	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

## Client Sample ID: AZ11889 MW-19

## Lab Sample ID: 400-170472-19

Date Collected: 05/15/19 10:55

Matrix: Water

Date Received: 05/20/19 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430313	05/31/19 06:15	EJQ	TAL SL
Total/NA	Analysis	9315		1	439663	08/15/19 13:19	KLS	TAL SL
Total/NA	Prep	PrecSep_0			430321	05/31/19 08:11	EJQ	TAL SL
Total/NA	Analysis	9320		1	436505	07/25/19 08:50	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

## Client Sample ID: AZ11890 MW-20

## Lab Sample ID: 400-170472-20

Date Collected: 05/15/19 12:00

Matrix: Water

Date Received: 05/20/19 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430313	05/31/19 06:15	EJQ	TAL SL
Total/NA	Analysis	9315		1	439663	08/15/19 13:19	KLS	TAL SL
Total/NA	Prep	PrecSep_0			430321	05/31/19 08:11	EJQ	TAL SL
Total/NA	Analysis	9320		1	436505	07/25/19 08:50	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL



# Lab Chronicle

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

## Client Sample ID: AZ11891 MW-20 DUP

## Lab Sample ID: 400-170472-21

Date Collected: 05/15/19 12:00

Matrix: Water

Date Received: 05/20/19 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436307	07/24/19 08:55	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

## Client Sample ID: AZ11892 MW-10

## Lab Sample ID: 400-170472-22

Date Collected: 05/15/19 13:30

Matrix: Water

Date Received: 05/20/19 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436307	07/24/19 08:55	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

## Client Sample ID: AZ11893 MW-12

## Lab Sample ID: 400-170472-23

Date Collected: 05/15/19 14:45

Matrix: Water

Date Received: 05/20/19 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436307	07/24/19 08:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	SMP	TAL SL

## Client Sample ID: AZ11894 EB-1

## Lab Sample ID: 400-170472-24

Date Collected: 05/15/19 15:10

Matrix: Water

Date Received: 05/20/19 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430556	06/03/19 11:50	ORM	TAL SL
Total/NA	Analysis	9315		1	439665	08/15/19 12:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430557	06/03/19 12:01	ORM	TAL SL
Total/NA	Analysis	9320		1	436307	07/24/19 08:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439955	08/20/19 07:42	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: 400-170472-1  
 SDG: Gorgas Landfill 1224

## Rad

### Prep Batch: 430313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-170472-15	AZ11885 MW-16	Total/NA	Water	PrecSep-21	
400-170472-16	AZ11886 MW-17R	Total/NA	Water	PrecSep-21	
400-170472-17	AZ11887 FB-2	Total/NA	Water	PrecSep-21	
400-170472-18	AZ11888 MW-18	Total/NA	Water	PrecSep-21	
400-170472-19	AZ11889 MW-19	Total/NA	Water	PrecSep-21	
400-170472-20	AZ11890 MW-20	Total/NA	Water	PrecSep-21	
MB 160-430313/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-430313/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-170472-15 DU	AZ11885 MW-16	Total/NA	Water	PrecSep-21	

### Prep Batch: 430321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-170472-15	AZ11885 MW-16	Total/NA	Water	PrecSep_0	
400-170472-16	AZ11886 MW-17R	Total/NA	Water	PrecSep_0	
400-170472-17	AZ11887 FB-2	Total/NA	Water	PrecSep_0	
400-170472-18	AZ11888 MW-18	Total/NA	Water	PrecSep_0	
400-170472-19	AZ11889 MW-19	Total/NA	Water	PrecSep_0	
400-170472-20	AZ11890 MW-20	Total/NA	Water	PrecSep_0	
MB 160-430321/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-430321/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-170472-15 DU	AZ11885 MW-16	Total/NA	Water	PrecSep_0	

### Prep Batch: 430556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-170472-1	AZ11871 MW-1	Total/NA	Water	PrecSep-21	
400-170472-2	AZ11872 MW-2	Total/NA	Water	PrecSep-21	
400-170472-3	AZ11873 MW-2 DUP	Total/NA	Water	PrecSep-21	
400-170472-4	AZ11874 MW-3	Total/NA	Water	PrecSep-21	
400-170472-5	AZ11875 MW-4	Total/NA	Water	PrecSep-21	
400-170472-6	AZ11876 MW-5	Total/NA	Water	PrecSep-21	
400-170472-7	AZ11877 MW-6	Total/NA	Water	PrecSep-21	
400-170472-8	AZ11878 MW-7	Total/NA	Water	PrecSep-21	
400-170472-9	AZ11879 FB-1	Total/NA	Water	PrecSep-21	
400-170472-10	AZ11880 MW-8	Total/NA	Water	PrecSep-21	
400-170472-11	AZ11881 MW-11	Total/NA	Water	PrecSep-21	
400-170472-12	AZ11882 MW-13	Total/NA	Water	PrecSep-21	
400-170472-13	AZ11883 MW-14	Total/NA	Water	PrecSep-21	
400-170472-14	AZ11884 MW-15	Total/NA	Water	PrecSep-21	
400-170472-21	AZ11891 MW-20 DUP	Total/NA	Water	PrecSep-21	
400-170472-22	AZ11892 MW-10	Total/NA	Water	PrecSep-21	
400-170472-23	AZ11893 MW-12	Total/NA	Water	PrecSep-21	
400-170472-24	AZ11894 EB-1	Total/NA	Water	PrecSep-21	
MB 160-430556/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-430556/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-170472-5 DU	AZ11875 MW-4	Total/NA	Water	PrecSep-21	

### Prep Batch: 430557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-170472-1	AZ11871 MW-1	Total/NA	Water	PrecSep_0	
400-170472-2	AZ11872 MW-2	Total/NA	Water	PrecSep_0	
400-170472-3	AZ11873 MW-2 DUP	Total/NA	Water	PrecSep_0	

# QC Association Summary

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

Job ID: 400-170472-1  
SDG: Gorgas Landfill 1224

## Rad (Continued)

### Prep Batch: 430557 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-170472-4	AZ11874 MW-3	Total/NA	Water	PrecSep_0	
400-170472-5	AZ11875 MW-4	Total/NA	Water	PrecSep_0	
400-170472-6	AZ11876 MW-5	Total/NA	Water	PrecSep_0	
400-170472-7	AZ11877 MW-6	Total/NA	Water	PrecSep_0	
400-170472-8	AZ11878 MW-7	Total/NA	Water	PrecSep_0	
400-170472-9	AZ11879 FB-1	Total/NA	Water	PrecSep_0	
400-170472-10	AZ11880 MW-8	Total/NA	Water	PrecSep_0	
400-170472-11	AZ11881 MW-11	Total/NA	Water	PrecSep_0	
400-170472-12	AZ11882 MW-13	Total/NA	Water	PrecSep_0	
400-170472-13	AZ11883 MW-14	Total/NA	Water	PrecSep_0	
400-170472-14	AZ11884 MW-15	Total/NA	Water	PrecSep_0	
400-170472-21	AZ11891 MW-20 DUP	Total/NA	Water	PrecSep_0	
400-170472-22	AZ11892 MW-10	Total/NA	Water	PrecSep_0	
400-170472-23	AZ11893 MW-12	Total/NA	Water	PrecSep_0	
400-170472-24	AZ11894 EB-1	Total/NA	Water	PrecSep_0	
MB 160-430557/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-430557/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-170472-5 DU	AZ11875 MW-4	Total/NA	Water	PrecSep_0	

# QC Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

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

**Lab Sample ID: MB 160-430313/23-A**  
**Matrix: Water**  
**Analysis Batch: 439663**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430313**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.009082	U	0.0397	0.0398	1.00	0.0865	pCi/L	05/31/19 06:15	08/15/19 13:19	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					05/31/19 06:15	08/15/19 13:19	1
	107									

**Lab Sample ID: LCS 160-430313/1-A**  
**Matrix: Water**  
**Analysis Batch: 439859**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430313**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	8.554		0.890	1.00	0.0886	pCi/L	75	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	102		40 - 110						

**Lab Sample ID: 400-170472-15 DU**  
**Matrix: Water**  
**Analysis Batch: 439623**

**Client Sample ID: AZ11885 MW-16**  
**Prep Type: Total/NA**  
**Prep Batch: 430313**

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.141		0.06298	U	0.0822	1.00	0.137	pCi/L	0.47	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	104		40 - 110							

**Lab Sample ID: MB 160-430556/23-A**  
**Matrix: Water**  
**Analysis Batch: 439665**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430556**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.03527	U	0.0367	0.0368	1.00	0.0553	pCi/L	06/03/19 11:50	08/15/19 13:50	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					06/03/19 11:50	08/15/19 13:50	1
	106									

**Lab Sample ID: LCS 160-430556/1-A**  
**Matrix: Water**  
**Analysis Batch: 439665**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430556**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.080		0.940	1.00	0.0604	pCi/L	80	75 - 125

Eurofins TestAmerica, Pensacola

# QC Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

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

**Lab Sample ID: LCS 160-430556/1-A**  
**Matrix: Water**  
**Analysis Batch: 439665**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430556**

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	94.9		40 - 110

**Lab Sample ID: 400-170472-5 DU**  
**Matrix: Water**  
**Analysis Batch: 439665**

**Client Sample ID: AZ11875 MW-4**  
**Prep Type: Total/NA**  
**Prep Batch: 430556**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	
									RER	Limit
Radium-226	0.0680		0.05407	U	0.0458	1.00	0.0631	pCi/L	0.14	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	94.9		40 - 110

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

**Lab Sample ID: MB 160-430321/23-A**  
**Matrix: Water**  
**Analysis Batch: 436505**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430321**

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	107		40 - 110	05/31/19 08:11	07/25/19 08:51	1
Y Carrier	86.4		40 - 110	05/31/19 08:11	07/25/19 08:51	1

**Lab Sample ID: LCS 160-430321/1-A**  
**Matrix: Water**  
**Analysis Batch: 436343**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430321**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
									Radium-228	8.99

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	92.3		40 - 110

**Lab Sample ID: 400-170472-15 DU**  
**Matrix: Water**  
**Analysis Batch: 436343**

**Client Sample ID: AZ11885 MW-16**  
**Prep Type: Total/NA**  
**Prep Batch: 430321**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	
									RER	Limit
Radium-228	0.389	U	0.6203		0.298	1.00	0.423	pCi/L	0.41	1

Eurofins TestAmerica, Pensacola

# QC Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

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

**Lab Sample ID: 400-170472-15 DU**  
**Matrix: Water**  
**Analysis Batch: 436343**

**Client Sample ID: AZ11885 MW-16**  
**Prep Type: Total/NA**  
**Prep Batch: 430321**

Carrier	<i>DU</i> %Yield	<i>DU</i> Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	90.8		40 - 110

**Lab Sample ID: MB 160-430557/23-A**  
**Matrix: Water**  
**Analysis Batch: 436188**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430557**

Analyte	MB MB		Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-228	0.1170	U	0.212	0.212	1.00	0.360	pCi/L	06/03/19 12:01	07/24/19 09:03	1
Carrier	<i>MB</i> %Yield	<i>MB</i> Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					06/03/19 12:01	07/24/19 09:03	1
Y Carrier	85.6		40 - 110					06/03/19 12:01	07/24/19 09:03	1

**Lab Sample ID: LCS 160-430557/1-A**  
**Matrix: Water**  
**Analysis Batch: 436307**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430557**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
									%Rec	Limits
Radium-228	9.00	9.699		1.14	1.00	0.494	pCi/L	108	75 - 125	
Carrier	<i>LCS</i> %Yield	<i>LCS</i> Qualifier	Limits							
Ba Carrier	94.9		40 - 110							
Y Carrier	86.4		40 - 110							

**Lab Sample ID: 400-170472-5 DU**  
**Matrix: Water**  
**Analysis Batch: 436187**

**Client Sample ID: AZ11875 MW-4**  
**Prep Type: Total/NA**  
**Prep Batch: 430557**

Analyte	Sample Sample		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER	Limit
	Result	Qual								RER	Limit
Radium-228	0.284	U	0.5807		0.279	1.00	0.399	pCi/L		0.57	1
Carrier	<i>DU</i> %Yield	<i>DU</i> Qualifier	Limits								
Ba Carrier	94.9		40 - 110								
Y Carrier	87.1		40 - 110								

# QC Sample Results

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

Job ID: 400-170472-1  
 SDG: Gorgas Landfill 1224

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-170472-5 DU**  
**Matrix: Water**  
**Analysis Batch: 439955**

**Client Sample ID: AZ11875 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	0.352	U	0.6347		0.283	5.00	0.399	pCi/L	0.54	

**Lab Sample ID: 400-170472-15 DU**  
**Matrix: Water**  
**Analysis Batch: 439955**

**Client Sample ID: AZ11885 MW-16**  
**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	0.530		0.6833		0.309	5.00	0.423	pCi/L	0.26	





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

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

**Chain of Custody Record**

**Client Information (Sub Contract Lab)**  
 Client Contact: Anthony Goggins  
 Phone: Laura Midkiff  
 Company: Alabama Power General Test Laboratory  
 Address: 744 County Rd 87 GSC#8  
 City: Calera  
 State: AL Zip: 35040  
 Phone: 205-664-6197  
 Email: lmidkiff@southernco.com  
 Project Name: CCR  
 Site: Gorgas Landfill 1224

**Sampler:** Whittire, Cheyenne R  
**Lab P/N:** Whittire, Cheyenne R  
**E-Mail:** cheyenne.whittire@testamericainc.com  
**Accreditations Required (See note):**

**Due Date Requested:**  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 40007143  
 SSO#:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C-comp, G-grab)	Matrix (Water, Sewage, Other)	Preservation Code:	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_GFP.C	Analysis Requested	Carrier Tracking No(s)	State of Origin:	Job #
AZ11871	5/14/19	10:16	G	Water		X								Alabama	Page 1 of 2
AZ11872	5/14/19	11:04	G	Water										Alabama	Page 1 of 2
AZ11873	5/14/19	11:04	G	Water										Alabama	Page 1 of 2
AZ11874	5/14/19	12:02	G	Water										Alabama	Page 1 of 2
AZ11875	5/14/19	13:06	G	Water		X								Alabama	Page 1 of 2
AZ11876	5/14/19	14:17	G	Water										Alabama	Page 1 of 2
AZ11877	5/15/19	10:27	G	Water										Alabama	Page 1 of 2
AZ11878	5/15/19	11:13	G	Water										Alabama	Page 1 of 2
AZ11879	5/15/19	11:20	G	Water										Alabama	Page 1 of 2
AZ11880	5/15/19	12:32	G	Water										Alabama	Page 1 of 2
AZ11881	5/15/19	14:11	G	Water										Alabama	Page 1 of 2

**Special Instructions/Note:**  
 MW-1  
 MW-2  
 MW-2 DUP (Sample Duplicate)  
 MW-3  
 MW-4  
 MW-5  
 MW-6  
 MW-7  
 MW-8  
 MW-11

**Preservation Codes:**  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Anionics Acid  
 H - Ascorbic Acid  
 I - TSP Dodecylsulfate  
 J - DI Water  
 K - EDTA  
 L - EDTA  
 M - Hexane  
 N - None  
 O - AsNaO2  
 P - Na2O4S  
 Q - Na2SO3  
 R - Na2SO3  
 S - H2SO4  
 T - TSP Dodecylsulfate  
 U - DI Water  
 V - MCAA  
 W - pH 4-5  
 X - EDTA  
 Z - other (specify)  
 Other:

**Analysis Requested:**  
 9315 Ra228, 9320 Ra228, Ra228Ra228\_GFP.C

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

**Employer/Client Relinquished by:** Laura Midkiff  
 Date/Time: 05/16/2019 14:30  
 Method of Shipment: Water APC  
 Company: Company

**Relinquished by:** [Signature]  
 Date/Time: 5/20/19 16:00  
 Company: THPCN

**Relinquished by:** [Signature]  
 Date/Time: 5/20/19 23:46  
 Company: [Signature]

**Custody Seals Intact:** Custody Seal No.:

**4355B Special Instructions/CC Requirements:**

Ver: 09/20/2016





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

Chain of Custody Record

TestAmerica  
 THE LABORATORY COMPANY, INC.

<b>Client Information (Sub Contract Lab)</b> Alabama Power General Test Laboratory 744 County Rd 87 GSC#6 Calera, AL 35040 Phone: 205-664-6197 Email: lbmidki@southernco.com Project Name: 40007143 CCR: SSO#W# Site: Gorgas Landfill 1224		Lab #/K: Whimire, Cheyenne R E-Mail: cheyenne.whimire@testamericainc.com Accreditations Required (See note)		COC No: 400-56525-24537.1 Page: Page 2 of 2 Job #:	
<b>Due Date Requested:</b> TAT Requested (days): Routine PO #: 205-664-6197 WO #: 40007143 Project #: SSO#W#		<b>Analysis Requested</b> 9315 Ra226, 9320 Ra228, Ra228Ra228, Ra228Ra228, GFCP SM 4500 F <sub>0</sub> SM 4500 Cl <sub>E</sub> SM 4500 SO <sub>4</sub> E			
<b>Sample Identification - Client ID (Lab ID)</b> AZ11882 AZ11883 AZ11884 AZ11885 AZ11886 AZ11887 AZ11888 AZ11889 AZ11890 AZ11891 AZ11892 AZ11893 AZ11894		<b>Sample Date</b> 5/14/19 5/14/19 5/14/19 5/14/19 5/14/19 5/14/19 5/15/19 5/15/19 5/15/19 5/15/19 5/15/19 5/15/19		<b>Sample Time</b> 09:17 10:15 11:10 12:02 13:10 13:35 09:30 10:55 12:00 12:00 13:30 14:45 15:10	
<b>Sample Type</b> (C=comp, G=grab) G G G G G G G G G G G G G		<b>Matrix</b> (W=water, O=oil, S=solid, L=liquid, A=air) Water Water Water Water Water Water Water Water Water Water Water Water Water Water		<b>Preservation Code:</b> MW-13 MW-14 MW-15 MW-16 MW-17R FB-1 (Field Blank) MW-18 MW-19 MW-20 MW-2 DUP (Sample Duplicate) MW-10 MW-12 EB-1 (Equipment Blank)	
<b>Field Filtered Sample (Yes or No)</b> <input checked="" type="checkbox"/>		<b>Perform MS/MSD (Yes or No)</b> <input checked="" type="checkbox"/>		<b>Total Number of Containers</b> 1 1 1 3 1 1 1 1 1 1 1 1	
<b>Special Instructions/Note:</b>					
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 sample 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.					
<b>Possible Hazard Identification</b> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify)					
<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Empty Kit Relinquished by: Laura Midki Date/Time: 6/5/16/2019 14:57 Date/Time: _____ Date/Time: _____ Date/Time: _____					
Custody Seals Intact: Custody Seal No.					



## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-170472-1  
SDG Number: Gorgas Landfill 1224

**Login Number: 170472**

**List Number: 1**

**Creator: Brown, Nathan**

**List Source: Eurofins TestAmerica, Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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	22.3°C, 23.4°C IR7
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: 400-170472-1  
SDG Number: Gorgas Landfill 1224

**Login Number: 170472**

**List Number: 2**

**Creator: Hellm, Michael**

**List Source: Eurofins TestAmerica, St. Louis**

**List Creation: 05/22/19 12:39 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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	18.0
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: 400-170472-1  
 SDG: Gorgas Landfill 1224

## 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
Alabama	State Program	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	AZ0710	01-12-20
Arkansas DEQ	State Program	88-0689	09-01-19
California	State Program	2510	06-30-20
Florida	NELAP	E81010	06-30-20
Florida	NELAP	E81010	06-30-20
Georgia	State Program	E81010 (FL)	06-30-20
Illinois	NELAP	200041	10-09-19
Illinois	NELAP	004586	10-09-19
Iowa	State Program	367	08-01-20
Kansas	NELAP	E-10253	10-31-19
Kentucky (UST)	State Program	53	06-30-20
Kentucky (WW)	State Program	98030	12-31-19
Louisiana	NELAP	30976	06-30-20
Louisiana (DW)	NELAP	LA017	12-31-19
Maryland	State Program	233	09-30-20
Massachusetts	State Program	M-FL094	06-30-20
Michigan	State	9912	05-06-20
Michigan	State Program	9912	05-06-20
New Jersey	NELAP	FL006	06-30-20
New Jersey	NELAP	FL006	07-30-20
North Carolina (WW/SW)	State Program	314	12-31-19
Oklahoma	State	9810-186	08-31-19
Oklahoma	State Program	9810	08-31-19
Pennsylvania	NELAP	68-00467	01-31-20
Pennsylvania	NELAP	68-00467	01-31-20
Rhode Island	State Program	LAO00307	12-30-19
South Carolina	State Program	96026	06-30-19 *
Tennessee	State	TN02907	06-30-20
Tennessee	State Program	TN02907	06-30-20
Texas	NELAP	T104704286-18-15	09-30-19
Texas	NELAP	T104704286	09-30-19
US Fish & Wildlife	Federal	LE058448-0	07-31-20
USDA	Federal	P330-18-00148	05-17-21
Virginia	NELAP	460166	06-14-20
Washington	State	C915	05-15-20
Washington	State Program	C915	05-15-20
West Virginia DEP	State Program	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: 400-170472-1  
 SDG: Gorgas Landfill 1224

## 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	DoD	L2305	04-06-22
ANAB	DOE	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-19
Arizona	State Program	AZ0813	12-08-19
California	State	2886	06-30-20
California	State Program	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Connecticut	State Program	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
Florida	NELAP	E87689	06-30-20
Hawaii	State Program	NA	06-30-20
Illinois	NELAP	200023	11-30-19
Illinois	NELAP	004553	11-30-19
Iowa	State Program	373	12-01-20
Kansas	NELAP	E-10236	10-31-19
Kentucky (DW)	State	KY90125	12-31-19
Kentucky (DW)	State Program	KY90125	12-31-19
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	NELAP	LA011	12-31-19
Louisiana (DW)	State	LA011	12-31-19
Maryland	State	310	09-30-20
Maryland	State Program	310	09-30-20
Michigan	State Program	9005	06-30-20
Missouri	State	780	06-30-22
Missouri	State Program	780	06-30-20
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	03-31-20
New York	NELAP	11616	04-01-20
North Dakota	State	R-207	06-30-20
North Dakota	State Program	R207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-19
Oklahoma	State Program	9997	08-31-19 *
Pennsylvania	NELAP	68-00540	02-28-20
Pennsylvania	NELAP	68-00540	02-28-20
South Carolina	State Program	85002001	06-30-20
Texas	NELAP	T104704193-19-14	07-31-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	Federal	058448	07-31-20
USDA	Federal	P330-17-0028	02-02-20
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	460230	06-14-20
Virginia	NELAP	10310	06-14-20
Washington	State Program	C592	08-30-19
West Virginia DEP	State Program	381	08-31-19 *

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

Eurofins TestAmerica, Pensacola

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-1	5/14/2019 9:59	Conductivity	2317	uS/cm
MW-1	5/14/2019 9:59	Depth to Water Detail	91.56	ft
MW-1	5/14/2019 9:59	DO	0.72	mg/L
MW-1	5/14/2019 9:59	Oxidation Reduction Potential	235.7	mv
MW-1	5/14/2019 9:59	pH	5.19	pH
MW-1	5/14/2019 9:59	Temperature	19.75	C
MW-1	5/14/2019 9:59	Turbidity	0.92	NTU
MW-1	5/14/2019 10:04	Conductivity	2291.8	uS/cm
MW-1	5/14/2019 10:04	Depth to Water Detail	91.62	ft
MW-1	5/14/2019 10:04	DO	0.71	mg/L
MW-1	5/14/2019 10:04	Oxidation Reduction Potential	240.4	mv
MW-1	5/14/2019 10:04	pH	5.2	pH
MW-1	5/14/2019 10:04	Temperature	19.66	C
MW-1	5/14/2019 10:04	Turbidity	0.55	NTU
MW-1	5/14/2019 10:09	Conductivity	2299.1	uS/cm
MW-1	5/14/2019 10:09	Depth to Water Detail	91.66	ft
MW-1	5/14/2019 10:09	DO	0.65	mg/L
MW-1	5/14/2019 10:09	Oxidation Reduction Potential	244.2	mv
MW-1	5/14/2019 10:09	pH	5.19	pH
MW-1	5/14/2019 10:09	Temperature	19.59	C
MW-1	5/14/2019 10:09	Turbidity	0.44	NTU
MW-1	5/14/2019 10:14	Conductivity	2298.7	uS/cm
MW-1	5/14/2019 10:14	Depth to Water Detail	91.66	ft
MW-1	5/14/2019 10:14	DO	0.59	mg/L
MW-1	5/14/2019 10:14	Oxidation Reduction Potential	247.6	mv
MW-1	5/14/2019 10:14	pH	5.19	pH
MW-1	5/14/2019 10:14	Temperature	19.74	C
MW-1	5/14/2019 10:14	Turbidity	0.67	NTU

**Alabama Power Company  
Plant Gorgas**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-10	5/15/2019 12:41	Conductivity	1470.1	uS/cm
MW-10	5/15/2019 12:41	Depth to Water Detail	85.21	ft
MW-10	5/15/2019 12:41	DO	4.17	mg/L
MW-10	5/15/2019 12:41	Oxidation Reduction Potential	9.2	mv
MW-10	5/15/2019 12:41	pH	6.56	pH
MW-10	5/15/2019 12:41	Temperature	22.04	C
MW-10	5/15/2019 12:41	Turbidity	21.3	NTU
MW-10	5/15/2019 12:46	Conductivity	1401.8	uS/cm
MW-10	5/15/2019 12:46	Depth to Water Detail	85.51	ft
MW-10	5/15/2019 12:46	DO	0.88	mg/L
MW-10	5/15/2019 12:46	Oxidation Reduction Potential	-13.6	mv
MW-10	5/15/2019 12:46	pH	6.41	pH
MW-10	5/15/2019 12:46	Temperature	21.62	C
MW-10	5/15/2019 12:46	Turbidity	106.1	NTU
MW-10	5/15/2019 12:51	Conductivity	1400.2	uS/cm
MW-10	5/15/2019 12:51	Depth to Water Detail	85.64	ft
MW-10	5/15/2019 12:51	DO	0.54	mg/L
MW-10	5/15/2019 12:51	Oxidation Reduction Potential	-15.4	mv
MW-10	5/15/2019 12:51	pH	6.4	pH
MW-10	5/15/2019 12:51	Temperature	21.33	C
MW-10	5/15/2019 12:51	Turbidity	139	NTU
MW-10	5/15/2019 12:56	Conductivity	1401.6	uS/cm
MW-10	5/15/2019 12:56	Depth to Water Detail	85.77	ft
MW-10	5/15/2019 12:56	DO	0.45	mg/L
MW-10	5/15/2019 12:56	Oxidation Reduction Potential	-15.6	mv
MW-10	5/15/2019 12:56	pH	6.39	pH
MW-10	5/15/2019 12:56	Temperature	21.38	C
MW-10	5/15/2019 12:56	Turbidity	106.8	NTU
MW-10	5/15/2019 13:01	Conductivity	1386.5	uS/cm
MW-10	5/15/2019 13:01	Depth to Water Detail	85.88	ft
MW-10	5/15/2019 13:01	DO	0.39	mg/L
MW-10	5/15/2019 13:01	Oxidation Reduction Potential	-15.5	mv
MW-10	5/15/2019 13:01	pH	6.4	pH
MW-10	5/15/2019 13:01	Temperature	21.6	C
MW-10	5/15/2019 13:01	Turbidity	76.5	NTU
MW-10	5/15/2019 13:06	Conductivity	1383.7	uS/cm
MW-10	5/15/2019 13:06	Depth to Water Detail	85.97	ft
MW-10	5/15/2019 13:06	DO	0.38	mg/L
MW-10	5/15/2019 13:06	Oxidation Reduction Potential	-13.6	mv
MW-10	5/15/2019 13:06	pH	6.4	pH
MW-10	5/15/2019 13:06	Temperature	21.07	C
MW-10	5/15/2019 13:06	Turbidity	45.7	NTU
MW-10	5/15/2019 13:11	Conductivity	1390.1	uS/cm
MW-10	5/15/2019 13:11	Depth to Water Detail	86.02	ft

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-10	5/15/2019 13:11	DO	0.42	mg/L
MW-10	5/15/2019 13:11	Oxidation Reduction Potention	-12.4	mv
MW-10	5/15/2019 13:11	pH	6.39	pH
MW-10	5/15/2019 13:11	Temperature	21.29	C
MW-10	5/15/2019 13:11	Turbidity	23.7	NTU
MW-10	5/15/2019 13:16	Conductivity	1398.7	uS/cm
MW-10	5/15/2019 13:16	Depth to Water Detail	86.06	ft
MW-10	5/15/2019 13:16	DO	0.44	mg/L
MW-10	5/15/2019 13:16	Oxidation Reduction Potention	-11.9	mv
MW-10	5/15/2019 13:16	pH	6.39	pH
MW-10	5/15/2019 13:16	Temperature	21.44	C
MW-10	5/15/2019 13:16	Turbidity	15.2	NTU
MW-10	5/15/2019 13:21	Conductivity	1403.7	uS/cm
MW-10	5/15/2019 13:21	Depth to Water Detail	86.11	ft
MW-10	5/15/2019 13:21	DO	0.42	mg/L
MW-10	5/15/2019 13:21	Oxidation Reduction Potention	-11.9	mv
MW-10	5/15/2019 13:21	pH	6.39	pH
MW-10	5/15/2019 13:21	Temperature	21.37	C
MW-10	5/15/2019 13:21	Turbidity	12.49	NTU
MW-10	5/15/2019 13:27	Conductivity	1423.1	uS/cm
MW-10	5/15/2019 13:27	Depth to Water Detail	86.13	ft
MW-10	5/15/2019 13:27	DO	0.41	mg/L
MW-10	5/15/2019 13:27	Oxidation Reduction Potention	-11.2	mv
MW-10	5/15/2019 13:27	pH	6.37	pH
MW-10	5/15/2019 13:27	Temperature	21.15	C
MW-10	5/15/2019 13:27	Turbidity	9.32	NTU



**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-11	5/15/2019 14:01	Conductivity	2814	uS/cm
MW-11	5/15/2019 14:01	Depth to Water Detail	102.55	ft
MW-11	5/15/2019 14:01	DO	1.29	mg/L
MW-11	5/15/2019 14:01	Oxidation Reduction Potention	-23.9	mv
MW-11	5/15/2019 14:01	pH	6.63	pH
MW-11	5/15/2019 14:01	Temperature	23.18	C
MW-11	5/15/2019 14:01	Turbidity	1.34	NTU
MW-11	5/15/2019 14:06	Conductivity	2806.8	uS/cm
MW-11	5/15/2019 14:06	Depth to Water Detail	102.69	ft
MW-11	5/15/2019 14:06	DO	1.21	mg/L
MW-11	5/15/2019 14:06	Oxidation Reduction Potention	-21.8	mv
MW-11	5/15/2019 14:06	pH	6.62	pH
MW-11	5/15/2019 14:06	Temperature	23.09	C
MW-11	5/15/2019 14:06	Turbidity	1.45	NTU
MW-11	5/15/2019 14:11	Conductivity	2804.3	uS/cm
MW-11	5/15/2019 14:11	Depth to Water Detail	102.82	ft
MW-11	5/15/2019 14:11	DO	1.21	mg/L
MW-11	5/15/2019 14:11	Oxidation Reduction Potention	-21.6	mv
MW-11	5/15/2019 14:11	pH	6.62	pH
MW-11	5/15/2019 14:11	Temperature	23.5	C
MW-11	5/15/2019 14:11	Turbidity	1.24	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-12	5/15/2019 14:18	Conductivity	3431.2	uS/cm
MW-12	5/15/2019 14:18	Depth to Water Detail	153.86	ft
MW-12	5/15/2019 14:18	DO	0.77	mg/L
MW-12	5/15/2019 14:18	Oxidation Reduction Potention	0	mv
MW-12	5/15/2019 14:18	pH	5.87	pH
MW-12	5/15/2019 14:18	Temperature	22.65	C
MW-12	5/15/2019 14:18	Turbidity	31.4	NTU
MW-12	5/15/2019 14:23	Conductivity	3495.2	uS/cm
MW-12	5/15/2019 14:23	Depth to Water Detail	153.85	ft
MW-12	5/15/2019 14:23	DO	0.58	mg/L
MW-12	5/15/2019 14:23	Oxidation Reduction Potention	-3.9	mv
MW-12	5/15/2019 14:23	pH	5.87	pH
MW-12	5/15/2019 14:23	Temperature	22.34	C
MW-12	5/15/2019 14:23	Turbidity	18.2	NTU
MW-12	5/15/2019 14:28	Conductivity	3563.5	uS/cm
MW-12	5/15/2019 14:28	Depth to Water Detail	153.85	ft
MW-12	5/15/2019 14:28	DO	0.52	mg/L
MW-12	5/15/2019 14:28	Oxidation Reduction Potention	-3.7	mv
MW-12	5/15/2019 14:28	pH	5.85	pH
MW-12	5/15/2019 14:28	Temperature	22.31	C
MW-12	5/15/2019 14:28	Turbidity	11.72	NTU
MW-12	5/15/2019 14:33	Conductivity	3606.5	uS/cm
MW-12	5/15/2019 14:33	Depth to Water Detail	153.85	ft
MW-12	5/15/2019 14:33	DO	0.49	mg/L
MW-12	5/15/2019 14:33	Oxidation Reduction Potention	-3.2	mv
MW-12	5/15/2019 14:33	pH	5.84	pH
MW-12	5/15/2019 14:33	Temperature	22.22	C
MW-12	5/15/2019 14:33	Turbidity	6.72	NTU
MW-12	5/15/2019 14:38	Conductivity	3636.8	uS/cm
MW-12	5/15/2019 14:38	Depth to Water Detail	153.86	ft
MW-12	5/15/2019 14:38	DO	0.48	mg/L
MW-12	5/15/2019 14:38	Oxidation Reduction Potention	-2.5	mv
MW-12	5/15/2019 14:38	pH	5.83	pH
MW-12	5/15/2019 14:38	Temperature	22.26	C
MW-12	5/15/2019 14:38	Turbidity	5.95	NTU
MW-12	5/15/2019 14:43	Conductivity	3678.7	uS/cm
MW-12	5/15/2019 14:43	Depth to Water Detail	153.86	ft
MW-12	5/15/2019 14:43	DO	0.5	mg/L
MW-12	5/15/2019 14:43	Oxidation Reduction Potention	-1.7	mv
MW-12	5/15/2019 14:43	pH	5.82	pH
MW-12	5/15/2019 14:43	Temperature	22.27	C
MW-12	5/15/2019 14:43	Turbidity	4.92	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-13	5/14/2019 8:51	Conductivity	2565.9	uS/cm
MW-13	5/14/2019 8:51	Depth to Water Detail	94.62	ft
MW-13	5/14/2019 8:51	DO	0.81	mg/L
MW-13	5/14/2019 8:51	Oxidation Reduction Potential	72.7	mv
MW-13	5/14/2019 8:51	pH	6.41	pH
MW-13	5/14/2019 8:51	Temperature	19.43	C
MW-13	5/14/2019 8:51	Turbidity	0.71	NTU
MW-13	5/14/2019 8:56	Conductivity	2563.4	uS/cm
MW-13	5/14/2019 8:56	Depth to Water Detail	94.8	ft
MW-13	5/14/2019 8:56	DO	0.4	mg/L
MW-13	5/14/2019 8:56	Oxidation Reduction Potential	68.1	mv
MW-13	5/14/2019 8:56	pH	6.41	pH
MW-13	5/14/2019 8:56	Temperature	19.28	C
MW-13	5/14/2019 8:56	Turbidity	0.62	NTU
MW-13	5/14/2019 9:01	Conductivity	2550.6	uS/cm
MW-13	5/14/2019 9:01	Depth to Water Detail	95.02	ft
MW-13	5/14/2019 9:01	DO	0.34	mg/L
MW-13	5/14/2019 9:01	Oxidation Reduction Potential	60.3	mv
MW-13	5/14/2019 9:01	pH	6.42	pH
MW-13	5/14/2019 9:01	Temperature	19.27	C
MW-13	5/14/2019 9:01	Turbidity	0.66	NTU
MW-13	5/14/2019 9:06	Conductivity	2548.8	uS/cm
MW-13	5/14/2019 9:06	Depth to Water Detail	95.11	ft
MW-13	5/14/2019 9:06	DO	0.36	mg/L
MW-13	5/14/2019 9:06	Oxidation Reduction Potential	55.9	mv
MW-13	5/14/2019 9:06	pH	6.42	pH
MW-13	5/14/2019 9:06	Temperature	19.24	C
MW-13	5/14/2019 9:06	Turbidity	0.8	NTU
MW-13	5/14/2019 9:11	Conductivity	2533.3	uS/cm
MW-13	5/14/2019 9:11	Depth to Water Detail	95.22	ft
MW-13	5/14/2019 9:11	DO	0.44	mg/L
MW-13	5/14/2019 9:11	Oxidation Reduction Potential	54.1	mv
MW-13	5/14/2019 9:11	pH	6.43	pH
MW-13	5/14/2019 9:11	Temperature	19.37	C
MW-13	5/14/2019 9:11	Turbidity	0.5	NTU
MW-13	5/14/2019 9:16	Conductivity	2530.7	uS/cm
MW-13	5/14/2019 9:16	Depth to Water Detail	95.3	ft
MW-13	5/14/2019 9:16	DO	0.49	mg/L
MW-13	5/14/2019 9:16	Oxidation Reduction Potential	53.6	mv
MW-13	5/14/2019 9:16	pH	6.41	pH
MW-13	5/14/2019 9:16	Temperature	19.32	C
MW-13	5/14/2019 9:16	Turbidity	0.46	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-14	5/14/2019 9:53	Conductivity	3116.6	uS/cm
MW-14	5/14/2019 9:53	Depth to Water Detail	89.15	ft
MW-14	5/14/2019 9:53	DO	0.3	mg/L
MW-14	5/14/2019 9:53	Oxidation Reduction Potential	14.4	mv
MW-14	5/14/2019 9:53	pH	6.43	pH
MW-14	5/14/2019 9:53	Temperature	19.37	C
MW-14	5/14/2019 9:53	Turbidity	0.53	NTU
MW-14	5/14/2019 9:58	Conductivity	3128.7	uS/cm
MW-14	5/14/2019 9:58	Depth to Water Detail	89.19	ft
MW-14	5/14/2019 9:58	DO	0.2	mg/L
MW-14	5/14/2019 9:58	Oxidation Reduction Potential	14.7	mv
MW-14	5/14/2019 9:58	pH	6.4	pH
MW-14	5/14/2019 9:58	Temperature	19.39	C
MW-14	5/14/2019 9:58	Turbidity	0.56	NTU
MW-14	5/14/2019 10:03	Conductivity	3125.9	uS/cm
MW-14	5/14/2019 10:03	Depth to Water Detail	89.19	ft
MW-14	5/14/2019 10:03	DO	0.17	mg/L
MW-14	5/14/2019 10:03	Oxidation Reduction Potential	13.6	mv
MW-14	5/14/2019 10:03	pH	6.39	pH
MW-14	5/14/2019 10:03	Temperature	19.35	C
MW-14	5/14/2019 10:03	Turbidity	0.47	NTU
MW-14	5/14/2019 10:08	Conductivity	3130.3	uS/cm
MW-14	5/14/2019 10:08	Depth to Water Detail	89.19	ft
MW-14	5/14/2019 10:08	DO	0.16	mg/L
MW-14	5/14/2019 10:08	Oxidation Reduction Potential	13.5	mv
MW-14	5/14/2019 10:08	pH	6.39	pH
MW-14	5/14/2019 10:08	Temperature	19.39	C
MW-14	5/14/2019 10:08	Turbidity	0.51	NTU
MW-14	5/14/2019 10:13	Conductivity	3125.6	uS/cm
MW-14	5/14/2019 10:13	Depth to Water Detail	89.19	ft
MW-14	5/14/2019 10:13	DO	0.15	mg/L
MW-14	5/14/2019 10:13	Oxidation Reduction Potential	13.7	mv
MW-14	5/14/2019 10:13	pH	6.39	pH
MW-14	5/14/2019 10:13	Temperature	19.41	C
MW-14	5/14/2019 10:13	Turbidity	0.42	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-15	5/14/2019 10:49	Conductivity	2622.7	uS/cm
MW-15	5/14/2019 10:49	Depth to Water Detail	67.86	ft
MW-15	5/14/2019 10:49	DO	0.24	mg/L
MW-15	5/14/2019 10:49	Oxidation Reduction Potential	-1.7	mv
MW-15	5/14/2019 10:49	pH	6.1	pH
MW-15	5/14/2019 10:49	Temperature	19.23	C
MW-15	5/14/2019 10:49	Turbidity	4.92	NTU
MW-15	5/14/2019 10:54	Conductivity	2586	uS/cm
MW-15	5/14/2019 10:54	Depth to Water Detail	67.86	ft
MW-15	5/14/2019 10:54	DO	0.21	mg/L
MW-15	5/14/2019 10:54	Oxidation Reduction Potential	4.2	mv
MW-15	5/14/2019 10:54	pH	6.08	pH
MW-15	5/14/2019 10:54	Temperature	19.19	C
MW-15	5/14/2019 10:54	Turbidity	7.65	NTU
MW-15	5/14/2019 10:59	Conductivity	2588.3	uS/cm
MW-15	5/14/2019 10:59	Depth to Water Detail	67.86	ft
MW-15	5/14/2019 10:59	DO	0.19	mg/L
MW-15	5/14/2019 10:59	Oxidation Reduction Potential	1.3	mv
MW-15	5/14/2019 10:59	pH	6.09	pH
MW-15	5/14/2019 10:59	Temperature	19.15	C
MW-15	5/14/2019 10:59	Turbidity	5.28	NTU
MW-15	5/14/2019 11:04	Conductivity	2586	uS/cm
MW-15	5/14/2019 11:04	Depth to Water Detail	67.86	ft
MW-15	5/14/2019 11:04	DO	0.18	mg/L
MW-15	5/14/2019 11:04	Oxidation Reduction Potential	0.2	mv
MW-15	5/14/2019 11:04	pH	6.1	pH
MW-15	5/14/2019 11:04	Temperature	19.16	C
MW-15	5/14/2019 11:04	Turbidity	3.4	NTU
MW-15	5/14/2019 11:09	Conductivity	2587.7	uS/cm
MW-15	5/14/2019 11:09	Depth to Water Detail	67.86	ft
MW-15	5/14/2019 11:09	DO	0.17	mg/L
MW-15	5/14/2019 11:09	Oxidation Reduction Potential	-0.4	mv
MW-15	5/14/2019 11:09	pH	6.1	pH
MW-15	5/14/2019 11:09	Temperature	19.18	C
MW-15	5/14/2019 11:09	Turbidity	2.25	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-16	5/14/2019 11:46	Conductivity	2568.9	uS/cm
MW-16	5/14/2019 11:46	Depth to Water Detail	90.57	ft
MW-16	5/14/2019 11:46	DO	0.27	mg/L
MW-16	5/14/2019 11:46	Oxidation Reduction Potential	-42.9	mv
MW-16	5/14/2019 11:46	pH	6.51	pH
MW-16	5/14/2019 11:46	Temperature	20.07	C
MW-16	5/14/2019 11:46	Turbidity	0.76	NTU
MW-16	5/14/2019 11:51	Conductivity	2565.4	uS/cm
MW-16	5/14/2019 11:51	Depth to Water Detail	90.58	ft
MW-16	5/14/2019 11:51	DO	0.2	mg/L
MW-16	5/14/2019 11:51	Oxidation Reduction Potential	-18.6	mv
MW-16	5/14/2019 11:51	pH	6.45	pH
MW-16	5/14/2019 11:51	Temperature	20.06	C
MW-16	5/14/2019 11:51	Turbidity	0.6	NTU
MW-16	5/14/2019 11:56	Conductivity	2560.4	uS/cm
MW-16	5/14/2019 11:56	Depth to Water Detail	90.58	ft
MW-16	5/14/2019 11:56	DO	0.17	mg/L
MW-16	5/14/2019 11:56	Oxidation Reduction Potential	-14.2	mv
MW-16	5/14/2019 11:56	pH	6.44	pH
MW-16	5/14/2019 11:56	Temperature	19.99	C
MW-16	5/14/2019 11:56	Turbidity	0.69	NTU
MW-16	5/14/2019 12:01	Conductivity	2556.4	uS/cm
MW-16	5/14/2019 12:01	Depth to Water Detail	90.58	ft
MW-16	5/14/2019 12:01	DO	0.17	mg/L
MW-16	5/14/2019 12:01	Oxidation Reduction Potential	-12.8	mv
MW-16	5/14/2019 12:01	pH	6.44	pH
MW-16	5/14/2019 12:01	Temperature	19.99	C
MW-16	5/14/2019 12:01	Turbidity	0.66	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-17R	5/14/2019 12:42	Conductivity	3551.2	uS/cm
MW-17R	5/14/2019 12:42	Depth to Water Detail	125.93	ft
MW-17R	5/14/2019 12:42	DO	2.05	mg/L
MW-17R	5/14/2019 12:42	Oxidation Reduction Potention	-0.1	mv
MW-17R	5/14/2019 12:42	pH	6.18	pH
MW-17R	5/14/2019 12:42	Temperature	22.71	C
MW-17R	5/14/2019 12:42	Turbidity	2.54	NTU
MW-17R	5/14/2019 12:47	Conductivity	3540	uS/cm
MW-17R	5/14/2019 12:47	Depth to Water Detail	125.95	ft
MW-17R	5/14/2019 12:47	DO	0.58	mg/L
MW-17R	5/14/2019 12:47	Oxidation Reduction Potention	-7	mv
MW-17R	5/14/2019 12:47	pH	6.06	pH
MW-17R	5/14/2019 12:47	Temperature	22.45	C
MW-17R	5/14/2019 12:47	Turbidity	2.13	NTU
MW-17R	5/14/2019 12:52	Conductivity	3521.4	uS/cm
MW-17R	5/14/2019 12:52	Depth to Water Detail	125.95	ft
MW-17R	5/14/2019 12:52	DO	0.36	mg/L
MW-17R	5/14/2019 12:52	Oxidation Reduction Potention	1.4	mv
MW-17R	5/14/2019 12:52	pH	5.94	pH
MW-17R	5/14/2019 12:52	Temperature	22.36	C
MW-17R	5/14/2019 12:52	Turbidity	1.1	NTU
MW-17R	5/14/2019 12:57	Conductivity	3514.5	uS/cm
MW-17R	5/14/2019 12:57	Depth to Water Detail	125.95	ft
MW-17R	5/14/2019 12:57	DO	0.32	mg/L
MW-17R	5/14/2019 12:57	Oxidation Reduction Potention	2.3	mv
MW-17R	5/14/2019 12:57	pH	5.95	pH
MW-17R	5/14/2019 12:57	Temperature	22.4	C
MW-17R	5/14/2019 12:57	Turbidity	0.76	NTU
MW-17R	5/14/2019 13:02	Conductivity	3529.4	uS/cm
MW-17R	5/14/2019 13:02	Depth to Water Detail	125.95	ft
MW-17R	5/14/2019 13:02	DO	0.31	mg/L
MW-17R	5/14/2019 13:02	Oxidation Reduction Potention	1.1	mv
MW-17R	5/14/2019 13:02	pH	5.98	pH
MW-17R	5/14/2019 13:02	Temperature	22.35	C
MW-17R	5/14/2019 13:02	Turbidity	0.86	NTU
MW-17R	5/14/2019 13:07	Conductivity	3539.5	uS/cm
MW-17R	5/14/2019 13:07	Depth to Water Detail	125.95	ft
MW-17R	5/14/2019 13:07	DO	0.3	mg/L
MW-17R	5/14/2019 13:07	Oxidation Reduction Potention	-0.1	mv
MW-17R	5/14/2019 13:07	pH	6.02	pH
MW-17R	5/14/2019 13:07	Temperature	22.38	C
MW-17R	5/14/2019 13:07	Turbidity	0.69	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-18	5/15/2019 9:06	Conductivity	2988.3	uS/cm
MW-18	5/15/2019 9:06	Depth to Water Detail	111.03	ft
MW-18	5/15/2019 9:06	DO	4.19	mg/L
MW-18	5/15/2019 9:06	Oxidation Reduction Potential	105.3	mv
MW-18	5/15/2019 9:06	pH	6.55	pH
MW-18	5/15/2019 9:06	Temperature	20.39	C
MW-18	5/15/2019 9:06	Turbidity	3.61	NTU
MW-18	5/15/2019 9:11	Conductivity	2946.7	uS/cm
MW-18	5/15/2019 9:11	Depth to Water Detail	111.04	ft
MW-18	5/15/2019 9:11	DO	2.91	mg/L
MW-18	5/15/2019 9:11	Oxidation Reduction Potential	107.3	mv
MW-18	5/15/2019 9:11	pH	6.48	pH
MW-18	5/15/2019 9:11	Temperature	20.45	C
MW-18	5/15/2019 9:11	Turbidity	3.84	NTU
MW-18	5/15/2019 9:16	Conductivity	2944.1	uS/cm
MW-18	5/15/2019 9:16	Depth to Water Detail	111.04	ft
MW-18	5/15/2019 9:16	DO	2.7	mg/L
MW-18	5/15/2019 9:16	Oxidation Reduction Potential	108.2	mv
MW-18	5/15/2019 9:16	pH	6.48	pH
MW-18	5/15/2019 9:16	Temperature	20.59	C
MW-18	5/15/2019 9:16	Turbidity	4.95	NTU
MW-18	5/15/2019 9:21	Conductivity	2942.9	uS/cm
MW-18	5/15/2019 9:21	Depth to Water Detail	111.05	ft
MW-18	5/15/2019 9:21	DO	2.67	mg/L
MW-18	5/15/2019 9:21	Oxidation Reduction Potential	109.4	mv
MW-18	5/15/2019 9:21	pH	6.48	pH
MW-18	5/15/2019 9:21	Temperature	20.75	C
MW-18	5/15/2019 9:21	Turbidity	4.92	NTU
MW-18	5/15/2019 9:26	Conductivity	2942.2	uS/cm
MW-18	5/15/2019 9:26	Depth to Water Detail	111.05	ft
MW-18	5/15/2019 9:26	DO	2.65	mg/L
MW-18	5/15/2019 9:26	Oxidation Reduction Potential	110.6	mv
MW-18	5/15/2019 9:26	pH	6.48	pH
MW-18	5/15/2019 9:26	Temperature	20.84	C
MW-18	5/15/2019 9:26	Turbidity	3.89	NTU



**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-19	5/15/2019 10:44	Conductivity	2921.4	uS/cm
MW-19	5/15/2019 10:44	Depth to Water Detail	79.32	ft
MW-19	5/15/2019 10:44	DO	0.19	mg/L
MW-19	5/15/2019 10:44	Oxidation Reduction Potention	43.6	mv
MW-19	5/15/2019 10:44	pH	6.21	pH
MW-19	5/15/2019 10:44	Temperature	20.78	C
MW-19	5/15/2019 10:44	Turbidity	5.69	NTU
MW-19	5/15/2019 10:49	Conductivity	2916	uS/cm
MW-19	5/15/2019 10:49	Depth to Water Detail	79.33	ft
MW-19	5/15/2019 10:49	DO	0.17	mg/L
MW-19	5/15/2019 10:49	Oxidation Reduction Potention	43.9	mv
MW-19	5/15/2019 10:49	pH	6.21	pH
MW-19	5/15/2019 10:49	Temperature	20.75	C
MW-19	5/15/2019 10:49	Turbidity	2.65	NTU
MW-19	5/15/2019 10:54	Conductivity	2916	uS/cm
MW-19	5/15/2019 10:54	Depth to Water Detail	79.32	ft
MW-19	5/15/2019 10:54	DO	0.16	mg/L
MW-19	5/15/2019 10:54	Oxidation Reduction Potention	44.5	mv
MW-19	5/15/2019 10:54	pH	6.21	pH
MW-19	5/15/2019 10:54	Temperature	20.66	C
MW-19	5/15/2019 10:54	Turbidity	2.42	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-2	5/14/2019 10:42	Conductivity	1885.1	uS/cm
MW-2	5/14/2019 10:42	Depth to Water Detail	84.36	ft
MW-2	5/14/2019 10:42	DO	0.35	mg/L
MW-2	5/14/2019 10:42	Oxidation Reduction Potention	46.7	mv
MW-2	5/14/2019 10:42	pH	6.04	pH
MW-2	5/14/2019 10:42	Temperature	19.48	C
MW-2	5/14/2019 10:42	Turbidity	8.94	NTU
MW-2	5/14/2019 10:47	Conductivity	1792.7	uS/cm
MW-2	5/14/2019 10:47	Depth to Water Detail	84.36	ft
MW-2	5/14/2019 10:47	DO	0.33	mg/L
MW-2	5/14/2019 10:47	Oxidation Reduction Potention	63.9	mv
MW-2	5/14/2019 10:47	pH	6.06	pH
MW-2	5/14/2019 10:47	Temperature	19.57	C
MW-2	5/14/2019 10:47	Turbidity	6.58	NTU
MW-2	5/14/2019 10:52	Conductivity	1766.2	uS/cm
MW-2	5/14/2019 10:52	Depth to Water Detail	84.36	ft
MW-2	5/14/2019 10:52	DO	0.25	mg/L
MW-2	5/14/2019 10:52	Oxidation Reduction Potention	76.5	mv
MW-2	5/14/2019 10:52	pH	6.06	pH
MW-2	5/14/2019 10:52	Temperature	19.25	C
MW-2	5/14/2019 10:52	Turbidity	2.41	NTU
MW-2	5/14/2019 10:57	Conductivity	1767.9	uS/cm
MW-2	5/14/2019 10:57	Depth to Water Detail	84.36	ft
MW-2	5/14/2019 10:57	DO	0.26	mg/L
MW-2	5/14/2019 10:57	Oxidation Reduction Potention	79.9	mv
MW-2	5/14/2019 10:57	pH	6.07	pH
MW-2	5/14/2019 10:57	Temperature	19.21	C
MW-2	5/14/2019 10:57	Turbidity	1.04	NTU
MW-2	5/14/2019 11:02	Conductivity	1762.6	uS/cm
MW-2	5/14/2019 11:02	Depth to Water Detail	84.36	ft
MW-2	5/14/2019 11:02	DO	0.21	mg/L
MW-2	5/14/2019 11:02	Oxidation Reduction Potention	83.4	mv
MW-2	5/14/2019 11:02	pH	6.07	pH
MW-2	5/14/2019 11:02	Temperature	19.21	C
MW-2	5/14/2019 11:02	Turbidity	0.83	NTU

**Alabama Power Company  
Plant Gorgas**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-20	5/15/2019 11:31	Conductivity	2851.4	uS/cm
MW-20	5/15/2019 11:31	Depth to Water Detail	22.21	ft
MW-20	5/15/2019 11:31	DO	0.11	mg/L
MW-20	5/15/2019 11:31	Oxidation Reduction Potential	-74.4	mv
MW-20	5/15/2019 11:31	pH	6.75	pH
MW-20	5/15/2019 11:31	Temperature	19.86	C
MW-20	5/15/2019 11:31	Turbidity	0.41	NTU
MW-20	5/15/2019 11:36	Conductivity	2853.5	uS/cm
MW-20	5/15/2019 11:36	Depth to Water Detail	22.32	ft
MW-20	5/15/2019 11:36	DO	0.09	mg/L
MW-20	5/15/2019 11:36	Oxidation Reduction Potential	-73.7	mv
MW-20	5/15/2019 11:36	pH	6.76	pH
MW-20	5/15/2019 11:36	Temperature	19.95	C
MW-20	5/15/2019 11:36	Turbidity	0.39	NTU
MW-20	5/15/2019 11:41	Conductivity	2853.2	uS/cm
MW-20	5/15/2019 11:41	Depth to Water Detail	22.48	ft
MW-20	5/15/2019 11:41	DO	0.08	mg/L
MW-20	5/15/2019 11:41	Oxidation Reduction Potential	-72.8	mv
MW-20	5/15/2019 11:41	pH	6.76	pH
MW-20	5/15/2019 11:41	Temperature	20.04	C
MW-20	5/15/2019 11:41	Turbidity	0.57	NTU
MW-20	5/15/2019 11:46	Conductivity	2848.8	uS/cm
MW-20	5/15/2019 11:46	Depth to Water Detail	22.68	ft
MW-20	5/15/2019 11:46	DO	0.08	mg/L
MW-20	5/15/2019 11:46	Oxidation Reduction Potential	-72.1	mv
MW-20	5/15/2019 11:46	pH	6.76	pH
MW-20	5/15/2019 11:46	Temperature	19.95	C
MW-20	5/15/2019 11:46	Turbidity	0.45	NTU
MW-20	5/15/2019 11:52	Conductivity	2838.8	uS/cm
MW-20	5/15/2019 11:52	Depth to Water Detail	22.77	ft
MW-20	5/15/2019 11:52	DO	0.08	mg/L
MW-20	5/15/2019 11:52	Oxidation Reduction Potential	-71.2	mv
MW-20	5/15/2019 11:52	pH	6.76	pH
MW-20	5/15/2019 11:52	Temperature	20.08	C
MW-20	5/15/2019 11:52	Turbidity	0.92	NTU
MW-20	5/15/2019 11:57	Conductivity	2828.6	uS/cm
MW-20	5/15/2019 11:57	Depth to Water Detail	22.81	ft
MW-20	5/15/2019 11:57	DO	0.08	mg/L
MW-20	5/15/2019 11:57	Oxidation Reduction Potential	-70.4	mv
MW-20	5/15/2019 11:57	pH	6.76	pH
MW-20	5/15/2019 11:57	Temperature	19.96	C
MW-20	5/15/2019 11:57	Turbidity	0.37	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-3	5/14/2019 11:39	Conductivity	3185	uS/cm
MW-3	5/14/2019 11:39	Depth to Water Detail	109.85	ft
MW-3	5/14/2019 11:39	DO	7.87	mg/L
MW-3	5/14/2019 11:39	Oxidation Reduction Potential	175.1	mv
MW-3	5/14/2019 11:39	pH	6.44	pH
MW-3	5/14/2019 11:39	Temperature	21.44	C
MW-3	5/14/2019 11:39	Turbidity	0.6	NTU
MW-3	5/14/2019 11:44	Conductivity	3182.1	uS/cm
MW-3	5/14/2019 11:44	Depth to Water Detail	109.93	ft
MW-3	5/14/2019 11:44	DO	6.65	mg/L
MW-3	5/14/2019 11:44	Oxidation Reduction Potential	201.1	mv
MW-3	5/14/2019 11:44	pH	5.9	pH
MW-3	5/14/2019 11:44	Temperature	21.12	C
MW-3	5/14/2019 11:44	Turbidity	0.67	NTU
MW-3	5/14/2019 11:49	Conductivity	3014.8	uS/cm
MW-3	5/14/2019 11:49	Depth to Water Detail	110.01	ft
MW-3	5/14/2019 11:49	DO	4.46	mg/L
MW-3	5/14/2019 11:49	Oxidation Reduction Potential	208.8	mv
MW-3	5/14/2019 11:49	pH	5.73	pH
MW-3	5/14/2019 11:49	Temperature	21.08	C
MW-3	5/14/2019 11:49	Turbidity	1.06	NTU
MW-3	5/14/2019 11:54	Conductivity	3006.7	uS/cm
MW-3	5/14/2019 11:54	Depth to Water Detail	110.14	ft
MW-3	5/14/2019 11:54	DO	4.2	mg/L
MW-3	5/14/2019 11:54	Oxidation Reduction Potential	208.9	mv
MW-3	5/14/2019 11:54	pH	5.72	pH
MW-3	5/14/2019 11:54	Temperature	21.4	C
MW-3	5/14/2019 11:54	Turbidity	1.47	NTU
MW-3	5/14/2019 11:59	Conductivity	3101.8	uS/cm
MW-3	5/14/2019 11:59	Depth to Water Detail	110.25	ft
MW-3	5/14/2019 11:59	DO	4.2	mg/L
MW-3	5/14/2019 11:59	Oxidation Reduction Potential	207.5	mv
MW-3	5/14/2019 11:59	pH	5.71	pH
MW-3	5/14/2019 11:59	Temperature	21.57	C
MW-3	5/14/2019 11:59	Turbidity	1.26	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-4	5/14/2019 12:49	Conductivity	3088.7	uS/cm
MW-4	5/14/2019 12:49	Depth to Water Detail	116.23	ft
MW-4	5/14/2019 12:49	DO	2.43	mg/L
MW-4	5/14/2019 12:49	Oxidation Reduction Potential	159	mv
MW-4	5/14/2019 12:49	pH	6.26	pH
MW-4	5/14/2019 12:49	Temperature	20.46	C
MW-4	5/14/2019 12:49	Turbidity	1.28	NTU
MW-4	5/14/2019 12:54	Conductivity	3092.2	uS/cm
MW-4	5/14/2019 12:54	Depth to Water Detail	116.23	ft
MW-4	5/14/2019 12:54	DO	2.24	mg/L
MW-4	5/14/2019 12:54	Oxidation Reduction Potential	167.1	mv
MW-4	5/14/2019 12:54	pH	6.23	pH
MW-4	5/14/2019 12:54	Temperature	20.64	C
MW-4	5/14/2019 12:54	Turbidity	1.19	NTU
MW-4	5/14/2019 12:59	Conductivity	3088.6	uS/cm
MW-4	5/14/2019 12:59	Depth to Water Detail	116.23	ft
MW-4	5/14/2019 12:59	DO	2.26	mg/L
MW-4	5/14/2019 12:59	Oxidation Reduction Potential	169.5	mv
MW-4	5/14/2019 12:59	pH	6.23	pH
MW-4	5/14/2019 12:59	Temperature	20.66	C
MW-4	5/14/2019 12:59	Turbidity	0.61	NTU
MW-4	5/14/2019 13:04	Conductivity	3089.9	uS/cm
MW-4	5/14/2019 13:04	Depth to Water Detail	116.23	ft
MW-4	5/14/2019 13:04	DO	2.32	mg/L
MW-4	5/14/2019 13:04	Oxidation Reduction Potential	168.5	mv
MW-4	5/14/2019 13:04	pH	6.23	pH
MW-4	5/14/2019 13:04	Temperature	20.69	C
MW-4	5/14/2019 13:04	Turbidity	0.71	NTU

**Alabama Power Company  
Plant Gorgas**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-5	5/14/2019 13:45	Conductivity	3158.5	uS/cm
MW-5	5/14/2019 13:45	Depth to Water Detail	125.96	ft
MW-5	5/14/2019 13:45	DO	3.52	mg/L
MW-5	5/14/2019 13:45	Oxidation Reduction Potention	-15.1	mv
MW-5	5/14/2019 13:45	pH	6.43	pH
MW-5	5/14/2019 13:45	Temperature	21.22	C
MW-5	5/14/2019 13:45	Turbidity	9.22	NTU
MW-5	5/14/2019 13:50	Conductivity	3083.7	uS/cm
MW-5	5/14/2019 13:50	Depth to Water Detail	126.04	ft
MW-5	5/14/2019 13:50	DO	1.84	mg/L
MW-5	5/14/2019 13:50	Oxidation Reduction Potention	-8.9	mv
MW-5	5/14/2019 13:50	pH	6.33	pH
MW-5	5/14/2019 13:50	Temperature	21.17	C
MW-5	5/14/2019 13:50	Turbidity	7.81	NTU
MW-5	5/14/2019 13:55	Conductivity	3073.1	uS/cm
MW-5	5/14/2019 13:55	Depth to Water Detail	126.04	ft
MW-5	5/14/2019 13:55	DO	1.27	mg/L
MW-5	5/14/2019 13:55	Oxidation Reduction Potention	-6.8	mv
MW-5	5/14/2019 13:55	pH	6.32	pH
MW-5	5/14/2019 13:55	Temperature	21.04	C
MW-5	5/14/2019 13:55	Turbidity	6.78	NTU
MW-5	5/14/2019 14:00	Conductivity	3089.1	uS/cm
MW-5	5/14/2019 14:00	Depth to Water Detail	126.04	ft
MW-5	5/14/2019 14:00	DO	0.97	mg/L
MW-5	5/14/2019 14:00	Oxidation Reduction Potention	-3.8	mv
MW-5	5/14/2019 14:00	pH	6.33	pH
MW-5	5/14/2019 14:00	Temperature	20.9	C
MW-5	5/14/2019 14:00	Turbidity	6.14	NTU
MW-5	5/14/2019 14:05	Conductivity	3267.7	uS/cm
MW-5	5/14/2019 14:05	Depth to Water Detail	126.04	ft
MW-5	5/14/2019 14:05	DO	0.6	mg/L
MW-5	5/14/2019 14:05	Oxidation Reduction Potention	-1.2	mv
MW-5	5/14/2019 14:05	pH	6.33	pH
MW-5	5/14/2019 14:05	Temperature	21.03	C
MW-5	5/14/2019 14:05	Turbidity	5.33	NTU
MW-5	5/14/2019 14:10	Conductivity	3280.9	uS/cm
MW-5	5/14/2019 14:10	Depth to Water Detail	126.04	ft
MW-5	5/14/2019 14:10	DO	0.57	mg/L
MW-5	5/14/2019 14:10	Oxidation Reduction Potention	1	mv
MW-5	5/14/2019 14:10	pH	6.34	pH
MW-5	5/14/2019 14:10	Temperature	21.11	C
MW-5	5/14/2019 14:10	Turbidity	3.41	NTU
MW-5	5/14/2019 14:15	Conductivity	3293.5	uS/cm
MW-5	5/14/2019 14:15	Depth to Water Detail	126.04	ft

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-5	5/14/2019 14:15	DO	0.55	mg/L
MW-5	5/14/2019 14:15	Oxidation Reduction Potention	2.8	mv
MW-5	5/14/2019 14:15	pH	6.34	pH
MW-5	5/14/2019 14:15	Temperature	21.31	C
MW-5	5/14/2019 14:15	Turbidity	2.5	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-6	5/15/2019 10:00	Conductivity	3149.6	uS/cm
MW-6	5/15/2019 10:00	Depth to Water Detail	96.8	ft
MW-6	5/15/2019 10:00	DO	0.31	mg/L
MW-6	5/15/2019 10:00	Oxidation Reduction Potential	-12.8	mv
MW-6	5/15/2019 10:00	pH	6.11	pH
MW-6	5/15/2019 10:00	Temperature	20.9	C
MW-6	5/15/2019 10:00	Turbidity	2.9	NTU
MW-6	5/15/2019 10:05	Conductivity	3143.7	uS/cm
MW-6	5/15/2019 10:05	Depth to Water Detail	96.9	ft
MW-6	5/15/2019 10:05	DO	0.23	mg/L
MW-6	5/15/2019 10:05	Oxidation Reduction Potential	-5.2	mv
MW-6	5/15/2019 10:05	pH	6.12	pH
MW-6	5/15/2019 10:05	Temperature	20.81	C
MW-6	5/15/2019 10:05	Turbidity	3.57	NTU
MW-6	5/15/2019 10:10	Conductivity	3097.1	uS/cm
MW-6	5/15/2019 10:10	Depth to Water Detail	96.9	ft
MW-6	5/15/2019 10:10	DO	0.2	mg/L
MW-6	5/15/2019 10:10	Oxidation Reduction Potential	12.3	mv
MW-6	5/15/2019 10:10	pH	6.06	pH
MW-6	5/15/2019 10:10	Temperature	20.79	C
MW-6	5/15/2019 10:10	Turbidity	3.12	NTU
MW-6	5/15/2019 10:15	Conductivity	3026	uS/cm
MW-6	5/15/2019 10:15	Depth to Water Detail	96.9	ft
MW-6	5/15/2019 10:15	DO	0.19	mg/L
MW-6	5/15/2019 10:15	Oxidation Reduction Potential	39.3	mv
MW-6	5/15/2019 10:15	pH	5.92	pH
MW-6	5/15/2019 10:15	Temperature	20.81	C
MW-6	5/15/2019 10:15	Turbidity	2.92	NTU
MW-6	5/15/2019 10:20	Conductivity	2964.7	uS/cm
MW-6	5/15/2019 10:20	Depth to Water Detail	96.9	ft
MW-6	5/15/2019 10:20	DO	0.18	mg/L
MW-6	5/15/2019 10:20	Oxidation Reduction Potential	61.1	mv
MW-6	5/15/2019 10:20	pH	5.8	pH
MW-6	5/15/2019 10:20	Temperature	20.77	C
MW-6	5/15/2019 10:20	Turbidity	3.4	NTU
MW-6	5/15/2019 10:25	Conductivity	2917.2	uS/cm
MW-6	5/15/2019 10:25	Depth to Water Detail	96.9	ft
MW-6	5/15/2019 10:25	DO	0.18	mg/L
MW-6	5/15/2019 10:25	Oxidation Reduction Potential	76.8	mv
MW-6	5/15/2019 10:25	pH	5.72	pH
MW-6	5/15/2019 10:25	Temperature	20.73	C
MW-6	5/15/2019 10:25	Turbidity	1.98	NTU



**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-7	5/15/2019 10:57	Conductivity	2681.2	uS/cm
MW-7	5/15/2019 10:57	Depth to Water Detail	56.22	ft
MW-7	5/15/2019 10:57	DO	0.3	mg/L
MW-7	5/15/2019 10:57	Oxidation Reduction Potention	1.6	mv
MW-7	5/15/2019 10:57	pH	6.59	pH
MW-7	5/15/2019 10:57	Temperature	19.66	C
MW-7	5/15/2019 10:57	Turbidity	3.23	NTU
MW-7	5/15/2019 11:02	Conductivity	2582.3	uS/cm
MW-7	5/15/2019 11:02	Depth to Water Detail	56.22	ft
MW-7	5/15/2019 11:02	DO	0.22	mg/L
MW-7	5/15/2019 11:02	Oxidation Reduction Potention	8.3	mv
MW-7	5/15/2019 11:02	pH	6.6	pH
MW-7	5/15/2019 11:02	Temperature	19.78	C
MW-7	5/15/2019 11:02	Turbidity	2.38	NTU
MW-7	5/15/2019 11:07	Conductivity	2526.4	uS/cm
MW-7	5/15/2019 11:07	Depth to Water Detail	56.22	ft
MW-7	5/15/2019 11:07	DO	0.2	mg/L
MW-7	5/15/2019 11:07	Oxidation Reduction Potention	13.1	mv
MW-7	5/15/2019 11:07	pH	6.61	pH
MW-7	5/15/2019 11:07	Temperature	19.75	C
MW-7	5/15/2019 11:07	Turbidity	2.01	NTU
MW-7	5/15/2019 11:12	Conductivity	2490.9	uS/cm
MW-7	5/15/2019 11:12	Depth to Water Detail	56.22	ft
MW-7	5/15/2019 11:12	DO	0.18	mg/L
MW-7	5/15/2019 11:12	Oxidation Reduction Potention	16	mv
MW-7	5/15/2019 11:12	pH	6.61	pH
MW-7	5/15/2019 11:12	Temperature	19.83	C
MW-7	5/15/2019 11:12	Turbidity	1.6	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-8	5/15/2019 11:44	Conductivity	2380.5	uS/cm
MW-8	5/15/2019 11:44	Depth to Water Detail	64.34	ft
MW-8	5/15/2019 11:44	DO	0.71	mg/L
MW-8	5/15/2019 11:44	Oxidation Reduction Potention	4.8	mv
MW-8	5/15/2019 11:44	pH	6.61	pH
MW-8	5/15/2019 11:44	Temperature	22.06	C
MW-8	5/15/2019 11:44	Turbidity	57.9	NTU
MW-8	5/15/2019 11:49	Conductivity	2385.6	uS/cm
MW-8	5/15/2019 11:49	Depth to Water Detail	64.51	ft
MW-8	5/15/2019 11:49	DO	0.55	mg/L
MW-8	5/15/2019 11:49	Oxidation Reduction Potention	6	mv
MW-8	5/15/2019 11:49	pH	6.59	pH
MW-8	5/15/2019 11:49	Temperature	22.06	C
MW-8	5/15/2019 11:49	Turbidity	45.4	NTU
MW-8	5/15/2019 11:54	Conductivity	2374.2	uS/cm
MW-8	5/15/2019 11:54	Depth to Water Detail	64.7	ft
MW-8	5/15/2019 11:54	DO	0.47	mg/L
MW-8	5/15/2019 11:54	Oxidation Reduction Potention	6.8	mv
MW-8	5/15/2019 11:54	pH	6.59	pH
MW-8	5/15/2019 11:54	Temperature	21.97	C
MW-8	5/15/2019 11:54	Turbidity	27.3	NTU
MW-8	5/15/2019 11:59	Conductivity	2385.6	uS/cm
MW-8	5/15/2019 11:59	Depth to Water Detail	64.76	ft
MW-8	5/15/2019 11:59	DO	0.44	mg/L
MW-8	5/15/2019 11:59	Oxidation Reduction Potention	6	mv
MW-8	5/15/2019 11:59	pH	6.59	pH
MW-8	5/15/2019 11:59	Temperature	22.11	C
MW-8	5/15/2019 11:59	Turbidity	18.2	NTU
MW-8	5/15/2019 12:04	Conductivity	2381.3	uS/cm
MW-8	5/15/2019 12:04	Depth to Water Detail	64.91	ft
MW-8	5/15/2019 12:04	DO	0.43	mg/L
MW-8	5/15/2019 12:04	Oxidation Reduction Potention	6.5	mv
MW-8	5/15/2019 12:04	pH	6.59	pH
MW-8	5/15/2019 12:04	Temperature	22.13	C
MW-8	5/15/2019 12:04	Turbidity	16.5	NTU
MW-8	5/15/2019 12:09	Conductivity	2377.5	uS/cm
MW-8	5/15/2019 12:09	Depth to Water Detail	64.95	ft
MW-8	5/15/2019 12:09	DO	0.43	mg/L
MW-8	5/15/2019 12:09	Oxidation Reduction Potention	6.8	mv
MW-8	5/15/2019 12:09	pH	6.59	pH
MW-8	5/15/2019 12:09	Temperature	22.11	C
MW-8	5/15/2019 12:09	Turbidity	12.1	NTU
MW-8	5/15/2019 12:14	Conductivity	2369.5	uS/cm
MW-8	5/15/2019 12:14	Depth to Water Detail	65.02	ft

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-8	5/15/2019 12:14	DO	0.6	mg/L
MW-8	5/15/2019 12:14	Oxidation Reduction Potention	7	mv
MW-8	5/15/2019 12:14	pH	6.6	pH
MW-8	5/15/2019 12:14	Temperature	22.06	C
MW-8	5/15/2019 12:14	Turbidity	8.41	NTU
MW-8	5/15/2019 12:19	Conductivity	2570.2	uS/cm
MW-8	5/15/2019 12:19	Depth to Water Detail	65.02	ft
MW-8	5/15/2019 12:19	DO	0.75	mg/L
MW-8	5/15/2019 12:19	Oxidation Reduction Potention	6.3	mv
MW-8	5/15/2019 12:19	pH	6.6	pH
MW-8	5/15/2019 12:19	Temperature	22.06	C
MW-8	5/15/2019 12:19	Turbidity	7.67	NTU
MW-8	5/15/2019 12:24	Conductivity	2569.5	uS/cm
MW-8	5/15/2019 12:24	Depth to Water Detail	65.02	ft
MW-8	5/15/2019 12:24	DO	0.8	mg/L
MW-8	5/15/2019 12:24	Oxidation Reduction Potention	6.6	mv
MW-8	5/15/2019 12:24	pH	6.6	pH
MW-8	5/15/2019 12:24	Temperature	22.2	C
MW-8	5/15/2019 12:24	Turbidity	3.85	NTU
MW-8	5/15/2019 12:30	Conductivity	2560.3	uS/cm
MW-8	5/15/2019 12:30	Depth to Water Detail	65.02	ft
MW-8	5/15/2019 12:30	DO	0.82	mg/L
MW-8	5/15/2019 12:30	Oxidation Reduction Potention	7.4	mv
MW-8	5/15/2019 12:30	pH	6.6	pH
MW-8	5/15/2019 12:30	Temperature	22.09	C
MW-8	5/15/2019 12:30	Turbidity	5.42	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 :** WMWGORLF\_1246

**Project/Site :** Gorgas Landfill  
Parrish, AL 35580

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

**Attention :** Dustin Brooks & Greg Dyer

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

November 08, 2019

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory between October 09, 2019 and October 11, 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@southemco.com, c=US  
Date: 2019.11.13 08:50:27 -0600

Supervision: **T. Durant Maske**  
Digitally signed by T. Durant Maske  
DN: cn=T. Durant Maske, o=Alabama  
Power Company, ou=Environmental  
Affairs, email=tdmaske@southemco.com,  
c=US  
Date: 2019.11.15 09:00:49 -0600



### REPORT OF LABORATORY ANALYSIS

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.



Metals ICP

Gorgas Landfill

WMWGORLF\_1246

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>
AZ23051	658520	WMWGORLF_1246
AZ23052	658520	WMWGORLF_1246
AZ23053	658520	WMWGORLF_1246
AZ23054	658520	WMWGORLF_1246
AZ23084	658520	WMWGORLF_1246
AZ23085	658520	WMWGORLF_1246
AZ23086	658520	WMWGORLF_1246
AZ23087	658520	WMWGORLF_1246
AZ23088	658520	WMWGORLF_1246
AZ23089	658520	WMWGORLF_1246
AZ23090	658521	WMWGORLF_1246
AZ23091	658521	WMWGORLF_1246
AZ23092	658521	WMWGORLF_1246
AZ23093	658521	WMWGORLF_1246
AZ23209	658521	WMWGORLF_1246
AZ23210	658521	WMWGORLF_1246
AZ23211	658521	WMWGORLF_1246
AZ23212	658521	WMWGORLF_1246
AZ23213	658521	WMWGORLF_1246
AZ23214	658521	WMWGORLF_1246
AZ23215	658522	WMWGORLF_1246
AZ23216	658522	WMWGORLF_1246
AZ23217	658522	WMWGORLF_1246
AZ23218	658522	WMWGORLF_1246
AZ23219	658522	WMWGORLF_1246
AZ23220	658522	WMWGORLF_1246

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, except for the following:
  - AZ23089 and AZ23214 MS/MSD spike levels for calcium were less than 30% of the sample nominal concentrations.
  - AZ23089 MS/MSD recoveries for lithium did not meet acceptance criteria. Serial dilution and post digestion spike were performed and did not pass. A matrix effect from the sample is suspected.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.



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

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
AZ23051	Calcium	20.3
AZ23052	Calcium	20.3
AZ23053	Calcium	20.3
AZ23054	Calcium	20.3
AZ23084	Calcium	20.3
AZ23085	Calcium	20.3
AZ23086	Calcium	20.3
AZ23087	Calcium	20.3
AZ23088	Calcium	20.3
AZ23089	Calcium	20.3
AZ23091	Calcium	20.3
AZ23092	Calcium	20.3
AZ23093	Calcium	20.3
AZ23209	Calcium	20.3
AZ23210	Calcium	20.3
AZ23211	Calcium	20.3
AZ23213	Calcium	20.3
AZ23214	Calcium	20.3
AZ23215	Calcium	20.3
AZ23216	Calcium	20.3
AZ23217	Calcium	20.3
AZ23219	Calcium	20.3

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

Metals ICPMS

Gorgas Landfill

WMWGORLF\_1246

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>
AZ23051	659358	WMWGORLF_1246
AZ23052	659358	WMWGORLF_1246
AZ23053	659358	WMWGORLF_1246
AZ23054	659358	WMWGORLF_1246
AZ23084	659358	WMWGORLF_1246
AZ23085	659358	WMWGORLF_1246
AZ23086	659358	WMWGORLF_1246
AZ23087	659358	WMWGORLF_1246
AZ23088	659358	WMWGORLF_1246
AZ23089	659358	WMWGORLF_1246
AZ23090	659359	WMWGORLF_1246
AZ23091	659359	WMWGORLF_1246
AZ23092	659359	WMWGORLF_1246
AZ23093	659359	WMWGORLF_1246
AZ23209	659359	WMWGORLF_1246
AZ23210	659359	WMWGORLF_1246
AZ23211	659359	WMWGORLF_1246
AZ23212	659359	WMWGORLF_1246
AZ23213	659359	WMWGORLF_1246
AZ23214	659359	WMWGORLF_1246
AZ23215	659360	WMWGORLF_1246
AZ23216	659360	WMWGORLF_1246
AZ23217	659360	WMWGORLF_1246
AZ23218	659360	WMWGORLF_1246
AZ23219	659360	WMWGORLF_1246
AZ23220	659360	WMWGORLF_1246

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

### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
    - AZ23089 MS/MSD spike level for cobalt was less than 30% of the sample nominal concentration.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. All samples were analyzed without a dilution factor.
  8. The raw data results are shown with dilution factors included.

Mercury

Gorgas Landfill

WMWGORLF\_1246

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>
AZ23051	658400	WMWGORLF_1246
AZ23052	658400	WMWGORLF_1246
AZ23053	658400	WMWGORLF_1246
AZ23054	658400	WMWGORLF_1246
AZ23084	658400	WMWGORLF_1246
AZ23085	658400	WMWGORLF_1246
AZ23086	658400	WMWGORLF_1246
AZ23087	658400	WMWGORLF_1246
AZ23088	658400	WMWGORLF_1246
AZ23089	658400	WMWGORLF_1246
AZ23090	658401	WMWGORLF_1246
AZ23091	658401	WMWGORLF_1246
AZ23092	658401	WMWGORLF_1246
AZ23093	658401	WMWGORLF_1246
AZ23209	658401	WMWGORLF_1246
AZ23210	658401	WMWGORLF_1246
AZ23211	658401	WMWGORLF_1246
AZ23212	658401	WMWGORLF_1246
AZ23213	658401	WMWGORLF_1246
AZ23214	658401	WMWGORLF_1246
AZ23215	658402	WMWGORLF_1246
AZ23216	658402	WMWGORLF_1246
AZ23217	658402	WMWGORLF_1246
AZ23218	658402	WMWGORLF_1246
AZ23219	658402	WMWGORLF_1246
AZ23220	658402	WMWGORLF_1246

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

TDS

Gorgas Landfill

WMWGORLF\_1246

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>
AZ23051	658351	WMWGORLF_1246
AZ23052	658351	WMWGORLF_1246
AZ23053	658351	WMWGORLF_1246
AZ23054	658351	WMWGORLF_1246
AZ23084	658351	WMWGORLF_1246
AZ23085	658351	WMWGORLF_1246
AZ23086	658351	WMWGORLF_1246
AZ23087	658351	WMWGORLF_1246
AZ23088	658351	WMWGORLF_1246
AZ23089	658351	WMWGORLF_1246
AZ23090	658437	WMWGORLF_1246
AZ23091	658437	WMWGORLF_1246
AZ23092	658437	WMWGORLF_1246
AZ23093	658437	WMWGORLF_1246
AZ23209	658437	WMWGORLF_1246
AZ23210	658437	WMWGORLF_1246
AZ23211	658438	WMWGORLF_1246
AZ23212	658438	WMWGORLF_1246
AZ23213	658438	WMWGORLF_1246
AZ23214	658438	WMWGORLF_1246
AZ23215	658438	WMWGORLF_1246
AZ23216	658438	WMWGORLF_1246
AZ23217	658438	WMWGORLF_1246
AZ23218	658438	WMWGORLF_1246
AZ23219	658438	WMWGORLF_1246
AZ23220	658438	WMWGORLF_1246

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:
  - AZ23090
  - AZ23212
  - AZ23218
  - AZ23220

## Anions

### Gorgas Landfill

#### WMWGORLF\_1246

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>
AZ23051	658780, 658783, & 658655	WMWGORLF_1246
AZ23052	658780, 658783, & 658655	WMWGORLF_1246
AZ23053	658780, 658783, & 658655	WMWGORLF_1246
AZ23054	658780, 658783, & 658655	WMWGORLF_1246
AZ23084	658780, 658783, & 658655	WMWGORLF_1246
AZ23085	658780, 658783, & 658655	WMWGORLF_1246
AZ23086	658780, 658783, & 658655	WMWGORLF_1246
AZ23087	658780, 658783, & 658655	WMWGORLF_1246
AZ23088	658780, 658783, & 658655	WMWGORLF_1246
AZ23089	658780, 658783, & 658655	WMWGORLF_1246
AZ23090	658781, 658784, & 658656	WMWGORLF_1246
AZ23091	658781, 658784, & 658656	WMWGORLF_1246
AZ23092	658781, 658784, & 658656	WMWGORLF_1246
AZ23093	658781, 658784, & 658656	WMWGORLF_1246
AZ23209	658781, 658784, & 658656	WMWGORLF_1246
AZ23210	658781, 658784, & 658656	WMWGORLF_1246
AZ23211	658781, 658784, & 658656	WMWGORLF_1246
AZ23212	658781, 658784, & 658656	WMWGORLF_1246
AZ23213	658781, 658784, & 658656	WMWGORLF_1246
AZ23214	658781, 658784, & 658656	WMWGORLF_1246
AZ23215	658782, 658785, & 658657	WMWGORLF_1246
AZ23216	658782, 658785, & 658657	WMWGORLF_1246
AZ23217	658782, 658785, & 658657	WMWGORLF_1246
AZ23218	658782, 658785, & 658657	WMWGORLF_1246
AZ23219	658782, 658785, & 658657	WMWGORLF_1246
AZ23220	658782, 658785, & 658657	WMWGORLF_1246

4. All of the above samples were analyzed and prepared by SM4500 CI 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.
  - 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>
AZ23051	Sulfate	40
AZ23052	Sulfate	40
AZ23053	Sulfate	40
AZ23054	Sulfate	100
AZ23084	Sulfate	80
AZ23085	Sulfate	80
AZ23086	Sulfate	80
AZ23087	Sulfate	40
AZ23088	Sulfate	40
AZ23089	Sulfate	100
AZ23091	Sulfate	80
AZ23092	Sulfate	80
AZ23093	Sulfate	40
AZ23209	Sulfate	40

## Case Narrative

AZ23210	Sulfate & Chloride	80 & 3
AZ23211	Sulfate	80
AZ23213	Sulfate & Chloride	40 & 8
AZ23214	Sulfate & Chloride	40 & 8
AZ23215	Sulfate	80
AZ23216	Sulfate	80
AZ23217	Sulfate	80
AZ23219	Sulfate & Chloride	80 & 8

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-1

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 11:20  
**Customer ID:**  
**Submittal Date:** 10/9/19 15:36

**Laboratory ID Number:** AZ23051

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 10:20		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/14/19 13:30	10/15/19 12:44		20.3	157	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 10:20		1.015	0.0268	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 10:25		1.015	0.0109	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 10:25		1.015	0.00218	mg/L	0.0003	0.001	
* Chromium, Total	10/11/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 10:25		1.015	0.0778	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 10:25		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:00		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/10/19 15:30	10/14/19 09:15		1	2330	mg/L		147.1	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 08:53	10/16/19 08:53		1	2.31	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 10:52	10/16/19 10:52		1	0.0924	mg/L	0.05	0.1	J
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 10:32	10/15/19 10:32		40	1540	mg/L	20.00	40	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: TJD</b>						
Conductivity	10/8/19 11:14	10/8/19 11:14			2249.07	uS/cm			FA
pH	10/8/19 11:14	10/8/19 11:14			5.12	SU			FA
Temperature	10/8/19 11:14	10/8/19 11:14			19.92	C			FA
Turbidity	10/8/19 11:14	10/8/19 11:14			1.53	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/8/19 11:20  
**Customer ID:**  
**Delivery Date:** 10/9/19 15:36

**Description:** Gorgas Landfill - MW-1

**Laboratory ID Number:** AZ23051

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23089	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.315	0.314	0.203	0.17 to 0.23	133	70 to 130	0.170	20
AZ23089	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	106	70 to 130	0.837	20
AZ23089	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.636	20
AZ23089	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.111	0.106	0.085 to 0.115	105	70 to 130	3.04	20
AZ23089	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.15	1.14	1.01	0.85 to 1.15	106	70 to 130	0.692	20
AZ23089	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0933	0.0932	0.0966	0.085 to 0.115	93.3	70 to 130	0.125	20
AZ23089	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.842	0.875	0.102	0.085 to 0.115	99.4	70 to 130	3.88	20
AZ23089	Mercury, Total by CVAA	mg/L	0.0000872	0.0005	0.004	0.00397	0.00394	0.00419	0.0034 to 0.0046	99.1	70 to 130	0.523	20
AZ23089	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.103	0.0935	0.085 to 0.115	105	70 to 130	1.41	20
AZ23089	Calcium, Total	mg/L	0.00728	0.1518	5.00	385	402	5.08	4.25 to 5.75	-140	70 to 130	4.14	20
AZ23089	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.39	20
AZ23089	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.182	20
AZ23089	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.104	0.103	0.085 to 0.115	101	70 to 130	3.31	20
AZ23089	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.104	0.104	0.102	0.085 to 0.115	104	70 to 130	0.690	20
AZ23089	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.101	0.101	0.0985	0.085 to 0.115	101	70 to 130	0.229	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:** WMWGORLF  
**Sample Date:** 10/8/19 11:20  
**Customer ID:**  
**Delivery Date:** 10/9/19 15:36

**Description:** Gorgas Landfill - MW-1

**Laboratory ID Number:** AZ23051

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23089	Chloride	mg/L	0.0911	0.50	10.0	13.5	3.12	10.8	9 to 11	104	80 to 120	0.639	20
AZ23089	Solids, Dissolved	mg/L	1.00	25			3990	55.0	40 to 60			0.499	5
AZ23089	Sulfate	mg/L	-0.381	0.50	4000	6470	2560	19.3	18 to 22	93.0	80 to 120	7.16	20
AZ23089	Fluoride	mg/L	0.0223	0.05	2.50	2.67	0.161	2.55	2.25 to 2.75	100	80 to 120	4.85	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 Landfill - MW-2

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 12:40  
**Customer ID:**  
**Submittal Date:** 10/9/19 15:36

**Laboratory ID Number:** AZ23052

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 10:23		1.015	0.0371	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 12:47		20.3	190	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 10:23		1.015	0.0677	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 10:27		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 10:27		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 10:27		1.015	0.0151	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 10:27		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 10:27		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 10:27		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 10:27		1.015	0.0674	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 10:27		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 10:27		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 10:27		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 10:27		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:03		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/10/19 15:30	10/14/19 09:15		1	1840	mg/L		125	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 08:55	10/16/19 08:55		1	4.26	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 10:53	10/16/19 10:53		1	0.164	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 10:33	10/15/19 10:33		40	1230	mg/L	20.00	40	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: TJD</b>						
Conductivity	10/8/19 12:36	10/8/19 12:36			1936.48	uS/cm			FA
pH	10/8/19 12:36	10/8/19 12:36			5.96	SU			FA
Temperature	10/8/19 12:36	10/8/19 12:36			19.80	C			FA
Turbidity	10/8/19 12:36	10/8/19 12:36			2.03	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/8/19 12:40  
**Customer ID:**  
**Delivery Date:** 10/9/19 15:36

**Description:** Gorgas Landfill - MW-2

**Laboratory ID Number:** AZ23052

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
AZ23089	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.315	0.314	0.203	0.17 to 0.23	133	70 to 130	0.170	20
AZ23089	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	106	70 to 130	0.837	20
AZ23089	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.636	20
AZ23089	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.111	0.106	0.085 to 0.115	105	70 to 130	3.04	20
AZ23089	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.15	1.14	1.01	0.85 to 1.15	106	70 to 130	0.692	20
AZ23089	Calcium, Total	mg/L	0.00728	0.1518	5.00	385	402	5.08	4.25 to 5.75	-140	70 to 130	4.14	20
AZ23089	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.39	20
AZ23089	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.182	20
AZ23089	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.104	0.103	0.085 to 0.115	101	70 to 130	3.31	20
AZ23089	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0933	0.0932	0.0966	0.085 to 0.115	93.3	70 to 130	0.125	20
AZ23089	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.842	0.875	0.102	0.085 to 0.115	99.4	70 to 130	3.88	20
AZ23089	Mercury, Total by CVAA	mg/L	0.0000872	0.0005	0.004	0.00397	0.00394	0.00419	0.0034 to 0.0046	99.1	70 to 130	0.523	20
AZ23089	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.103	0.0935	0.085 to 0.115	105	70 to 130	1.41	20
AZ23089	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.104	0.104	0.102	0.085 to 0.115	104	70 to 130	0.690	20
AZ23089	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.101	0.101	0.0985	0.085 to 0.115	101	70 to 130	0.229	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:** WMWGORLF

**Sample Date:** 10/8/19 12:40

**Customer ID:**

**Delivery Date:** 10/9/19 15:36

**Description:** Gorgas Landfill - MW-2

**Laboratory ID Number:** AZ23052

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23089	Fluoride	mg/L	0.0223	0.05	2.50	2.67	0.161	2.55	2.25 to 2.75	100	80 to 120	4.85	20
AZ23089	Chloride	mg/L	0.0911	0.50	10.0	13.5	3.12	10.8	9 to 11	104	80 to 120	0.639	20
AZ23089	Solids, Dissolved	mg/L	1.00	25			3990	55.0	40 to 60			0.499	5
AZ23089	Sulfate	mg/L	-0.381	0.50	4000	6470	2560	19.3	18 to 22	93.0	80 to 120	7.16	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:**



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-2 DUP

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 12:40  
**Customer ID:**  
**Submittal Date:** 10/9/19 15:36

**Laboratory ID Number:** AZ23053

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 10:26		1.015	0.0354	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 12:49		20.3	188	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 10:26		1.015	0.0681	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 10:30		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 10:30		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 10:30		1.015	0.0149	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 10:30		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 10:30		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 10:30		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 10:30		1.015	0.0684	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 10:30		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 10:30		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 10:30		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 10:30		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:05		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/10/19 15:30	10/14/19 09:15		1	1820	mg/L		125	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 08:56	10/16/19 08:56		1	4.28	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 10:54	10/16/19 10:54		1	0.159	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 10:34	10/15/19 10:34		40	1110	mg/L	20.00	40	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: TJD</b>						
Conductivity	10/8/19 12:36	10/8/19 12:36			1936.48	uS/cm			FA
pH	10/8/19 12:36	10/8/19 12:36			5.96	SU			FA
Temperature	10/8/19 12:36	10/8/19 12:36			19.80	C			FA
Turbidity	10/8/19 12:36	10/8/19 12:36			2.03	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/8/19 12:40  
**Customer ID:**  
**Delivery Date:** 10/9/19 15:36

**Description:** Gorgas Landfill - MW-2 DUP

**Laboratory ID Number:** AZ23053

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
AZ23089	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.315	0.314	0.203	0.17 to 0.23	133	70 to 130	0.170	20
AZ23089	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.636	20
AZ23089	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	106	70 to 130	0.837	20
AZ23089	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.104	0.104	0.102	0.085 to 0.115	104	70 to 130	0.690	20
AZ23089	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.101	0.101	0.0985	0.085 to 0.115	101	70 to 130	0.229	20
AZ23089	Calcium, Total	mg/L	0.00728	0.1518	5.00	385	402	5.08	4.25 to 5.75	-140	70 to 130	4.14	20
AZ23089	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.39	20
AZ23089	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.182	20
AZ23089	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.104	0.103	0.085 to 0.115	101	70 to 130	3.31	20
AZ23089	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0933	0.0932	0.0966	0.085 to 0.115	93.3	70 to 130	0.125	20
AZ23089	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.842	0.875	0.102	0.085 to 0.115	99.4	70 to 130	3.88	20
AZ23089	Mercury, Total by CVAA	mg/L	0.0000872	0.0005	0.004	0.00397	0.00394	0.00419	0.0034 to 0.0046	99.1	70 to 130	0.523	20
AZ23089	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.103	0.0935	0.085 to 0.115	105	70 to 130	1.41	20
AZ23089	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.111	0.106	0.085 to 0.115	105	70 to 130	3.04	20
AZ23089	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.15	1.14	1.01	0.85 to 1.15	106	70 to 130	0.692	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:** WMWGORLF  
**Sample Date:** 10/8/19 12:40  
**Customer ID:**  
**Delivery Date:** 10/9/19 15:36

**Description:** Gorgas Landfill - MW-2 DUP

**Laboratory ID Number:** AZ23053

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23089	Fluoride	mg/L	0.0223	0.05	2.50	2.67	0.161	2.55	2.25 to 2.75	100	80 to 120	4.85	20
AZ23089	Solids, Dissolved	mg/L	1.00	25			3990	55.0	40 to 60			0.499	5
AZ23089	Chloride	mg/L	0.0911	0.50	10.0	13.5	3.12	10.8	9 to 11	104	80 to 120	0.639	20
AZ23089	Sulfate	mg/L	-0.381	0.50	4000	6470	2560	19.3	18 to 22	93.0	80 to 120	7.16	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 Landfill - MW-3

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 14:15  
**Customer ID:**  
**Submittal Date:** 10/9/19 15:36

**Laboratory ID Number:** AZ23054

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 10:29		1.015	0.0537	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 12:52		20.3	371	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 10:29		1.015	0.419	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 10:33		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 10:33		1.015	0.00480	mg/L	0.001	0.005	J
* Barium, Total	10/11/19 14:45	10/18/19 10:33		1.015	0.0154	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 10:33		1.015	0.00840	mg/L	0.0006	0.003	
* Cadmium, Total	10/11/19 14:45	10/18/19 10:33		1.015	0.00598	mg/L	0.0003	0.001	
* Chromium, Total	10/11/19 14:45	10/18/19 10:33		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 10:33		1.015	1.07	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 10:33		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 10:33		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 10:33		1.015	0.00256	mg/L	0.002	0.01	J
* Thallium, Total	10/11/19 14:45	10/18/19 10:33		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:07		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/10/19 15:30	10/14/19 09:15		1	4720	mg/L		250	
<b>Analytical Method: SM4500CI E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 08:57	10/16/19 08:57		1	1.36	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 10:55	10/16/19 10:55		1	0.225	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 10:43	10/15/19 10:43		100	2950	mg/L	50.00	100	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: TJD</b>						
Conductivity	10/8/19 14:11	10/8/19 14:11			3857.54	uS/cm			FA
pH	10/8/19 14:11	10/8/19 14:11			4.98	SU			FA
Temperature	10/8/19 14:11	10/8/19 14:11			23.37	C			FA
Turbidity	10/8/19 14:11	10/8/19 14:11			9.89	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/8/19 14:15  
**Customer ID:**  
**Delivery Date:** 10/9/19 15:36

**Description:** Gorgas Landfill - MW-3

**Laboratory ID Number:** AZ23054

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
AZ23089	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.315	0.314	0.203	0.17 to 0.23	133	70 to 130	0.170	20
AZ23089	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	106	70 to 130	0.837	20
AZ23089	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.636	20
AZ23089	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.111	0.106	0.085 to 0.115	105	70 to 130	3.04	20
AZ23089	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.15	1.14	1.01	0.85 to 1.15	106	70 to 130	0.692	20
AZ23089	Calcium, Total	mg/L	0.00728	0.1518	5.00	385	402	5.08	4.25 to 5.75	-140	70 to 130	4.14	20
AZ23089	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.39	20
AZ23089	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.182	20
AZ23089	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.104	0.103	0.085 to 0.115	101	70 to 130	3.31	20
AZ23089	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.104	0.104	0.102	0.085 to 0.115	104	70 to 130	0.690	20
AZ23089	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.101	0.101	0.0985	0.085 to 0.115	101	70 to 130	0.229	20
AZ23089	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0933	0.0932	0.0966	0.085 to 0.115	93.3	70 to 130	0.125	20
AZ23089	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.842	0.875	0.102	0.085 to 0.115	99.4	70 to 130	3.88	20
AZ23089	Mercury, Total by CVAA	mg/L	0.0000872	0.0005	0.004	0.00397	0.00394	0.00419	0.0034 to 0.0046	99.1	70 to 130	0.523	20
AZ23089	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.103	0.0935	0.085 to 0.115	105	70 to 130	1.41	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:**

## Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 10/8/19 14:15

**Customer ID:**

**Delivery Date:** 10/9/19 15:36

**Description:** Gorgas Landfill - MW-3

**Laboratory ID Number:** AZ23054

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23089	Fluoride	mg/L	0.0223	0.05	2.50	2.67	0.161	2.55	2.25 to 2.75	100	80 to 120	4.85	20
AZ23089	Chloride	mg/L	0.0911	0.50	10.0	13.5	3.12	10.8	9 to 11	104	80 to 120	0.639	20
AZ23089	Solids, Dissolved	mg/L	1.00	25			3990	55.0	40 to 60			0.499	5
AZ23089	Sulfate	mg/L	-0.381	0.50	4000	6470	2560	19.3	18 to 22	93.0	80 to 120	7.16	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 Landfill - MW-13

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 08:42  
**Customer ID:**  
**Submittal Date:** 10/10/19 08:50

**Laboratory ID Number:** AZ23084

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 10:32		1.015	0.0616	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 12:55		20.3	304	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 10:32		1.015	0.0200	mg/L	0.01	0.02	J
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 10:35		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 10:35		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 10:35		1.015	0.0143	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 10:35		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 10:35		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 10:35		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 10:35		1.015	0.0204	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 10:35		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 10:35		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 10:35		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 10:35		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:10		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/10/19 15:30	10/14/19 09:15		1	3050	mg/L		178.6	
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 08:58	10/16/19 08:58		1	2.10	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 10:57	10/16/19 10:57		1	0.184	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 10:37	10/15/19 10:37		80	1980	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/8/19 08:39	10/8/19 08:39			3174.50	uS/cm			FA
pH	10/8/19 08:39	10/8/19 08:39			6.34	SU			FA
Temperature	10/8/19 08:39	10/8/19 08:39			19.97	C			FA
Turbidity	10/8/19 08:39	10/8/19 08:39			0.71	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 10/8/19 08:42

**Customer ID:**

**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-13

**Laboratory ID Number:** AZ23084

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23089	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.315	0.314	0.203	0.17 to 0.23	133	70 to 130	0.170	20
AZ23089	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.636	20
AZ23089	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	106	70 to 130	0.837	20
AZ23089	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0933	0.0932	0.0966	0.085 to 0.115	93.3	70 to 130	0.125	20
AZ23089	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.842	0.875	0.102	0.085 to 0.115	99.4	70 to 130	3.88	20
AZ23089	Mercury, Total by CVAA	mg/L	0.0000872	0.0005	0.004	0.00397	0.00394	0.00419	0.0034 to 0.0046	99.1	70 to 130	0.523	20
AZ23089	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.103	0.0935	0.085 to 0.115	105	70 to 130	1.41	20
AZ23089	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.104	0.104	0.102	0.085 to 0.115	104	70 to 130	0.690	20
AZ23089	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.101	0.101	0.0985	0.085 to 0.115	101	70 to 130	0.229	20
AZ23089	Calcium, Total	mg/L	0.00728	0.1518	5.00	385	402	5.08	4.25 to 5.75	-140	70 to 130	4.14	20
AZ23089	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.39	20
AZ23089	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.182	20
AZ23089	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.104	0.103	0.085 to 0.115	101	70 to 130	3.31	20
AZ23089	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.111	0.106	0.085 to 0.115	105	70 to 130	3.04	20
AZ23089	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.15	1.14	1.01	0.85 to 1.15	106	70 to 130	0.692	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:** WMWGORLF  
**Sample Date:** 10/8/19 08:42  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-13

**Laboratory ID Number:** AZ23084

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ23089	Fluoride	mg/L	0.0223	0.05	2.50	2.67	0.161	2.55	2.25 to 2.75	100	80 to 120	4.85	20
AZ23089	Chloride	mg/L	0.0911	0.50	10.0	13.5	3.12	10.8	9 to 11	104	80 to 120	0.639	20
AZ23089	Sulfate	mg/L	-0.381	0.50	4000	6470	2560	19.3	18 to 22	93.0	80 to 120	7.16	20
AZ23089	Solids, Dissolved	mg/L	1.00	25			3990	55.0	40 to 60			0.499	5

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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 Landfill - MW-14

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 09:33  
**Customer ID:**  
**Submittal Date:** 10/10/19 08:50

**Laboratory ID Number:** AZ23085

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 10:35		1.015	0.0522	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 12:58		20.3	341	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 10:35		1.015	0.0389	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 10:38		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 10:38		1.015	0.00120	mg/L	0.001	0.005	J
* Barium, Total	10/11/19 14:45	10/18/19 10:38		1.015	0.0132	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 10:38		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 10:38		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 10:38		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 10:38		1.015	0.0108	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 10:38		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 10:38		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 10:38		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 10:38		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:12		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/10/19 15:30	10/14/19 09:15		1	3120	mg/L		208.3	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 08:59	10/16/19 08:59		1	2.01	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 10:58	10/16/19 10:58		1	0.224	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 10:38	10/15/19 10:38		80	2030	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: DKG</b>						
Conductivity	10/8/19 09:30	10/8/19 09:30			3246.70	uS/cm			FA
pH	10/8/19 09:30	10/8/19 09:30			6.32	SU			FA
Temperature	10/8/19 09:30	10/8/19 09:30			19.69	C			FA
Turbidity	10/8/19 09:30	10/8/19 09:30			1.2	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/8/19 09:33  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-14

**Laboratory ID Number:** AZ23085

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
AZ23089	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.315	0.314	0.203	0.17 to 0.23	133	70 to 130	0.170	20
AZ23089	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	106	70 to 130	0.837	20
AZ23089	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.636	20
AZ23089	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.111	0.106	0.085 to 0.115	105	70 to 130	3.04	20
AZ23089	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.15	1.14	1.01	0.85 to 1.15	106	70 to 130	0.692	20
AZ23089	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0933	0.0932	0.0966	0.085 to 0.115	93.3	70 to 130	0.125	20
AZ23089	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.842	0.875	0.102	0.085 to 0.115	99.4	70 to 130	3.88	20
AZ23089	Mercury, Total by CVAA	mg/L	0.0000872	0.0005	0.004	0.00397	0.00394	0.00419	0.0034 to 0.0046	99.1	70 to 130	0.523	20
AZ23089	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.103	0.0935	0.085 to 0.115	105	70 to 130	1.41	20
AZ23089	Calcium, Total	mg/L	0.00728	0.1518	5.00	385	402	5.08	4.25 to 5.75	-140	70 to 130	4.14	20
AZ23089	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.39	20
AZ23089	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.182	20
AZ23089	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.104	0.103	0.085 to 0.115	101	70 to 130	3.31	20
AZ23089	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.104	0.104	0.102	0.085 to 0.115	104	70 to 130	0.690	20
AZ23089	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.101	0.101	0.0985	0.085 to 0.115	101	70 to 130	0.229	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:** WMWGORLF  
**Sample Date:** 10/8/19 09:33  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-14

**Laboratory ID Number:** AZ23085

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23089	Fluoride	mg/L	0.0223	0.05	2.50	2.67	0.161	2.55	2.25 to 2.75	100	80 to 120	4.85	20
AZ23089	Solids, Dissolved	mg/L	1.00	25			3990	55.0	40 to 60			0.499	5
AZ23089	Chloride	mg/L	0.0911	0.50	10.0	13.5	3.12	10.8	9 to 11	104	80 to 120	0.639	20
AZ23089	Sulfate	mg/L	-0.381	0.50	4000	6470	2560	19.3	18 to 22	93.0	80 to 120	7.16	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 Landfill - MW-15

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 10:23  
**Customer ID:**  
**Submittal Date:** 10/10/19 08:50

**Laboratory ID Number:** AZ23086

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 10:38		1.015	0.0644	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 13:01		20.3	299	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 10:38		1.015	0.0772	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 10:40		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 10:40		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 10:40		1.015	0.0130	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 10:40		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 10:40		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 10:40		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 10:40		1.015	0.0725	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 10:40		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 10:40		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 10:40		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 10:40		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:15		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/10/19 15:30	10/14/19 09:15		1	2640	mg/L		178.6	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 09:01	10/16/19 09:01		1	1.80	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 10:59	10/16/19 10:59		1	0.382	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 10:39	10/15/19 10:39		80	1650	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: DKG</b>						
Conductivity	10/8/19 10:19	10/8/19 10:19			2770.79	uS/cm			FA
pH	10/8/19 10:19	10/8/19 10:19			5.99	SU			FA
Temperature	10/8/19 10:19	10/8/19 10:19			19.36	C			FA
Turbidity	10/8/19 10:19	10/8/19 10:19			1.45	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 10/8/19 10:23

**Customer ID:**

**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-15

**Laboratory ID Number:** AZ23086

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23089	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.315	0.314	0.203	0.17 to 0.23	133	70 to 130	0.170	20
AZ23089	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.636	20
AZ23089	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	106	70 to 130	0.837	20
AZ23089	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.104	0.104	0.102	0.085 to 0.115	104	70 to 130	0.690	20
AZ23089	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.101	0.101	0.0985	0.085 to 0.115	101	70 to 130	0.229	20
AZ23089	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0933	0.0932	0.0966	0.085 to 0.115	93.3	70 to 130	0.125	20
AZ23089	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.842	0.875	0.102	0.085 to 0.115	99.4	70 to 130	3.88	20
AZ23089	Mercury, Total by CVAA	mg/L	0.0000872	0.0005	0.004	0.00397	0.00394	0.00419	0.0034 to 0.0046	99.1	70 to 130	0.523	20
AZ23089	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.103	0.0935	0.085 to 0.115	105	70 to 130	1.41	20
AZ23089	Calcium, Total	mg/L	0.00728	0.1518	5.00	385	402	5.08	4.25 to 5.75	-140	70 to 130	4.14	20
AZ23089	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.39	20
AZ23089	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.182	20
AZ23089	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.104	0.103	0.085 to 0.115	101	70 to 130	3.31	20
AZ23089	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.111	0.106	0.085 to 0.115	105	70 to 130	3.04	20
AZ23089	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.15	1.14	1.01	0.85 to 1.15	106	70 to 130	0.692	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:** WMWGORLF  
**Sample Date:** 10/8/19 10:23  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-15

**Laboratory ID Number:** AZ23086

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23089	Fluoride	mg/L	0.0223	0.05	2.50	2.67	0.161	2.55	2.25 to 2.75	100	80 to 120	4.85	20
AZ23089	Solids, Dissolved	mg/L	1.00	25			3990	55.0	40 to 60			0.499	5
AZ23089	Chloride	mg/L	0.0911	0.50	10.0	13.5	3.12	10.8	9 to 11	104	80 to 120	0.639	20
AZ23089	Sulfate	mg/L	-0.381	0.50	4000	6470	2560	19.3	18 to 22	93.0	80 to 120	7.16	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 Landfill - MW-16

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 11:12  
**Customer ID:**  
**Submittal Date:** 10/10/19 08:50

**Laboratory ID Number:** AZ23087

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 10:41		1.015	0.0528	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 13:04		20.3	325	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 10:41		1.015	0.0194	mg/L	0.01	0.02	J
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 10:43		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 10:43		1.015	0.00372	mg/L	0.001	0.005	J
* Barium, Total	10/11/19 14:45	10/18/19 10:43		1.015	0.0140	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 10:43		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 10:43		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 10:43		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 10:43		1.015	0.0111	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 10:43		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 10:43		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 10:43		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 10:43		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:17		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/10/19 15:30	10/14/19 09:15		1	2460	mg/L		147.1	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 09:02	10/16/19 09:02		1	3.88	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 11:00	10/16/19 11:00		1	0.161	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 10:40	10/15/19 10:40		40	1490	mg/L	20.00	40	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: DKG</b>						
Conductivity	10/8/19 11:09	10/8/19 11:09			2660.19	uS/cm			FA
pH	10/8/19 11:09	10/8/19 11:09			6.16	SU			FA
Temperature	10/8/19 11:09	10/8/19 11:09			19.95	C			FA
Turbidity	10/8/19 11:09	10/8/19 11:09			0.39	NTU			FA

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

**Comments:**



# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 10/8/19 11:12

**Customer ID:**

**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-16

**Laboratory ID Number:** AZ23087

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
AZ23089	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.315	0.314	0.203	0.17 to 0.23	133	70 to 130	0.170	20
AZ23089	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	106	70 to 130	0.837	20
AZ23089	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.636	20
AZ23089	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.111	0.106	0.085 to 0.115	105	70 to 130	3.04	20
AZ23089	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.15	1.14	1.01	0.85 to 1.15	106	70 to 130	0.692	20
AZ23089	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.104	0.104	0.102	0.085 to 0.115	104	70 to 130	0.690	20
AZ23089	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.101	0.101	0.0985	0.085 to 0.115	101	70 to 130	0.229	20
AZ23089	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0933	0.0932	0.0966	0.085 to 0.115	93.3	70 to 130	0.125	20
AZ23089	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.842	0.875	0.102	0.085 to 0.115	99.4	70 to 130	3.88	20
AZ23089	Mercury, Total by CVAA	mg/L	0.0000872	0.0005	0.004	0.00397	0.00394	0.00419	0.0034 to 0.0046	99.1	70 to 130	0.523	20
AZ23089	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.103	0.0935	0.085 to 0.115	105	70 to 130	1.41	20
AZ23089	Calcium, Total	mg/L	0.00728	0.1518	5.00	385	402	5.08	4.25 to 5.75	-140	70 to 130	4.14	20
AZ23089	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.39	20
AZ23089	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.182	20
AZ23089	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.104	0.103	0.085 to 0.115	101	70 to 130	3.31	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:** WMWGORLF  
**Sample Date:** 10/8/19 11:12  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-16

**Laboratory ID Number:** AZ23087

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23089	Fluoride	mg/L	0.0223	0.05	2.50	2.67	0.161	2.55	2.25 to 2.75	100	80 to 120	4.85	20
AZ23089	Solids, Dissolved	mg/L	1.00	25			3990	55.0	40 to 60			0.499	5
AZ23089	Sulfate	mg/L	-0.381	0.50	4000	6470	2560	19.3	18 to 22	93.0	80 to 120	7.16	20
AZ23089	Chloride	mg/L	0.0911	0.50	10.0	13.5	3.12	10.8	9 to 11	104	80 to 120	0.639	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:**

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-16 DUP

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 11:12  
**Customer ID:**  
**Submittal Date:** 10/10/19 08:50

**Laboratory ID Number:** AZ23088

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 10:44		1.015	0.0527	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 13:07		20.3	319	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 10:44		1.015	0.0194	mg/L	0.01	0.02	J
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 10:46		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 10:46		1.015	0.00380	mg/L	0.001	0.005	J
* Barium, Total	10/11/19 14:45	10/18/19 10:46		1.015	0.0133	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 10:46		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 10:46		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 10:46		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 10:46		1.015	0.0113	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 10:46		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 10:46		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 10:46		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 10:46		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:19		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/10/19 15:30	10/14/19 09:15		1	2380	mg/L		147.1	
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 09:03	10/16/19 09:03		1	3.83	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 11:01	10/16/19 11:01		1	0.166	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 10:41	10/15/19 10:41		40	1500	mg/L	20.00	40	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/8/19 11:09	10/8/19 11:09			2660.19	uS/cm			FA
pH	10/8/19 11:09	10/8/19 11:09			6.16	SU			FA
Temperature	10/8/19 11:09	10/8/19 11:09			19.95	C			FA
Turbidity	10/8/19 11:09	10/8/19 11:09			0.39	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 10/8/19 11:12

**Customer ID:**

**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-16 DUP

**Laboratory ID Number:** AZ23088

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AZ23089	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.315	0.314	0.203	0.17 to 0.23	133	70 to 130	0.170	20
AZ23089	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	106	70 to 130	0.837	20
AZ23089	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.636	20
AZ23089	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0933	0.0932	0.0966	0.085 to 0.115	93.3	70 to 130	0.125	20
AZ23089	Cobalt, Total	mg/L	-0.0000213	0.0001474	0.10	0.842	0.875	0.102	0.085 to 0.115	99.4	70 to 130	3.88	20
AZ23089	Mercury, Total by CVAA	mg/L	0.0000872	0.0005	0.004	0.00397	0.00394	0.00419	0.0034 to 0.0046	99.1	70 to 130	0.523	20
AZ23089	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.103	0.0935	0.085 to 0.115	105	70 to 130	1.41	20
AZ23089	Calcium, Total	mg/L	0.00728	0.1518	5.00	385	402	5.08	4.25 to 5.75	-140	70 to 130	4.14	20
AZ23089	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.39	20
AZ23089	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.182	20
AZ23089	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.104	0.103	0.085 to 0.115	101	70 to 130	3.31	20
AZ23089	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.111	0.106	0.085 to 0.115	105	70 to 130	3.04	20
AZ23089	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.15	1.14	1.01	0.85 to 1.15	106	70 to 130	0.692	20
AZ23089	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.104	0.104	0.102	0.085 to 0.115	104	70 to 130	0.690	20
AZ23089	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.101	0.101	0.0985	0.085 to 0.115	101	70 to 130	0.229	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:** WMWGORLF  
**Sample Date:** 10/8/19 11:12  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-16 DUP

**Laboratory ID Number:** AZ23088

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23089	Solids, Dissolved	mg/L	1.00	25			3990	55.0	40 to 60			0.499	5
AZ23089	Fluoride	mg/L	0.0223	0.05	2.50	2.67	0.161	2.55	2.25 to 2.75	100	80 to 120	4.85	20
AZ23089	Sulfate	mg/L	-0.381	0.50	4000	6470	2560	19.3	18 to 22	93.0	80 to 120	7.16	20
AZ23089	Chloride	mg/L	0.0911	0.50	10.0	13.5	3.12	10.8	9 to 11	104	80 to 120	0.639	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:**

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-17R

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 12:19  
**Customer ID:**  
**Submittal Date:** 10/10/19 08:50

**Laboratory ID Number:** AZ23089

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 10:47		1.015	0.0907	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 13:10		20.3	392	mg/L	2.03	10.15	RA
* Lithium, Total	10/14/19 13:30	10/15/19 10:47		1.015	0.0481	mg/L	0.01	0.02	R
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 10:48		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 10:48		1.015	0.00224	mg/L	0.001	0.005	J
* Barium, Total	10/11/19 14:45	10/18/19 10:48		1.015	0.0171	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 10:48		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 10:48		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 10:48		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 10:48		1.015	0.743	mg/L	0.002	0.005	RA
* Lead, Total	10/11/19 14:45	10/18/19 10:48		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 10:48		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 10:48		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 10:48		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:22		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/10/19 15:30	10/14/19 09:15		1	4030	mg/L		250	
<b>Analytical Method: SM4500CI E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 09:04	10/16/19 09:04		1	3.14	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 11:03	10/16/19 11:03		1	0.169	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 10:44	10/15/19 10:44		100	2750	mg/L	50.00	100	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: DKG</b>						
Conductivity	10/8/19 12:16	10/8/19 12:16			3683.72	uS/cm			FA
pH	10/8/19 12:16	10/8/19 12:16			5.89	SU			FA
Temperature	10/8/19 12:16	10/8/19 12:16			22.55	C			FA
Turbidity	10/8/19 12:16	10/8/19 12:16			0.53	NTU			FA

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

**Comments:** Recoveries for Calcium and Cobalt are out of spec; spike amounts are less than 30% of the sample amounts. Recovery for Lithium is out of spec. Serial dilution and post digestion spike were performed and did not pass. A matrix effect is suspected. LBM 10/24/19

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/8/19 12:19  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-17R

**Laboratory ID Number:** AZ23089

Sample	Analysis	Units	MB					Standard		Rec		Prec	
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
AZ23089	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.315	0.314	0.203	0.17 to 0.23	133	70 to 130	0.170	20
AZ23089	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	106	70 to 130	0.837	20
AZ23089	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.111	0.106	0.085 to 0.115	105	70 to 130	3.04	20
AZ23089	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.15	1.14	1.01	0.85 to 1.15	106	70 to 130	0.692	20
AZ23089	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	0.636	20
AZ23089	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0933	0.0932	0.0966	0.085 to 0.115	93.3	70 to 130	0.125	20
AZ23089	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.842	0.875	0.102	0.085 to 0.115	99.4	70 to 130	3.88	20
AZ23089	Mercury, Total by CVAA	mg/L	0.0000872	0.0005	0.004	0.00397	0.00394	0.00419	0.0034 to 0.0046	99.1	70 to 130	0.523	20
AZ23089	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.103	0.0935	0.085 to 0.115	105	70 to 130	1.41	20
AZ23089	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.104	0.104	0.102	0.085 to 0.115	104	70 to 130	0.690	20
AZ23089	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.101	0.101	0.0985	0.085 to 0.115	101	70 to 130	0.229	20
AZ23089	Calcium, Total	mg/L	0.00728	0.1518	5.00	385	402	5.08	4.25 to 5.75	-140	70 to 130	4.14	20
AZ23089	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.39	20
AZ23089	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.102	0.103	0.102	0.085 to 0.115	102	70 to 130	0.182	20
AZ23089	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.104	0.103	0.085 to 0.115	101	70 to 130	3.31	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:** Recoveries for Calcium and Cobalt are out of spec; spike amounts are less than 30% of the sample amounts. Recovery for Lithium is out of spec. Serial dilution and post digestion spike were performed and did not pass. A matrix effect is suspected. LBM 10/24/19

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/8/19 12:19  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-17R

**Laboratory ID Number:** AZ23089

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23089	Fluoride	mg/L	0.0223	0.05	2.50	2.67	0.161	2.55	2.25 to 2.75	100	80 to 120	4.85	20
AZ23089	Solids, Dissolved	mg/L	1.00	25			3990	55.0	40 to 60			0.499	5
AZ23089	Sulfate	mg/L	-0.381	0.50	4000	6470	2560	19.3	18 to 22	93.0	80 to 120	7.16	20
AZ23089	Chloride	mg/L	0.0911	0.50	10.0	13.5	3.12	10.8	9 to 11	104	80 to 120	0.639	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 and Cobalt are out of spec; spike amounts are less than 30% of the sample amounts.  
 Recovery for Lithium is out of spec. Serial dilution and post digestion spike were performed and did not pass. A matrix effect is suspected. LBM 10/24/19



# Certificate Of Analysis

**Description:** Gorgas Landfill Field Blank

**Location Code:** WMWGORLFFB  
**Collected:** 10/8/19 12:44  
**Customer ID:**  
**Submittal Date:** 10/10/19 08:50

**Laboratory ID Number:** AZ23090

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:01		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/14/19 13:30	10/15/19 11:01		1.015	Not Detected	mg/L	0.1	0.5	U
* Lithium, Total	10/14/19 13:30	10/15/19 11:01		1.015	Not Detected	mg/L	0.01	0.02	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.002	0.01	U
* Beryllium, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:04		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:38		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 09:18	10/16/19 09:18		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 11:15	10/16/19 11:15		1	Not Detected	mg/L	0.05	0.1	U
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 10:58	10/15/19 10:58		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:** WMWGORLFFB  
**Sample Date:** 10/8/19 12:44  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill Field Blank

**Laboratory ID Number:** AZ23090

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23214	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.107	0.103	0.085 to 0.115	101	70 to 130	5.13	20
AZ23214	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.110	0.106	0.085 to 0.115	108	70 to 130	1.70	20
AZ23214	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.106	0.0935	0.085 to 0.115	105	70 to 130	0.854	20
AZ23214	Mercury, Total by CVAA	mg/L	0.0000850	0.0005	0.004	0.00407	0.00406	0.00413	0.0034 to 0.0046	102	70 to 130	0.162	20
AZ23214	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.16	1.14	1.01	0.85 to 1.15	105	70 to 130	1.22	20
AZ23214	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.54	20
AZ23214	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.534	0.531	0.203	0.17 to 0.23	129	70 to 130	0.694	20
AZ23214	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.105	0.106	0.102	0.085 to 0.115	105	70 to 130	1.18	20
AZ23214	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.100	0.106	0.0985	0.085 to 0.115	98.6	70 to 130	5.36	20
AZ23214	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	1.40	20
AZ23214	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	108	70 to 130	1.06	20
AZ23214	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.347	20
AZ23214	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.105	0.105	0.102	0.085 to 0.115	105	70 to 130	0.179	20
AZ23214	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0961	0.0999	0.0966	0.085 to 0.115	96.1	70 to 130	3.93	20
AZ23214	Calcium, Total	mg/L	0.00728	0.1518	5.00	412	393	5.08	4.25 to 5.75	783	70 to 130	4.67	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:** WMWGORLFFB

**Sample Date:** 10/8/19 12:44

**Customer ID:**

**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill Field Blank

**Laboratory ID Number:** AZ23090

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23214	Chloride	mg/L	0.0588	0.50	80.0	168	82.4	10.8	9 to 11	104	80 to 120	2.63	20
AZ23214	Fluoride	mg/L	0.0186	0.05	2.50	2.65	0.109	2.59	2.25 to 2.75	102	80 to 120	17.5	20
AZ23210	Solids, Dissolved	mg/L	1.00	25			2660	56.0	40 to 60			1.36	5
AZ23214	Sulfate	mg/L	-0.440	0.50	800	1650	723	19.1	18 to 22	116	80 to 120	0.555	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 Landfill - MW-18

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 13:33  
**Customer ID:**  
**Submittal Date:** 10/10/19 08:50

**Laboratory ID Number:** AZ23091

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:04		1.015	0.0380	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 13:25		20.3	312	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 11:04		1.015	0.0658	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:07		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:07		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 11:07		1.015	0.00971	mg/L	0.002	0.01	J
* Beryllium, Total	10/11/19 14:45	10/18/19 11:07		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:07		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:07		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:07		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/11/19 14:45	10/18/19 11:07		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:07		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:07		1.015	0.00279	mg/L	0.002	0.01	J
* Thallium, Total	10/11/19 14:45	10/18/19 11:07		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:41		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	2860	mg/L		178.6	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 09:19	10/16/19 09:19		1	1.48	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 11:16	10/16/19 11:16		1	0.284	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 11:09	10/15/19 11:09		80	1900	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: DKG</b>						
Conductivity	10/8/19 13:29	10/8/19 13:29			2895.65	uS/cm			FA
pH	10/8/19 13:29	10/8/19 13:29			6.43	SU			FA
Temperature	10/8/19 13:29	10/8/19 13:29			21.83	C			FA
Turbidity	10/8/19 13:29	10/8/19 13:29			2.13	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 10/8/19 13:33

**Customer ID:**

**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-18

**Laboratory ID Number:** AZ23091

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AZ23214	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.107	0.103	0.085 to 0.115	101	70 to 130	5.13	20
AZ23214	Mercury, Total by CVAA	mg/L	0.0000850	0.0005	0.004	0.00407	0.00406	0.00413	0.0034 to 0.0046	102	70 to 130	0.162	20
AZ23214	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.110	0.106	0.085 to 0.115	108	70 to 130	1.70	20
AZ23214	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.106	0.0935	0.085 to 0.115	105	70 to 130	0.854	20
AZ23214	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0961	0.0999	0.0966	0.085 to 0.115	96.1	70 to 130	3.93	20
AZ23214	Calcium, Total	mg/L	0.00728	0.1518	5.00	412	393	5.08	4.25 to 5.75	783	70 to 130	4.67	20
AZ23214	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	108	70 to 130	1.06	20
AZ23214	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.347	20
AZ23214	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.105	0.105	0.102	0.085 to 0.115	105	70 to 130	0.179	20
AZ23214	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.105	0.106	0.102	0.085 to 0.115	105	70 to 130	1.18	20
AZ23214	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.100	0.106	0.0985	0.085 to 0.115	98.6	70 to 130	5.36	20
AZ23214	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	1.40	20
AZ23214	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.16	1.14	1.01	0.85 to 1.15	105	70 to 130	1.22	20
AZ23214	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.54	20
AZ23214	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.534	0.531	0.203	0.17 to 0.23	129	70 to 130	0.694	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:** WMWGORLF  
**Sample Date:** 10/8/19 13:33  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-18

**Laboratory ID Number:** AZ23091

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23214	Chloride	mg/L	0.0588	0.50	80.0	168	82.4	10.8	9 to 11	104	80 to 120	2.63	20
AZ23214	Fluoride	mg/L	0.0186	0.05	2.50	2.65	0.109	2.59	2.25 to 2.75	102	80 to 120	17.5	20
AZ23210	Solids, Dissolved	mg/L	1.00	25			2660	56.0	40 to 60			1.36	5
AZ23214	Sulfate	mg/L	-0.440	0.50	800	1650	723	19.1	18 to 22	116	80 to 120	0.555	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 Landfill - MW-19

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 14:32  
**Customer ID:**  
**Submittal Date:** 10/10/19 08:50

**Laboratory ID Number:** AZ23092

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:07		1.015	0.0413	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 13:28		20.3	357	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 11:07		1.015	0.0698	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:09		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:09		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 11:09		1.015	0.0106	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:09		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:09		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:09		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:09		1.015	0.0545	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 11:09		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:09		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:09		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:09		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:43		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	3300	mg/L		208.3	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 09:20	10/16/19 09:20		1	2.13	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 11:17	10/16/19 11:17		1	0.345	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 11:10	10/15/19 11:10		80	2380	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: DKG</b>						
Conductivity	10/8/19 14:29	10/8/19 14:29			3256.36	uS/cm			FA
pH	10/8/19 14:29	10/8/19 14:29			6.19	SU			FA
Temperature	10/8/19 14:29	10/8/19 14:29			20.61	C			FA
Turbidity	10/8/19 14:29	10/8/19 14:29			4.72	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 10/8/19 14:32

**Customer ID:**

**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-19

**Laboratory ID Number:** AZ23092

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23214	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.107	0.103	0.085 to 0.115	101	70 to 130	5.13	20
AZ23214	Mercury, Total by CVAA	mg/L	0.0000850	0.0005	0.004	0.00407	0.00406	0.00413	0.0034 to 0.0046	102	70 to 130	0.162	20
AZ23214	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.110	0.106	0.085 to 0.115	108	70 to 130	1.70	20
AZ23214	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.106	0.0935	0.085 to 0.115	105	70 to 130	0.854	20
AZ23214	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.105	0.106	0.102	0.085 to 0.115	105	70 to 130	1.18	20
AZ23214	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.100	0.106	0.0985	0.085 to 0.115	98.6	70 to 130	5.36	20
AZ23214	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	1.40	20
AZ23214	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.16	1.14	1.01	0.85 to 1.15	105	70 to 130	1.22	20
AZ23214	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.54	20
AZ23214	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.534	0.531	0.203	0.17 to 0.23	129	70 to 130	0.694	20
AZ23214	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	108	70 to 130	1.06	20
AZ23214	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.347	20
AZ23214	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.105	0.105	0.102	0.085 to 0.115	105	70 to 130	0.179	20
AZ23214	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0961	0.0999	0.0966	0.085 to 0.115	96.1	70 to 130	3.93	20
AZ23214	Calcium, Total	mg/L	0.00728	0.1518	5.00	412	393	5.08	4.25 to 5.75	783	70 to 130	4.67	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:** WMWGORLF  
**Sample Date:** 10/8/19 14:32  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-19

**Laboratory ID Number:** AZ23092

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23214	Chloride	mg/L	0.0588	0.50	80.0	168	82.4	10.8	9 to 11	104	80 to 120	2.63	20
AZ23214	Fluoride	mg/L	0.0186	0.05	2.50	2.65	0.109	2.59	2.25 to 2.75	102	80 to 120	17.5	20
AZ23210	Solids, Dissolved	mg/L	1.00	25			2660	56.0	40 to 60			1.36	5
AZ23214	Sulfate	mg/L	-0.440	0.50	800	1650	723	19.1	18 to 22	116	80 to 120	0.555	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:**

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-7

**Location Code:** WMWGORLF  
**Collected:** 10/8/19 15:40  
**Customer ID:**  
**Submittal Date:** 10/10/19 08:50

**Laboratory ID Number:** AZ23093

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:10		1.015	0.0730	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 13:31		20.3	294	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 11:10		1.015	0.131	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:12		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:12		1.015	0.00145	mg/L	0.001	0.005	J
* Barium, Total	10/11/19 14:45	10/18/19 11:12		1.015	0.0145	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:12		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:12		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:12		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:12		1.015	0.00408	mg/L	0.002	0.005	J
* Lead, Total	10/11/19 14:45	10/18/19 11:12		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:12		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:12		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:12		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:45		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	2340	mg/L		147.1	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 09:21	10/16/19 09:21		1	16.8	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 11:18	10/16/19 11:18		1	0.183	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 11:02	10/15/19 11:02		40	1570	mg/L	20.00	40	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: DKG</b>						
Conductivity	10/8/19 15:37	10/8/19 15:37			2604.18	uS/cm			FA
pH	10/8/19 15:37	10/8/19 15:37			6.52	SU			FA
Temperature	10/8/19 15:37	10/8/19 15:37			20.25	C			FA
Turbidity	10/8/19 15:37	10/8/19 15:37			0.94	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/8/19 15:40  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-7

**Laboratory ID Number:** AZ23093

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
AZ23214	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.107	0.103	0.085 to 0.115	101	70 to 130	5.13	20
AZ23214	Mercury, Total by CVAA	mg/L	0.0000850	0.0005	0.004	0.00407	0.00406	0.00413	0.0034 to 0.0046	102	70 to 130	0.162	20
AZ23214	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.110	0.106	0.085 to 0.115	108	70 to 130	1.70	20
AZ23214	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.106	0.0935	0.085 to 0.115	105	70 to 130	0.854	20
AZ23214	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.105	0.106	0.102	0.085 to 0.115	105	70 to 130	1.18	20
AZ23214	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.100	0.106	0.0985	0.085 to 0.115	98.6	70 to 130	5.36	20
AZ23214	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	1.40	20
AZ23214	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0961	0.0999	0.0966	0.085 to 0.115	96.1	70 to 130	3.93	20
AZ23214	Calcium, Total	mg/L	0.00728	0.1518	5.00	412	393	5.08	4.25 to 5.75	783	70 to 130	4.67	20
AZ23214	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	108	70 to 130	1.06	20
AZ23214	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.347	20
AZ23214	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.105	0.105	0.102	0.085 to 0.115	105	70 to 130	0.179	20
AZ23214	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.16	1.14	1.01	0.85 to 1.15	105	70 to 130	1.22	20
AZ23214	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.54	20
AZ23214	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.534	0.531	0.203	0.17 to 0.23	129	70 to 130	0.694	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:** WMWGORLF  
**Sample Date:** 10/8/19 15:40  
**Customer ID:**  
**Delivery Date:** 10/10/19 08:50

**Description:** Gorgas Landfill - MW-7

**Laboratory ID Number:** AZ23093

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23214	Chloride	mg/L	0.0588	0.50	80.0	168	82.4	10.8	9 to 11	104	80 to 120	2.63	20
AZ23214	Fluoride	mg/L	0.0186	0.05	2.50	2.65	0.109	2.59	2.25 to 2.75	102	80 to 120	17.5	20
AZ23210	Solids, Dissolved	mg/L	1.00	25			2660	56.0	40 to 60			1.36	5
AZ23214	Sulfate	mg/L	-0.440	0.50	800	1650	723	19.1	18 to 22	116	80 to 120	0.555	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 Landfill - MW-10

**Location Code:** WMWGORLF  
**Collected:** 10/9/19 12:50  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23209

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:13		1.015	0.181	mg/L	0.03	0.1	
* Calcium, Total	10/14/19 13:30	10/15/19 13:34		20.3	146	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 11:13		1.015	0.202	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:15		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:15		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 11:15		1.015	0.0204	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:15		1.015	0.000720	mg/L	0.0006	0.003	J
* Cadmium, Total	10/11/19 14:45	10/18/19 11:15		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:15		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:15		1.015	0.00969	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 11:15		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:15		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:15		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:15		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:48		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	1120	mg/L		75.8	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 09:23	10/16/19 09:23		1	4.51	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 11:19	10/16/19 11:19		1	0.142	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 11:03	10/15/19 11:03		40	748	mg/L	20.00	40	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: AWG</b>						
Conductivity	10/9/19 12:46	10/9/19 12:46			1385.36	uS/cm			FA
pH	10/9/19 12:46	10/9/19 12:46			6.50	SU			FA
Temperature	10/9/19 12:46	10/9/19 12:46			22.84	C			FA
Turbidity	10/9/19 12:46	10/9/19 12:46			8.28	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 10/9/19 12:50

**Customer ID:**

**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-10

**Laboratory ID Number:** AZ23209

Sample	Analysis	Units	MB				Standard		Rec		Prec	Limit	
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec			Limit
AZ23214	Mercury, Total by CVAA	mg/L	0.0000850	0.0005	0.004	0.00407	0.00406	0.00413	0.0034 to 0.0046	102	70 to 130	0.162	20
AZ23214	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.107	0.103	0.085 to 0.115	101	70 to 130	5.13	20
AZ23214	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0961	0.0999	0.0966	0.085 to 0.115	96.1	70 to 130	3.93	20
AZ23214	Calcium, Total	mg/L	0.00728	0.1518	5.00	412	393	5.08	4.25 to 5.75	783	70 to 130	4.67	20
AZ23214	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	108	70 to 130	1.06	20
AZ23214	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.347	20
AZ23214	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.105	0.105	0.102	0.085 to 0.115	105	70 to 130	0.179	20
AZ23214	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.105	0.106	0.102	0.085 to 0.115	105	70 to 130	1.18	20
AZ23214	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.100	0.106	0.0985	0.085 to 0.115	98.6	70 to 130	5.36	20
AZ23214	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	1.40	20
AZ23214	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.16	1.14	1.01	0.85 to 1.15	105	70 to 130	1.22	20
AZ23214	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.54	20
AZ23214	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.534	0.531	0.203	0.17 to 0.23	129	70 to 130	0.694	20
AZ23214	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.110	0.106	0.085 to 0.115	108	70 to 130	1.70	20
AZ23214	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.106	0.0935	0.085 to 0.115	105	70 to 130	0.854	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:** WMWGORLF  
**Sample Date:** 10/9/19 12:50  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-10

**Laboratory ID Number:** AZ23209

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23214	Chloride	mg/L	0.0588	0.50	80.0	168	82.4	10.8	9 to 11	104	80 to 120	2.63	20
AZ23214	Fluoride	mg/L	0.0186	0.05	2.50	2.65	0.109	2.59	2.25 to 2.75	102	80 to 120	17.5	20
AZ23210	Solids, Dissolved	mg/L	1.00	25			2660	56.0	40 to 60			1.36	5
AZ23214	Sulfate	mg/L	-0.440	0.50	800	1650	723	19.1	18 to 22	116	80 to 120	0.555	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 Landfill - MW-8

**Location Code:** WMWGORLF  
**Collected:** 10/9/19 13:55  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23210

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:16		1.015	0.0723	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 13:36		20.3	329	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 11:16		1.015	0.163	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:17		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:17		1.015	0.00142	mg/L	0.001	0.005	J
* Barium, Total	10/11/19 14:45	10/18/19 11:17		1.015	0.0137	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:17		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:17		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:17		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:17		1.015	0.00864	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 11:17		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:17		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:17		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:17		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:50		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	2590	mg/L		178.6	
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 09:32	10/16/19 09:32		3	39.2	mg/L	1.50	3	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 11:21	10/16/19 11:21		1	0.189	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 11:13	10/15/19 11:13		80	1550	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/9/19 13:51	10/9/19 13:51			2790.04	uS/cm			FA
pH	10/9/19 13:51	10/9/19 13:51			6.67	SU			FA
Temperature	10/9/19 13:51	10/9/19 13:51			23.45	C			FA
Turbidity	10/9/19 13:51	10/9/19 13:51			3.28	NTU			FA

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

**Comments:**



# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 10/9/19 13:55

**Customer ID:**

**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-8

**Laboratory ID Number:** AZ23210

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AZ23214	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.107	0.103	0.085 to 0.115	101	70 to 130	5.13	20
AZ23214	Mercury, Total by CVAA	mg/L	0.0000850	0.0005	0.004	0.00407	0.00406	0.00413	0.0034 to 0.0046	102	70 to 130	0.162	20
AZ23214	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.110	0.106	0.085 to 0.115	108	70 to 130	1.70	20
AZ23214	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.106	0.0935	0.085 to 0.115	105	70 to 130	0.854	20
AZ23214	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.105	0.106	0.102	0.085 to 0.115	105	70 to 130	1.18	20
AZ23214	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.100	0.106	0.0985	0.085 to 0.115	98.6	70 to 130	5.36	20
AZ23214	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	1.40	20
AZ23214	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0961	0.0999	0.0966	0.085 to 0.115	96.1	70 to 130	3.93	20
AZ23214	Calcium, Total	mg/L	0.00728	0.1518	5.00	412	393	5.08	4.25 to 5.75	783	70 to 130	4.67	20
AZ23214	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.16	1.14	1.01	0.85 to 1.15	105	70 to 130	1.22	20
AZ23214	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.54	20
AZ23214	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.534	0.531	0.203	0.17 to 0.23	129	70 to 130	0.694	20
AZ23214	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	108	70 to 130	1.06	20
AZ23214	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.347	20
AZ23214	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.105	0.105	0.102	0.085 to 0.115	105	70 to 130	0.179	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:** WMWGORLF  
**Sample Date:** 10/9/19 13:55  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-8

**Laboratory ID Number:** AZ23210

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Limit
AZ23214	Fluoride	mg/L	0.0186	0.05	2.50	2.65	0.109	2.59	2.25 to 2.75	102	80 to 120	17.5	20
AZ23214	Chloride	mg/L	0.0588	0.50	80.0	168	82.4	10.8	9 to 11	104	80 to 120	2.63	20
AZ23210	Solids, Dissolved	mg/L	1.00	25			2660	56.0	40 to 60			1.36	5
AZ23214	Sulfate	mg/L	-0.440	0.50	800	1650	723	19.1	18 to 22	116	80 to 120	0.555	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:**

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-12

**Location Code:** WMWGORLF  
**Collected:** 10/9/19 15:10  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23211

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:19		1.015	0.315	mg/L	0.03	0.1	
* Calcium, Total	10/14/19 13:30	10/15/19 13:39		20.3	359	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 11:19		1.015	0.0838	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:20		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:20		1.015	0.0507	mg/L	0.001	0.005	
* Barium, Total	10/11/19 14:45	10/18/19 11:20		1.015	0.0126	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:20		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:20		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:20		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:20		1.015	0.0512	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 11:20		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:20		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:20		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:20		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:52		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	4090	mg/L		250	
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 09:25	10/16/19 09:25		1	8.73	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 11:22	10/16/19 11:22		1	0.215	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 11:11	10/15/19 11:11		80	2550	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/9/19 15:06	10/9/19 15:06			3723.63	uS/cm			FA
pH	10/9/19 15:06	10/9/19 15:06			5.85	SU			FA
Temperature	10/9/19 15:06	10/9/19 15:06			23.82	C			FA
Turbidity	10/9/19 15:06	10/9/19 15:06			4.52	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 10/9/19 15:10

**Customer ID:**

**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-12

**Laboratory ID Number:** AZ23211

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
AZ23214	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.107	0.103	0.085 to 0.115	101	70 to 130	5.13	20
AZ23214	Mercury, Total by CVAA	mg/L	0.0000850	0.0005	0.004	0.00407	0.00406	0.00413	0.0034 to 0.0046	102	70 to 130	0.162	20
AZ23214	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.110	0.106	0.085 to 0.115	108	70 to 130	1.70	20
AZ23214	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.106	0.0935	0.085 to 0.115	105	70 to 130	0.854	20
AZ23214	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.105	0.106	0.102	0.085 to 0.115	105	70 to 130	1.18	20
AZ23214	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.100	0.106	0.0985	0.085 to 0.115	98.6	70 to 130	5.36	20
AZ23214	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	1.40	20
AZ23214	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0961	0.0999	0.0966	0.085 to 0.115	96.1	70 to 130	3.93	20
AZ23214	Calcium, Total	mg/L	0.00728	0.1518	5.00	412	393	5.08	4.25 to 5.75	783	70 to 130	4.67	20
AZ23214	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	108	70 to 130	1.06	20
AZ23214	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.347	20
AZ23214	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.105	0.105	0.102	0.085 to 0.115	105	70 to 130	0.179	20
AZ23214	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.16	1.14	1.01	0.85 to 1.15	105	70 to 130	1.22	20
AZ23214	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.54	20
AZ23214	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.534	0.531	0.203	0.17 to 0.23	129	70 to 130	0.694	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:** WMWGORLF  
**Sample Date:** 10/9/19 15:10  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-12

**Laboratory ID Number:** AZ23211

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23214	Sulfate	mg/L	-0.440	0.50	800	1650	723	19.1	18 to 22	116	80 to 120	0.555	20
AZ23219	Solids, Dissolved	mg/L	1.00	25			2560	56.0	40 to 60			0.278	5
AZ23214	Chloride	mg/L	0.0588	0.50	80.0	168	82.4	10.8	9 to 11	104	80 to 120	2.63	20
AZ23214	Fluoride	mg/L	0.0186	0.05	2.50	2.65	0.109	2.59	2.25 to 2.75	102	80 to 120	17.5	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 Landfill Equipment Blank

**Location Code:** WMWGORLFEB  
**Collected:** 10/10/19 10:50  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23212

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:22		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/14/19 13:30	10/15/19 11:22		1.015	0.153	mg/L	0.1	0.5	J
* Lithium, Total	10/14/19 13:30	10/15/19 11:22		1.015	Not Detected	mg/L	0.01	0.02	U
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.002	0.01	U
* Beryllium, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:22		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:55		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500CI E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 09:26	10/16/19 09:26		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 11:23	10/16/19 11:23		1	Not Detected	mg/L	0.05	0.1	U
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 11:08	10/15/19 11:08		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:** WMWGORLFEB  
**Sample Date:** 10/10/19 10:50  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill Equipment Blank

**Laboratory ID Number:** AZ23212

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23214	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.107	0.103	0.085 to 0.115	101	70 to 130	5.13	20
AZ23214	Mercury, Total by CVAA	mg/L	0.0000850	0.0005	0.004	0.00407	0.00406	0.00413	0.0034 to 0.0046	102	70 to 130	0.162	20
AZ23214	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.110	0.106	0.085 to 0.115	108	70 to 130	1.70	20
AZ23214	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.106	0.0935	0.085 to 0.115	105	70 to 130	0.854	20
AZ23214	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0961	0.0999	0.0966	0.085 to 0.115	96.1	70 to 130	3.93	20
AZ23214	Calcium, Total	mg/L	0.00728	0.1518	5.00	412	393	5.08	4.25 to 5.75	783	70 to 130	4.67	20
AZ23214	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.105	0.106	0.102	0.085 to 0.115	105	70 to 130	1.18	20
AZ23214	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.100	0.106	0.0985	0.085 to 0.115	98.6	70 to 130	5.36	20
AZ23214	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	1.40	20
AZ23214	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.16	1.14	1.01	0.85 to 1.15	105	70 to 130	1.22	20
AZ23214	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.54	20
AZ23214	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.534	0.531	0.203	0.17 to 0.23	129	70 to 130	0.694	20
AZ23214	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	108	70 to 130	1.06	20
AZ23214	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.347	20
AZ23214	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.105	0.105	0.102	0.085 to 0.115	105	70 to 130	0.179	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:** WMWGORLFEB

**Sample Date:** 10/10/19 10:50

**Customer ID:**

**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill Equipment Blank

**Laboratory ID Number:** AZ23212

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ23214	Chloride	mg/L	0.0588	0.50	80.0	168	82.4	10.8	9 to 11	104	80 to 120	2.63	20
AZ23214	Fluoride	mg/L	0.0186	0.05	2.50	2.65	0.109	2.59	2.25 to 2.75	102	80 to 120	17.5	20
AZ23219	Solids, Dissolved	mg/L	1.00	25			2560	56.0	40 to 60			0.278	5
AZ23214	Sulfate	mg/L	-0.440	0.50	800	1650	723	19.1	18 to 22	116	80 to 120	0.555	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:**



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-12V

**Location Code:** WMWGORLF  
**Collected:** 10/10/19 11:30  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23213

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:25		1.015	0.150	mg/L	0.03	0.1	
* Calcium, Total	10/14/19 13:30	10/15/19 13:42		20.3	319	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 11:25		1.015	0.297	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:25		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:25		1.015	0.00827	mg/L	0.001	0.005	
* Barium, Total	10/11/19 14:45	10/18/19 11:25		1.015	0.0236	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:25		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:25		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:25		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:25		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/11/19 14:45	10/18/19 11:25		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:25		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:25		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:25		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:57		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	2360	mg/L		147.1	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 09:49	10/16/19 09:49		8	79.3	mg/L	4.00	8	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 11:24	10/16/19 11:24		1	0.163	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 11:06	10/15/19 11:06		40	1490	mg/L	20.00	40	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: AWG</b>						
Conductivity	10/10/19 11:24	10/10/19 11:24			2722.34	uS/cm			FA
pH	10/10/19 11:24	10/10/19 11:24			6.77	SU			FA
Temperature	10/10/19 11:24	10/10/19 11:24			22.72	C			FA
Turbidity	10/10/19 11:24	10/10/19 11:24			3.79	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/10/19 11:30  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-12V

**Laboratory ID Number:** AZ23213

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AZ23214	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.107	0.103	0.085 to 0.115	101	70 to 130	5.13	20
AZ23214	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0961	0.0999	0.0966	0.085 to 0.115	96.1	70 to 130	3.93	20
AZ23214	Calcium, Total	mg/L	0.00728	0.1518	5.00	412	393	5.08	4.25 to 5.75	783	70 to 130	4.67	20
AZ23214	Mercury, Total by CVAA	mg/L	0.0000850	0.0005	0.004	0.00407	0.00406	0.00413	0.0034 to 0.0046	102	70 to 130	0.162	20
AZ23214	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	108	70 to 130	1.06	20
AZ23214	Cobalt, Total	mg/L	-0.0000213	0.0001474	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.347	20
AZ23214	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.105	0.105	0.102	0.085 to 0.115	105	70 to 130	0.179	20
AZ23214	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.110	0.106	0.085 to 0.115	108	70 to 130	1.70	20
AZ23214	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.106	0.0935	0.085 to 0.115	105	70 to 130	0.854	20
AZ23214	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.16	1.14	1.01	0.85 to 1.15	105	70 to 130	1.22	20
AZ23214	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.54	20
AZ23214	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.534	0.531	0.203	0.17 to 0.23	129	70 to 130	0.694	20
AZ23214	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.105	0.106	0.102	0.085 to 0.115	105	70 to 130	1.18	20
AZ23214	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.100	0.106	0.0985	0.085 to 0.115	98.6	70 to 130	5.36	20
AZ23214	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	1.40	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:** WMWGORLF  
**Sample Date:** 10/10/19 11:30  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-12V

**Laboratory ID Number:** AZ23213

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23214	Chloride	mg/L	0.0588	0.50	80.0	168	82.4	10.8	9 to 11	104	80 to 120	2.63	20
AZ23219	Solids, Dissolved	mg/L	1.00	25			2560	56.0	40 to 60			0.278	5
AZ23214	Sulfate	mg/L	-0.440	0.50	800	1650	723	19.1	18 to 22	116	80 to 120	0.555	20
AZ23214	Fluoride	mg/L	0.0186	0.05	2.50	2.65	0.109	2.59	2.25 to 2.75	102	80 to 120	17.5	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 Landfill - MW-11

**Location Code:** WMWGORLF  
**Collected:** 10/10/19 13:18  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23214

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:28		1.015	0.109	mg/L	0.03	0.1	
* Calcium, Total	10/14/19 13:30	10/15/19 13:45		20.3	373	mg/L	2.03	10.15	RA
* Lithium, Total	10/14/19 13:30	10/15/19 11:28		1.015	0.275	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:28		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:28		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 11:28		1.015	0.0154	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:28		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:28		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:28		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:28		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/11/19 14:45	10/18/19 11:28		1.015	0.00145	mg/L	0.001	0.005	J
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:28		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:28		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:28		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: GAS</b>						
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 12:59		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	2460	mg/L		178.6	
<b>Analytical Method: SM4500Cl E</b>			<b>Analyst: JCC</b>						
* Chloride	10/16/19 09:50	10/16/19 09:50		8	84.6	mg/L	4.00	8	
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/16/19 11:25	10/16/19 11:25		1	0.0915	mg/L	0.05	0.1	J
<b>Analytical Method: SM4500SO4 E</b>			<b>Analyst: JCC</b>						
* Sulfate	10/15/19 11:14	10/15/19 11:14		40	719	mg/L	20.00	40	
<b>Analytical Method: Field Measurements</b>			<b>Analyst: AWG</b>						
Conductivity	10/10/19 13:15	10/10/19 13:15			2861.83	uS/cm			FA
pH	10/10/19 13:15	10/10/19 13:15			6.69	SU			FA
Temperature	10/10/19 13:15	10/10/19 13:15			23.19	C			FA
Turbidity	10/10/19 13:15	10/10/19 13:15			1.79	NTU			FA

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

**Comments:** Recovery for Calcium is out of spec; spike amount is less than 30% of the sample amount. LBM 10/24/19

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/10/19 13:18  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-11

**Laboratory ID Number:** AZ23214

Sample	Analysis	Units	MB				Standard		Rec		Prec	Limit	
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec			Limit
AZ23214	Mercury, Total by CVAA	mg/L	0.0000850	0.0005	0.004	0.00407	0.00406	0.00413	0.0034 to 0.0046	102	70 to 130	0.162	20
AZ23214	Thallium, Total	mg/L	0.0000121	0.0001474	0.10	0.101	0.107	0.103	0.085 to 0.115	101	70 to 130	5.13	20
AZ23214	Arsenic, Total	mg/L	-0.0000183	0.0001474	0.10	0.108	0.110	0.106	0.085 to 0.115	108	70 to 130	1.70	20
AZ23214	Antimony, Total	mg/L	0.000100	0.00066	0.10	0.105	0.106	0.0935	0.085 to 0.115	105	70 to 130	0.854	20
AZ23214	Beryllium, Total	mg/L	0.0000296	0.00088	0.10	0.0961	0.0999	0.0966	0.085 to 0.115	96.1	70 to 130	3.93	20
AZ23214	Calcium, Total	mg/L	0.00728	0.1518	5.00	412	393	5.08	4.25 to 5.75	783	70 to 130	4.67	20
AZ23214	Boron, Total	mg/L	0.00302	0.0650254	1.00	1.16	1.14	1.01	0.85 to 1.15	105	70 to 130	1.22	20
AZ23214	Cadmium, Total	mg/L	0.00000519	0.0001474	0.10	0.102	0.104	0.102	0.085 to 0.115	102	70 to 130	2.54	20
AZ23214	Lithium, Total	mg/L	-0.000167	0.0154	0.20	0.534	0.531	0.203	0.17 to 0.23	129	70 to 130	0.694	20
AZ23214	Chromium, Total	mg/L	0.0000758	0.00044	0.10	0.105	0.106	0.102	0.085 to 0.115	105	70 to 130	1.18	20
AZ23214	Lead, Total	mg/L	0.0000101	0.0001474	0.10	0.100	0.106	0.0985	0.085 to 0.115	98.6	70 to 130	5.36	20
AZ23214	Selenium, Total	mg/L	0.000109	0.00066	0.10	0.104	0.105	0.102	0.085 to 0.115	104	70 to 130	1.40	20
AZ23214	Barium, Total	mg/L	0.0000399	0.0002	0.10	0.123	0.122	0.101	0.085 to 0.115	108	70 to 130	1.06	20
AZ23214	Cobalt, Total	mg/L	-0.00000213	0.0001474	0.10	0.101	0.100	0.102	0.085 to 0.115	101	70 to 130	0.347	20
AZ23214	Molybdenum, Total	mg/L	0.0000215	0.0001474	0.10	0.105	0.105	0.102	0.085 to 0.115	105	70 to 130	0.179	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:** Recovery for Calcium is out of spec; spike amount is less than 30% of the sample amount. LBM 10/24/19

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/10/19 13:18  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-11

**Laboratory ID Number:** AZ23214

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ23214	Chloride	mg/L	0.0588	0.50	80.0	168	82.4	10.8	9 to 11	104	80 to 120	2.63	20
AZ23214	Fluoride	mg/L	0.0186	0.05	2.50	2.65	0.109	2.59	2.25 to 2.75	102	80 to 120	17.5	20
AZ23219	Solids, Dissolved	mg/L	1.00	25			2560	56.0	40 to 60			0.278	5
AZ23214	Sulfate	mg/L	-0.440	0.50	800	1650	723	19.1	18 to 22	116	80 to 120	0.555	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:** Recovery for Calcium is out of spec; spike amount is less than 30% of the sample amount. LBM 10/24/19

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-6

**Location Code:** WMWGORLF  
**Collected:** 10/10/19 10:14  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23215

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:48		1.015	0.0919	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 14:00		20.3	461	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 11:48		1.015	0.251	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:49		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:49		1.015	0.00473	mg/L	0.001	0.005	J
* Barium, Total	10/11/19 14:45	10/18/19 11:49		1.015	0.0152	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:49		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:49		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:49		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:49		1.015	0.0425	mg/L	0.002	0.005	
* Lead, Total	10/11/19 14:45	10/18/19 11:49		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:49		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:49		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:49		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 13:16		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	3260	mg/L		208.3	
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 10:06	10/16/19 10:06		1	3.61	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 11:37	10/16/19 11:37		1	0.124	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 11:36	10/15/19 11:36		80	2330	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/10/19 10:11	10/10/19 10:11			3106.79	uS/cm			FA
pH	10/10/19 10:11	10/10/19 10:11			6.16	SU			FA
Temperature	10/10/19 10:11	10/10/19 10:11			20.80	C			FA
Turbidity	10/10/19 10:11	10/10/19 10:11			0.71	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/10/19 10:14  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-6

**Laboratory ID Number:** AZ23215

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23220	Thallium, Total	mg/L	0.0000372	0.0001474	0.10	0.103	0.111	0.107	0.085 to 0.115	103	70 to 130	7.34	20
AZ23220	Antimony, Total	mg/L	0.0000878	0.00066	0.10	0.0962	0.0997	0.0951	0.085 to 0.115	96.2	70 to 130	3.57	20
AZ23220	Molybdenum, Total	mg/L	-0.00000029	0.0001474	0.10	0.102	0.105	0.100	0.085 to 0.115	102	70 to 130	2.22	20
AZ23220	Arsenic, Total	mg/L	-0.00000216	0.0001474	0.10	0.108	0.107	0.104	0.085 to 0.115	108	70 to 130	0.415	20
AZ23220	Calcium, Total	mg/L	0.00125	0.1518	5.00	4.94	4.92	5.08	4.25 to 5.75	98.8	70 to 130	0.350	20
AZ23220	Cadmium, Total	mg/L	0.0000149	0.0001474	0.10	0.104	0.107	0.102	0.085 to 0.115	104	70 to 130	2.18	20
AZ23220	Lithium, Total	mg/L	-0.000203	0.0154	0.20	0.204	0.202	0.201	0.17 to 0.23	102	70 to 130	0.944	20
AZ23220	Boron, Total	mg/L	0.00300	0.0650254	1.00	1.02	1.01	1.01	0.85 to 1.15	102	70 to 130	1.40	20
AZ23220	Chromium, Total	mg/L	0.00000856	0.00044	0.10	0.108	0.108	0.104	0.085 to 0.115	108	70 to 130	0.309	20
AZ23220	Beryllium, Total	mg/L	0.0000169	0.00088	0.10	0.0950	0.0978	0.0975	0.085 to 0.115	95.0	70 to 130	2.98	20
AZ23220	Mercury, Total by CVAA	mg/L	0.0000683	0.0005	0.004	0.00408	0.00391	0.00410	0.0034 to 0.0046	102	70 to 130	4.30	20
AZ23220	Lead, Total	mg/L	0.00000470	0.0001474	0.10	0.0993	0.103	0.101	0.085 to 0.115	99.3	70 to 130	3.24	20
AZ23220	Selenium, Total	mg/L	0.000124	0.00066	0.10	0.105	0.105	0.105	0.085 to 0.115	105	70 to 130	0.195	20
AZ23220	Barium, Total	mg/L	-0.00000854	0.0002	0.10	0.103	0.104	0.101	0.085 to 0.115	103	70 to 130	1.47	20
AZ23220	Cobalt, Total	mg/L	-0.00000238	0.0001474	0.10	0.104	0.103	0.101	0.085 to 0.115	104	70 to 130	0.166	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:**



## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/10/19 10:14  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-6

**Laboratory ID Number:** AZ23215

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23220	Sulfate	mg/L	0.266	0.50	20.0	20.4	-0.220	19.3	18 to 22	102	80 to 120	0.00	20
AZ23220	Chloride	mg/L	0.0695	0.50	10.0	10.4	0.156	10.7	9 to 11	104	80 to 120	0.00	20
AZ23219	Solids, Dissolved	mg/L	1.00	25			2560	56.0	40 to 60			0.278	5
AZ23220	Fluoride	mg/L	0.00432	0.05	2.50	2.52	0.00816	2.54	2.25 to 2.75	101	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 Landfill - MW-5

**Location Code:** WMWGORLF  
**Collected:** 10/10/19 11:11  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23216

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:51		1.015	0.0323	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 14:03		20.3	386	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 11:51		1.015	0.0981	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:51		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:51		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 11:51		1.015	0.0105	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:51		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:51		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:51		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:51		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/11/19 14:45	10/18/19 11:51		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:51		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:51		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:51		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 13:18		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	3830	mg/L		250	
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 10:07	10/16/19 10:07		1	7.88	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 11:39	10/16/19 11:39		1	0.338	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 11:37	10/15/19 11:37		80	2460	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/10/19 11:08	10/10/19 11:08			3518.23	uS/cm			FA
pH	10/10/19 11:08	10/10/19 11:08			6.43	SU			FA
Temperature	10/10/19 11:08	10/10/19 11:08			23.20	C			FA
Turbidity	10/10/19 11:08	10/10/19 11:08			0.83	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/10/19 11:11  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-5

**Laboratory ID Number:** AZ23216

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AZ23220	Thallium, Total	mg/L	0.00000372	0.0001474	0.10	0.103	0.111	0.107	0.085 to 0.115	103	70 to 130	7.34	20
AZ23220	Antimony, Total	mg/L	0.0000878	0.00066	0.10	0.0962	0.0997	0.0951	0.085 to 0.115	96.2	70 to 130	3.57	20
AZ23220	Arsenic, Total	mg/L	-0.00000216	0.0001474	0.10	0.108	0.107	0.104	0.085 to 0.115	108	70 to 130	0.415	20
AZ23220	Calcium, Total	mg/L	0.00125	0.1518	5.00	4.94	4.92	5.08	4.25 to 5.75	98.8	70 to 130	0.350	20
AZ23220	Cadmium, Total	mg/L	0.0000149	0.0001474	0.10	0.104	0.107	0.102	0.085 to 0.115	104	70 to 130	2.18	20
AZ23220	Lithium, Total	mg/L	-0.000203	0.0154	0.20	0.204	0.202	0.201	0.17 to 0.23	102	70 to 130	0.944	20
AZ23220	Molybdenum, Total	mg/L	-0.00000029	0.0001474	0.10	0.102	0.105	0.100	0.085 to 0.115	102	70 to 130	2.22	20
AZ23220	Barium, Total	mg/L	-0.00000854	0.0002	0.10	0.103	0.104	0.101	0.085 to 0.115	103	70 to 130	1.47	20
AZ23220	Cobalt, Total	mg/L	-0.00000238	0.0001474	0.10	0.104	0.103	0.101	0.085 to 0.115	104	70 to 130	0.166	20
AZ23220	Beryllium, Total	mg/L	0.0000169	0.00088	0.10	0.0950	0.0978	0.0975	0.085 to 0.115	95.0	70 to 130	2.98	20
AZ23220	Mercury, Total by CVAA	mg/L	0.0000683	0.0005	0.004	0.00408	0.00391	0.00410	0.0034 to 0.0046	102	70 to 130	4.30	20
AZ23220	Lead, Total	mg/L	0.00000470	0.0001474	0.10	0.0993	0.103	0.101	0.085 to 0.115	99.3	70 to 130	3.24	20
AZ23220	Selenium, Total	mg/L	0.000124	0.00066	0.10	0.105	0.105	0.105	0.085 to 0.115	105	70 to 130	0.195	20
AZ23220	Boron, Total	mg/L	0.00300	0.0650254	1.00	1.02	1.01	1.01	0.85 to 1.15	102	70 to 130	1.40	20
AZ23220	Chromium, Total	mg/L	0.00000856	0.00044	0.10	0.108	0.108	0.104	0.085 to 0.115	108	70 to 130	0.309	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:** WMWGORLF  
**Sample Date:** 10/10/19 11:11  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-5

**Laboratory ID Number:** AZ23216

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23220	Sulfate	mg/L	0.266	0.50	20.0	20.4	-0.220	19.3	18 to 22	102	80 to 120	0.00	20
AZ23220	Chloride	mg/L	0.0695	0.50	10.0	10.4	0.156	10.7	9 to 11	104	80 to 120	0.00	20
AZ23219	Solids, Dissolved	mg/L	1.00	25			2560	56.0	40 to 60			0.278	5
AZ23220	Fluoride	mg/L	0.00432	0.05	2.50	2.52	0.00816	2.54	2.25 to 2.75	101	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 Landfill - MW-4

**Location Code:** WMWGORLF  
**Collected:** 10/10/19 12:09  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23217

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:54		1.015	0.0487	mg/L	0.03	0.1	J
* Calcium, Total	10/14/19 13:30	10/15/19 14:06		20.3	302	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 11:54		1.015	0.0540	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:54		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:54		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 11:54		1.015	0.0116	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:54		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:54		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:54		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:54		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/11/19 14:45	10/18/19 11:54		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:54		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:54		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:54		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 13:21		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	4000	mg/L		250	
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 10:08	10/16/19 10:08		1	1.93	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 11:40	10/16/19 11:40		1	0.304	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 11:38	10/15/19 11:38		80	2690	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/10/19 12:07	10/10/19 12:07			3642.62	uS/cm			FA
pH	10/10/19 12:07	10/10/19 12:07			6.15	SU			FA
Temperature	10/10/19 12:07	10/10/19 12:07			21.06	C			FA
Turbidity	10/10/19 12:07	10/10/19 12:07			0.33	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/10/19 12:09  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-4

**Laboratory ID Number:** AZ23217

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23220	Thallium, Total	mg/L	0.00000372	0.0001474	0.10	0.103	0.111	0.107	0.085 to 0.115	103	70 to 130	7.34	20
AZ23220	Arsenic, Total	mg/L	-0.00000216	0.0001474	0.10	0.108	0.107	0.104	0.085 to 0.115	108	70 to 130	0.415	20
AZ23220	Molybdenum, Total	mg/L	-0.00000029	0.0001474	0.10	0.102	0.105	0.100	0.085 to 0.115	102	70 to 130	2.22	20
AZ23220	Antimony, Total	mg/L	0.0000878	0.00066	0.10	0.0962	0.0997	0.0951	0.085 to 0.115	96.2	70 to 130	3.57	20
AZ23220	Calcium, Total	mg/L	0.00125	0.1518	5.00	4.94	4.92	5.08	4.25 to 5.75	98.8	70 to 130	0.350	20
AZ23220	Cadmium, Total	mg/L	0.0000149	0.0001474	0.10	0.104	0.107	0.102	0.085 to 0.115	104	70 to 130	2.18	20
AZ23220	Lithium, Total	mg/L	-0.000203	0.0154	0.20	0.204	0.202	0.201	0.17 to 0.23	102	70 to 130	0.944	20
AZ23220	Boron, Total	mg/L	0.00300	0.0650254	1.00	1.02	1.01	1.01	0.85 to 1.15	102	70 to 130	1.40	20
AZ23220	Chromium, Total	mg/L	0.00000856	0.00044	0.10	0.108	0.108	0.104	0.085 to 0.115	108	70 to 130	0.309	20
AZ23220	Barium, Total	mg/L	-0.00000854	0.0002	0.10	0.103	0.104	0.101	0.085 to 0.115	103	70 to 130	1.47	20
AZ23220	Cobalt, Total	mg/L	-0.00000238	0.0001474	0.10	0.104	0.103	0.101	0.085 to 0.115	104	70 to 130	0.166	20
AZ23220	Beryllium, Total	mg/L	0.0000169	0.00088	0.10	0.0950	0.0978	0.0975	0.085 to 0.115	95.0	70 to 130	2.98	20
AZ23220	Mercury, Total by CVAA	mg/L	0.0000683	0.0005	0.004	0.00408	0.00391	0.00410	0.0034 to 0.0046	102	70 to 130	4.30	20
AZ23220	Lead, Total	mg/L	0.00000470	0.0001474	0.10	0.0993	0.103	0.101	0.085 to 0.115	99.3	70 to 130	3.24	20
AZ23220	Selenium, Total	mg/L	0.000124	0.00066	0.10	0.105	0.105	0.105	0.085 to 0.115	105	70 to 130	0.195	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:** WMWGORLF  
**Sample Date:** 10/10/19 12:09  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-4

**Laboratory ID Number:** AZ23217

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23220	Sulfate	mg/L	0.266	0.50	20.0	20.4	-0.220	19.3	18 to 22	102	80 to 120	0.00	20
AZ23220	Fluoride	mg/L	0.00432	0.05	2.50	2.52	0.00816	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ23219	Solids, Dissolved	mg/L	1.00	25			2560	56.0	40 to 60			0.278	5
AZ23220	Chloride	mg/L	0.0695	0.50	10.0	10.4	0.156	10.7	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, 2017

**Comments:**

# Certificate Of Analysis

**Description:** Gorgas Landfill Field Blank

**Location Code:** WMWGORLFFB  
**Collected:** 10/10/19 12:24  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23218

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 11:57		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/14/19 13:30	10/15/19 11:57		1.015	Not Detected	mg/L	0.1	0.5	U
* Lithium, Total	10/14/19 13:30	10/15/19 11:57		1.015	Not Detected	mg/L	0.01	0.02	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.002	0.01	U
* Beryllium, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:57		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 13:23		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 10:10	10/16/19 10:10		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 11:41	10/16/19 11:41		1	Not Detected	mg/L	0.05	0.1	U
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 11:39	10/15/19 11:39		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:** WMWGORLFFB  
**Sample Date:** 10/10/19 12:24  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill Field Blank

**Laboratory ID Number:** AZ23218

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23220	Thallium, Total	mg/L	0.0000372	0.0001474	0.10	0.103	0.111	0.107	0.085 to 0.115	103	70 to 130	7.34	20
AZ23220	Arsenic, Total	mg/L	-0.00000216	0.0001474	0.10	0.108	0.107	0.104	0.085 to 0.115	108	70 to 130	0.415	20
AZ23220	Antimony, Total	mg/L	0.0000878	0.00066	0.10	0.0962	0.0997	0.0951	0.085 to 0.115	96.2	70 to 130	3.57	20
AZ23220	Molybdenum, Total	mg/L	-0.00000029	0.0001474	0.10	0.102	0.105	0.100	0.085 to 0.115	102	70 to 130	2.22	20
AZ23220	Calcium, Total	mg/L	0.00125	0.1518	5.00	4.94	4.92	5.08	4.25 to 5.75	98.8	70 to 130	0.350	20
AZ23220	Cadmium, Total	mg/L	0.0000149	0.0001474	0.10	0.104	0.107	0.102	0.085 to 0.115	104	70 to 130	2.18	20
AZ23220	Lithium, Total	mg/L	-0.000203	0.0154	0.20	0.204	0.202	0.201	0.17 to 0.23	102	70 to 130	0.944	20
AZ23220	Boron, Total	mg/L	0.00300	0.0650254	1.00	1.02	1.01	1.01	0.85 to 1.15	102	70 to 130	1.40	20
AZ23220	Chromium, Total	mg/L	0.00000856	0.00044	0.10	0.108	0.108	0.104	0.085 to 0.115	108	70 to 130	0.309	20
AZ23220	Barium, Total	mg/L	-0.00000854	0.0002	0.10	0.103	0.104	0.101	0.085 to 0.115	103	70 to 130	1.47	20
AZ23220	Cobalt, Total	mg/L	-0.00000238	0.0001474	0.10	0.104	0.103	0.101	0.085 to 0.115	104	70 to 130	0.166	20
AZ23220	Beryllium, Total	mg/L	0.0000169	0.00088	0.10	0.0950	0.0978	0.0975	0.085 to 0.115	95.0	70 to 130	2.98	20
AZ23220	Mercury, Total by CVAA	mg/L	0.0000683	0.0005	0.004	0.00408	0.00391	0.00410	0.0034 to 0.0046	102	70 to 130	4.30	20
AZ23220	Lead, Total	mg/L	0.00000470	0.0001474	0.10	0.0993	0.103	0.101	0.085 to 0.115	99.3	70 to 130	3.24	20
AZ23220	Selenium, Total	mg/L	0.000124	0.00066	0.10	0.105	0.105	0.105	0.085 to 0.115	105	70 to 130	0.195	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:**

## Batch QC Summary

**Customer Account:** WMWGORLFFB

**Sample Date:** 10/10/19 12:24

**Customer ID:**

**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill Field Blank

**Laboratory ID Number:** AZ23218

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23220	Sulfate	mg/L	0.266	0.50	20.0	20.4	-0.220	19.3	18 to 22	102	80 to 120	0.00	20
AZ23220	Chloride	mg/L	0.0695	0.50	10.0	10.4	0.156	10.7	9 to 11	104	80 to 120	0.00	20
AZ23220	Fluoride	mg/L	0.00432	0.05	2.50	2.52	0.00816	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ23219	Solids, Dissolved	mg/L	1.00	25			2560	56.0	40 to 60			0.278	5

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:**

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-20

**Location Code:** WMWGORLF  
**Collected:** 10/10/19 13:03  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23219

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 12:00		1.015	0.115	mg/L	0.03	0.1	
* Calcium, Total	10/14/19 13:30	10/15/19 14:09		20.3	407	mg/L	2.03	10.15	
* Lithium, Total	10/14/19 13:30	10/15/19 12:00		1.015	0.264	mg/L	0.01	0.02	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 11:59		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 11:59		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 11:59		1.015	0.0173	mg/L	0.002	0.01	
* Beryllium, Total	10/11/19 14:45	10/18/19 11:59		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 11:59		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 11:59		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 11:59		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/11/19 14:45	10/18/19 11:59		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 11:59		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 11:59		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 11:59		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 13:25		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	2580	mg/L		178.6	
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 10:16	10/16/19 10:16		8	66.1	mg/L	4.00	8	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 11:42	10/16/19 11:42		1	0.103	mg/L	0.05	0.1	
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 11:41	10/15/19 11:41		80	1700	mg/L	40.00	80	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/10/19 13:00	10/10/19 13:00			2742.07	uS/cm			FA
pH	10/10/19 13:00	10/10/19 13:00			6.78	SU			FA
Temperature	10/10/19 13:00	10/10/19 13:00			20.34	C			FA
Turbidity	10/10/19 13:00	10/10/19 13:00			0.38	NTU			FA

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 10/10/19 13:03  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-20

**Laboratory ID Number:** AZ23219

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ23220	Thallium, Total	mg/L	0.00000372	0.0001474	0.10	0.103	0.111	0.107	0.085 to 0.115	103	70 to 130	7.34	20
AZ23220	Antimony, Total	mg/L	0.0000878	0.00066	0.10	0.0962	0.0997	0.0951	0.085 to 0.115	96.2	70 to 130	3.57	20
AZ23220	Molybdenum, Total	mg/L	-0.00000029	0.0001474	0.10	0.102	0.105	0.100	0.085 to 0.115	102	70 to 130	2.22	20
AZ23220	Arsenic, Total	mg/L	-0.00000216	0.0001474	0.10	0.108	0.107	0.104	0.085 to 0.115	108	70 to 130	0.415	20
AZ23220	Barium, Total	mg/L	-0.00000854	0.0002	0.10	0.103	0.104	0.101	0.085 to 0.115	103	70 to 130	1.47	20
AZ23220	Cobalt, Total	mg/L	-0.00000238	0.0001474	0.10	0.104	0.103	0.101	0.085 to 0.115	104	70 to 130	0.166	20
AZ23220	Calcium, Total	mg/L	0.00125	0.1518	5.00	4.94	4.92	5.08	4.25 to 5.75	98.8	70 to 130	0.350	20
AZ23220	Cadmium, Total	mg/L	0.0000149	0.0001474	0.10	0.104	0.107	0.102	0.085 to 0.115	104	70 to 130	2.18	20
AZ23220	Lithium, Total	mg/L	-0.000203	0.0154	0.20	0.204	0.202	0.201	0.17 to 0.23	102	70 to 130	0.944	20
AZ23220	Boron, Total	mg/L	0.00300	0.0650254	1.00	1.02	1.01	1.01	0.85 to 1.15	102	70 to 130	1.40	20
AZ23220	Chromium, Total	mg/L	0.00000856	0.00044	0.10	0.108	0.108	0.104	0.085 to 0.115	108	70 to 130	0.309	20
AZ23220	Beryllium, Total	mg/L	0.0000169	0.00088	0.10	0.0950	0.0978	0.0975	0.085 to 0.115	95.0	70 to 130	2.98	20
AZ23220	Mercury, Total by CVAA	mg/L	0.0000683	0.0005	0.004	0.00408	0.00391	0.00410	0.0034 to 0.0046	102	70 to 130	4.30	20
AZ23220	Lead, Total	mg/L	0.00000470	0.0001474	0.10	0.0993	0.103	0.101	0.085 to 0.115	99.3	70 to 130	3.24	20
AZ23220	Selenium, Total	mg/L	0.000124	0.00066	0.10	0.105	0.105	0.105	0.085 to 0.115	105	70 to 130	0.195	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:** WMWGORLF  
**Sample Date:** 10/10/19 13:03  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill - MW-20

**Laboratory ID Number:** AZ23219

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ23220	Sulfate	mg/L	0.266	0.50	20.0	20.4	-0.220	19.3	18 to 22	102	80 to 120	0.00	20
AZ23220	Chloride	mg/L	0.0695	0.50	10.0	10.4	0.156	10.7	9 to 11	104	80 to 120	0.00	20
AZ23220	Fluoride	mg/L	0.00432	0.05	2.50	2.52	0.00816	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ23219	Solids, Dissolved	mg/L	1.00	25			2560	56.0	40 to 60			0.278	5

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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 Landfill Equipment Blank

**Location Code:** WMWGORLFEB  
**Collected:** 10/10/19 13:20  
**Customer ID:**  
**Submittal Date:** 10/11/19 07:19

**Laboratory ID Number:** AZ23220

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/14/19 13:30	10/15/19 12:03		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/14/19 13:30	10/15/19 12:03		1.015	Not Detected	mg/L	0.1	0.5	U
* Lithium, Total	10/14/19 13:30	10/15/19 12:03		1.015	Not Detected	mg/L	0.01	0.02	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.002	0.01	U
* Beryllium, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/11/19 14:45	10/18/19 12:02		1.015	Not Detected	mg/L	0.0002	0.001	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: GAS</b>							
* Mercury, Total by CVAA	10/11/19 11:40	10/15/19 13:28		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	10/11/19 13:10	10/15/19 10:35		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/16/19 10:12	10/16/19 10:12		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/16/19 11:55	10/16/19 11:55		1	Not Detected	mg/L	0.05	0.1	U
<b>Analytical Method: SM4500SO4 E</b>		<b>Analyst: JCC</b>							
* Sulfate	10/15/19 11:42	10/15/19 11:42		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:** WMWGORLFEB  
**Sample Date:** 10/10/19 13:20  
**Customer ID:**  
**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill Equipment Blank

**Laboratory ID Number:** AZ23220

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AZ23220	Arsenic, Total	mg/L	-0.00000216	0.0001474	0.10	0.108	0.107	0.104	0.085 to 0.115	108	70 to 130	0.415	20
AZ23220	Antimony, Total	mg/L	0.0000878	0.00066	0.10	0.0962	0.0997	0.0951	0.085 to 0.115	96.2	70 to 130	3.57	20
AZ23220	Thallium, Total	mg/L	0.00000372	0.0001474	0.10	0.103	0.111	0.107	0.085 to 0.115	103	70 to 130	7.34	20
AZ23220	Calcium, Total	mg/L	0.00125	0.1518	5.00	4.94	4.92	5.08	4.25 to 5.75	98.8	70 to 130	0.350	20
AZ23220	Cadmium, Total	mg/L	0.0000149	0.0001474	0.10	0.104	0.107	0.102	0.085 to 0.115	104	70 to 130	2.18	20
AZ23220	Lithium, Total	mg/L	-0.000203	0.0154	0.20	0.204	0.202	0.201	0.17 to 0.23	102	70 to 130	0.944	20
AZ23220	Barium, Total	mg/L	-0.00000854	0.0002	0.10	0.103	0.104	0.101	0.085 to 0.115	103	70 to 130	1.47	20
AZ23220	Cobalt, Total	mg/L	-0.00000238	0.0001474	0.10	0.104	0.103	0.101	0.085 to 0.115	104	70 to 130	0.166	20
AZ23220	Boron, Total	mg/L	0.00300	0.0650254	1.00	1.02	1.01	1.01	0.85 to 1.15	102	70 to 130	1.40	20
AZ23220	Chromium, Total	mg/L	0.00000856	0.00044	0.10	0.108	0.108	0.104	0.085 to 0.115	108	70 to 130	0.309	20
AZ23220	Molybdenum, Total	mg/L	-0.00000029	0.0001474	0.10	0.102	0.105	0.100	0.085 to 0.115	102	70 to 130	2.22	20
AZ23220	Beryllium, Total	mg/L	0.0000169	0.00088	0.10	0.0950	0.0978	0.0975	0.085 to 0.115	95.0	70 to 130	2.98	20
AZ23220	Mercury, Total by CVAA	mg/L	0.0000683	0.0005	0.004	0.00408	0.00391	0.00410	0.0034 to 0.0046	102	70 to 130	4.30	20
AZ23220	Lead, Total	mg/L	0.00000470	0.0001474	0.10	0.0993	0.103	0.101	0.085 to 0.115	99.3	70 to 130	3.24	20
AZ23220	Selenium, Total	mg/L	0.000124	0.00066	0.10	0.105	0.105	0.105	0.085 to 0.115	105	70 to 130	0.195	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:** WMWGORLFEB

**Sample Date:** 10/10/19 13:20

**Customer ID:**

**Delivery Date:** 10/11/19 07:19

**Description:** Gorgas Landfill Equipment Blank

**Laboratory ID Number:** AZ23220

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ23220	Sulfate	mg/L	0.266	0.50	20.0	20.4	-0.220	19.3	18 to 22	102	80 to 120	0.00	20
AZ23220	Fluoride	mg/L	0.00432	0.05	2.50	2.52	0.00816	2.54	2.25 to 2.75	101	80 to 120	0.00	20
AZ23220	Chloride	mg/L	0.0695	0.50	10.0	10.4	0.156	10.7	9 to 11	104	80 to 120	0.00	20
AZ23219	Solids, Dissolved	mg/L	1.00	25			2560	56.0	40 to 60			0.278	5

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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\* 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:**



## 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.
R	Matrix spike recovery and/or matrix spike duplicate recovery is outside of specification limit.
RA	Matrix spike is invalid due to sample concentration.
U	Compound was analyzed, but not detected.





# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA

Requested Complete Date	Routine		Results To	Dustin Brooks, Greg Dyer		
	Che George			Requested By	Greg Dyer	
	Dallas Gentry				Location	

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-13	10/8/19	08:42	4	Groundwater		AZ23084
MW-14	10/08/2019	09:33	4	Groundwater		AZ23085
MW-15	10/08/2019	10:23	4	Groundwater		AZ23086
MW-16	10/08/2019	11:12	4	Groundwater		AZ23087
MW-16 Dup	10/08/2019	11:12	4	Sample Duplicate		AZ23088
MW-17R	10/08/2019	12:19	4	Groundwater		AZ23089
FB-1	10/08/2019	12:44	4	Field Blank		AZ23090
MW-18	10/08/2019	13:33	4	Groundwater		AZ23091
MW-19	10/08/2019	14:32	4	Groundwater		AZ23092
MW-7	10/08/2019	15:40	4	Groundwater		AZ23093

Relinquished By	Received By	Date/Time
		10/10/2019 07:54

SmarTroll ID	7586-41446-5-5	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	7081-38476-1-1	
Sample Event	1246	
Cooler Temp	0.3 degrees C	
Thermometer ID	5408-27568-2-2	
pH Strip ID	7453-40656-10-8	





# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA 10/10/2019 16:35

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

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-10	10/9/19	12:50	4	Groundwater		AZ23209
MW-8	10/09/2019	13:55	4	Groundwater		AZ23210
MW-12	10/09/2019	15:10	4	Groundwater		AZ23211
EB-2	10/10/2019	10:50	4	Equipment Blank		AZ23212
MW-12V	10/10/2019	11:30	4	Groundwater		AZ23213
MW-11	10/10/2019	13:18	4	Groundwater		AZ23214

Relinquished By	Received By	Date/Time
		10/10/2019 17:06

SmarTroll ID	7586-41442-5-1	All metals and radiological bottles have pH < 2	<input checked="" type="checkbox"/>
Turbidity ID	5160-26211-1-1	Cooler Temp	0.7 degrees C
Sample Event	1246	Thermometer ID	5408-27568-2-2
		pH Strip ID	7453-40656-10-8



# 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 Landfill

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

Comments Rad Dup collected @ MW-1

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	10/8/19	11:20	3	Groundwater		AZ23055
MW-2	10/08/2019	12:40	1	Groundwater		AZ23056
MW-2 Dup	10/08/2019	12:40	1	Sample Duplicate		AZ23057
MW-3	10/08/2019	14:15	1	Groundwater		AZ23058

Relinquished By	Received By	Date/Time
		10/09/2019 14:43

SmarTroll ID	7586-41445-5-4
Turbidity ID	4677-23342-4-1
Sample Event	1246

All metals and radiological bottles have pH < 2

Cooler Temp	N/A
Thermometer ID	N/A
pH Strip ID	7453-40656-10-8



# 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	Dallas Gentry	Location	Gorgas Landfill

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

Comments: Radium duplicate collected at MW-14

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-13	10/8/19	08:42	1	Groundwater		AZ23094
MW-14	10/08/2019	09:33	3	Groundwater		AZ23095
MW-15	10/08/2019	10:23	1	Groundwater		AZ23096
MW-16	10/08/2019	11:12	1	Groundwater		AZ23097
MW-16 Dup	10/08/2019	11:12	1	Sample Duplicate		AZ23098
MW-17R	10/08/2019	12:19	1	Groundwater		AZ23099
FB-1	10/08/2019	12:44	1	Field Blank		AZ23100
MW-18	10/08/2019	13:33	1	Groundwater		AZ23101
MW-19	10/08/2019	14:32	1	Groundwater		AZ23102
MW-7	10/08/2019	15:40	1	Groundwater		AZ23103

Relinquished By	Received By	Date/Time
<i>Dallas Gentry</i>	<i>Laura M. Dyer</i>	10/10/2019 07:54

SmarTroll ID	7586-41446-5-5	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	7081-38476-1-1	
Sample Event	1246	
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: 400-178037-1

Laboratory Sample Delivery Group: Gorgas Landfill 1246  
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:  
11/20/2019 5:19:13 PM

Cheyenne Whitmire, Project Manager II  
(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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

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



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Method Summary . . . . .	5
Sample Summary . . . . .	6
Client Sample Results . . . . .	7
Definitions . . . . .	33
Chronicle . . . . .	34
QC Association . . . . .	41
QC Sample Results . . . . .	43
Chain of Custody . . . . .	47
Receipt Checklists . . . . .	51
Certification Summary . . . . .	53

# Case Narrative

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

Job ID: 400-178037-1  
SDG: Gorgas Landfill 1246

**Job ID: 400-178037-1**

**Laboratory: Eurofins TestAmerica, Pensacola**

## Narrative

### Job Narrative 400-178037-1

#### RAD

Method 9315: Radium-226 prep batch 160-446982. 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. AZ23055 MW-1 (400-178037-1), AZ23055 MW-1 (400-178037-1[DUJ]), AZ23056 MW-2 (400-178037-2), AZ23057 MW-2 DUP (400-178037-3), AZ23058 MW-3 (400-178037-4), AZ23094 MW-13 (400-178037-5), AZ23095 MW-14 (400-178037-6), AZ23095 MW-14 (400-178037-6[DUJ]), AZ23096 MW-15 (400-178037-7), AZ23097 MW-16 (400-178037-8), AZ23098 MW-16 DUP (400-178037-9), AZ23099 MW-17R (400-178037-10), AZ23100 FB-1 (400-178037-11), AZ23101 MW-18 (400-178037-12), AZ23102 MW-19 (400-178037-13), AZ23103 MW-7 (400-178037-14), AZ23221 MW-10 (400-178037-15), AZ23222 MW-8 (400-178037-16), AZ23223 MW-12 (400-178037-17), AZ23224 EB-2 (400-178037-18), (LCS 160-446982/1-A) and (MB 160-446982/22-A)

Methods 9315: Radium-226 prep batch 160-446985. 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. AZ23225 MW-12V (400-178037-19), AZ23226 MW-11 (400-178037-20), AZ23227 MW-6 (400-178037-21), AZ23228 MW-5 (400-178037-22), AZ23229 MW-4 (400-178037-23), AZ23230 FB-2 (400-178037-24), AZ23231 MW-20 (400-178037-25), AZ23232 EB-1 (400-178037-26), (LCS 160-446985/1-A), (LCSD 160-446985/2-A) and (MB 160-446985/17-A)

Methods 9320: Radium-228 Prep Batch 160-446988. 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. AZ23225 MW-12V (400-178037-19), AZ23226 MW-11 (400-178037-20), AZ23227 MW-6 (400-178037-21), AZ23228 MW-5 (400-178037-22), AZ23229 MW-4 (400-178037-23), AZ23230 FB-2 (400-178037-24), AZ23231 MW-20 (400-178037-25), AZ23232 EB-1 (400-178037-26), (LCS 160-446988/1-A), (LCSD 160-446988/2-A) and (MB 160-446988/17-A)

Method 9320: Radium-228 Prep Batch: 160-446988. The detection goal was not met for the following sample due to insufficient sample available for analysis: AZ23229 MW-4 (400-178037-23). See Prep NCM 160-180851. Analytical results are reported with the detection limit achieved.

Method 9320: Radium-228 prep batch 160-446984. 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. AZ23055 MW-1 (400-178037-1), AZ23055 MW-1 (400-178037-1[DUJ]), AZ23056 MW-2 (400-178037-2), AZ23057 MW-2 DUP (400-178037-3), AZ23058 MW-3 (400-178037-4), AZ23094 MW-13 (400-178037-5), AZ23095 MW-14 (400-178037-6), AZ23095 MW-14 (400-178037-6[DUJ]), AZ23096 MW-15 (400-178037-7), AZ23097 MW-16 (400-178037-8), AZ23098 MW-16 DUP (400-178037-9), AZ23099 MW-17R (400-178037-10), AZ23100 FB-1 (400-178037-11), AZ23101 MW-18 (400-178037-12), AZ23102 MW-19 (400-178037-13), AZ23103 MW-7 (400-178037-14), AZ23221 MW-10 (400-178037-15), AZ23222 MW-8 (400-178037-16), AZ23223 MW-12 (400-178037-17), AZ23224 EB-2 (400-178037-18), (LCS 160-446984/1-A) and (MB 160-446984/22-A)

Method 9320: Radium-228 prep batch 160-446984. The following samples did not meet the requested limit (RL) due to the reduced sample volume (see Prep NCM 160-180846). The data have been reported with this narrative. AZ23058 MW-3 (400-178037-4), AZ23095 MW-14 (400-178037-6), AZ23102 MW-19 (400-178037-13), AZ23103 MW-7 (400-178037-14) and AZ23221 MW-10 (400-178037-15)

Method 9320: Radium-228 prep batch 160-446984. The Ra-228 laboratory control sample (LCS) recovery (141%) is outside the upper QC limit of (125%), indicating a potential positive bias for that analyte. All other QC is within limits (MB, RPD/RER). There is insufficient volume to re-analyze. The data have been reported with this narrative. AZ23055 MW-1 (400-178037-1), AZ23055 MW-1 (400-178037-1[DUJ]), AZ23056 MW-2 (400-178037-2), AZ23057 MW-2 DUP (400-178037-3), AZ23058 MW-3 (400-178037-4), AZ23094 MW-13 (400-178037-5), AZ23095 MW-14 (400-178037-6), AZ23095 MW-14 (400-178037-6[DUJ]), AZ23096 MW-15 (400-178037-7), AZ23097 MW-16 (400-178037-8), AZ23098 MW-16 DUP (400-178037-9), AZ23099 MW-17R (400-178037-10), AZ23100 FB-1 (400-178037-11), AZ23101 MW-18 (400-178037-12), AZ23102 MW-19 (400-178037-13), AZ23103 MW-7 (400-178037-14), AZ23221 MW-10 (400-178037-15), AZ23222 MW-8 (400-178037-16), AZ23223 MW-12 (400-178037-17), AZ23224 EB-2 (400-178037-18), (LCS 160-446984/1-A) and (MB 160-446984/22-A)

# Case Narrative

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

Job ID: 400-178037-1  
SDG: Gorgas Landfill 1246

## Job ID: 400-178037-1 (Continued)

### Laboratory: Eurofins TestAmerica, Pensacola (Continued)

Method PrecSep\_0: Radium 228 Prep Batch 160-446984. The following samples were prepared at a reduced aliquot due to insufficient volume: AZ23055 MW-1 (400-178037-1), AZ23055 MW-1 (400-178037-1[DU]), AZ23056 MW-2 (400-178037-2), AZ23057 MW-2 DUP (400-178037-3), AZ23058 MW-3 (400-178037-4), AZ23094 MW-13 (400-178037-5), AZ23095 MW-14 (400-178037-6), AZ23095 MW-14 (400-178037-6[DU]), AZ23096 MW-15 (400-178037-7), AZ23097 MW-16 (400-178037-8), AZ23098 MW-16 DUP (400-178037-9), AZ23099 MW-17R (400-178037-10), AZ23100 FB-1 (400-178037-11), AZ23101 MW-18 (400-178037-12), AZ23102 MW-19 (400-178037-13), AZ23103 MW-7 (400-178037-14), AZ23221 MW-10 (400-178037-15), AZ23222 MW-8 (400-178037-16), AZ23223 MW-12 (400-178037-17) and AZ23224 EB-2 (400-178037-18). Sample 400-178037-A-17 had light yellow discoloration.

Method PrecSep\_0: Radium 228 Prep Batch 160-446988. The following samples were prepared at a reduced aliquot due to insufficient volume: AZ23225 MW-12V (400-178037-19), AZ23226 MW-11 (400-178037-20), AZ23227 MW-6 (400-178037-21), AZ23228 MW-5 (400-178037-22), AZ23229 MW-4 (400-178037-23), AZ23230 FB-2 (400-178037-24), AZ23231 MW-20 (400-178037-25) and AZ23232 EB-1 (400-178037-26).

Method PrecSep\_0: Radium 228 Prep Batch 160-446988. Insufficient sample volume was available to perform a sample duplicate for the following samples: AZ23225 MW-12V (400-178037-19), AZ23226 MW-11 (400-178037-20), AZ23227 MW-6 (400-178037-21), AZ23228 MW-5 (400-178037-22), AZ23229 MW-4 (400-178037-23), AZ23230 FB-2 (400-178037-24), AZ23231 MW-20 (400-178037-25) and AZ23232 EB-1 (400-178037-26). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision

Method PrecSep-21: Radium 226 Prep Batch 160-446982. The following samples were prepared at a reduced aliquot due to insufficient volume: AZ23055 MW-1 (400-178037-1), AZ23055 MW-1 (400-178037-1[DU]), AZ23056 MW-2 (400-178037-2), AZ23057 MW-2 DUP (400-178037-3), AZ23058 MW-3 (400-178037-4), AZ23094 MW-13 (400-178037-5), AZ23095 MW-14 (400-178037-6), AZ23095 MW-14 (400-178037-6[DU]), AZ23096 MW-15 (400-178037-7), AZ23097 MW-16 (400-178037-8), AZ23098 MW-16 DUP (400-178037-9), AZ23099 MW-17R (400-178037-10), AZ23100 FB-1 (400-178037-11), AZ23101 MW-18 (400-178037-12), AZ23102 MW-19 (400-178037-13), AZ23103 MW-7 (400-178037-14), AZ23221 MW-10 (400-178037-15), AZ23222 MW-8 (400-178037-16), AZ23223 MW-12 (400-178037-17) and AZ23224 EB-2 (400-178037-18). Sample 400-178037-A-17 had light yellow discoloration.

Method PrecSep-21: Radium 226 Prep Batch 160-446985. The following samples were prepared at a reduced aliquot: AZ23225 MW-12V (400-178037-19), AZ23226 MW-11 (400-178037-20), AZ23227 MW-6 (400-178037-21), AZ23228 MW-5 (400-178037-22), AZ23229 MW-4 (400-178037-23), AZ23230 FB-2 (400-178037-24), AZ23231 MW-20 (400-178037-25) and AZ23232 EB-1 (400-178037-26). Sample 180-97248-G-2 was reduced due to yellow discoloration. Samples 400-178037-A-19, 400-178037-A-19, 400-178037-A-20, 400-178037-A-21, 400-178037-A-22, 400-178037-A-23, 400-178037-A-24, 400-178037-A-25 and 400-178037-A-26 were reduced due to insufficient volume. Sample 180-97248-H-1 had light yellow discoloration but was not reduced.

Method PrecSep-21: Radium 226 Prep Batch 160-446985. Insufficient sample volume was available to perform a sample duplicate for the following samples: AZ23225 MW-12V (400-178037-19), AZ23226 MW-11 (400-178037-20), AZ23227 MW-6 (400-178037-21), AZ23228 MW-5 (400-178037-22), AZ23229 MW-4 (400-178037-23), AZ23230 FB-2 (400-178037-24), AZ23231 MW-20 (400-178037-25) and AZ23232 EB-1 (400-178037-26). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

# Method Summary

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

Job ID: 400-178037-1  
SDG: Gorgas Landfill 1246

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: 400-178037-1  
SDG: Gorgas Landfill 1246

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
400-178037-1	AZ23055 MW-1	Water	10/08/19 11:20	10/15/19 13:15	
400-178037-2	AZ23056 MW-2	Water	10/08/19 12:40	10/15/19 13:15	
400-178037-3	AZ23057 MW-2 DUP	Water	10/08/19 12:40	10/15/19 13:15	
400-178037-4	AZ23058 MW-3	Water	10/08/19 14:15	10/15/19 13:15	
400-178037-5	AZ23094 MW-13	Water	10/08/19 08:42	10/15/19 13:15	
400-178037-6	AZ23095 MW-14	Water	10/08/19 09:33	10/15/19 13:15	
400-178037-7	AZ23096 MW-15	Water	10/08/19 10:23	10/15/19 13:15	
400-178037-8	AZ23097 MW-16	Water	10/08/19 11:12	10/15/19 13:15	
400-178037-9	AZ23098 MW-16 DUP	Water	10/08/19 11:12	10/15/19 13:15	
400-178037-10	AZ23099 MW-17R	Water	10/08/19 12:19	10/15/19 13:15	
400-178037-11	AZ23100 FB-1	Water	10/08/19 12:44	10/15/19 13:15	
400-178037-12	AZ23101 MW-18	Water	10/08/19 13:33	10/15/19 13:15	
400-178037-13	AZ23102 MW-19	Water	10/08/19 14:32	10/15/19 13:15	
400-178037-14	AZ23103 MW-7	Water	10/08/19 15:40	10/15/19 13:15	
400-178037-15	AZ23221 MW-10	Water	10/09/19 12:50	10/15/19 13:15	
400-178037-16	AZ23222 MW-8	Water	10/09/19 13:55	10/15/19 13:15	
400-178037-17	AZ23223 MW-12	Water	10/09/19 15:10	10/15/19 13:15	
400-178037-18	AZ23224 EB-2	Water	10/10/19 10:50	10/15/19 13:15	
400-178037-19	AZ23225 MW-12V	Water	10/10/19 11:30	10/15/19 13:15	
400-178037-20	AZ23226 MW-11	Water	10/10/19 13:18	10/15/19 13:15	
400-178037-21	AZ23227 MW-6	Water	10/10/19 10:14	10/15/19 13:15	
400-178037-22	AZ23228 MW-5	Water	10/10/19 11:11	10/15/19 13:15	
400-178037-23	AZ23229 MW-4	Water	10/10/19 12:09	10/15/19 13:15	
400-178037-24	AZ23230 FB-2	Water	10/10/19 12:24	10/15/19 13:15	
400-178037-25	AZ23231 MW-20	Water	10/10/19 13:03	10/15/19 13:15	
400-178037-26	AZ23232 EB-1	Water	10/10/19 13:20	10/15/19 13:15	

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23055 MW-1**

**Lab Sample ID: 400-178037-1**

Date Collected: 10/08/19 11:20

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0316	U	0.124	0.124	1.00	0.230	pCi/L	10/18/19 17:08	11/13/19 11:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.8		40 - 110					10/18/19 17:08	11/13/19 11:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.44	*	0.575	0.590	1.00	0.803	pCi/L	10/18/19 18:38	11/01/19 17:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.8		40 - 110					10/18/19 18:38	11/01/19 17:47	1
Y Carrier	81.1		40 - 110					10/18/19 18:38	11/01/19 17:47	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	1.47		0.588	0.603	5.00	0.803	pCi/L		11/15/19 07:31	1



# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23056 MW-2**

**Lab Sample ID: 400-178037-2**

Date Collected: 10/08/19 12:40

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.109	U	0.0730	0.0736	1.00	0.195	pCi/L	10/18/19 17:08	11/13/19 11:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.8		40 - 110					10/18/19 17:08	11/13/19 11:29	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.603	U *	0.560	0.563	1.00	0.903	pCi/L	10/18/19 18:38	11/01/19 17:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.8		40 - 110					10/18/19 18:38	11/01/19 17:47	1
Y Carrier	63.2		40 - 110					10/18/19 18:38	11/01/19 17:47	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	0.493	U	0.565	0.568	5.00	0.903	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23057 MW-2 DUP**

**Lab Sample ID: 400-178037-3**

Date Collected: 10/08/19 12:40

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00425	U	0.0704	0.0704	1.00	0.146	pCi/L	10/18/19 17:08	11/13/19 11:29	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	76.0		40 - 110					10/18/19 17:08	11/13/19 11:29	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.539	U *	0.544	0.546	1.00	0.885	pCi/L	10/18/19 18:38	11/01/19 17:48	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	76.0		40 - 110					10/18/19 18:38	11/01/19 17:48	1
Y Carrier	68.0		40 - 110					10/18/19 18:38	11/01/19 17:48	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	0.544	U	0.549	0.551	5.00	0.885	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23058 MW-3**

**Lab Sample ID: 400-178037-4**

Date Collected: 10/08/19 14:15

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0808	U	0.0650	0.0654	1.00	0.175	pCi/L	10/18/19 17:08	11/13/19 11:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		40 - 110					10/18/19 17:08	11/13/19 11:29	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.914	U * G	0.698	0.703	1.00	1.10	pCi/L	10/18/19 18:38	11/01/19 17:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		40 - 110					10/18/19 18:38	11/01/19 17:48	1
Y Carrier	49.0		40 - 110					10/18/19 18:38	11/01/19 17:48	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	0.833	U	0.701	0.706	5.00	1.10	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23094 MW-13**

**Lab Sample ID: 400-178037-5**

Date Collected: 10/08/19 08:42

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00213	U	0.0997	0.0997	1.00	0.195	pCi/L	10/18/19 17:08	11/13/19 11:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.7		40 - 110					10/18/19 17:08	11/13/19 11:29	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.287	U *	0.480	0.481	1.00	0.809	pCi/L	10/18/19 18:38	11/01/19 17:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.7		40 - 110					10/18/19 18:38	11/01/19 17:48	1
Y Carrier	90.5		40 - 110					10/18/19 18:38	11/01/19 17:48	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	0.290	U	0.490	0.491	5.00	0.809	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23095 MW-14**

**Lab Sample ID: 400-178037-6**

Date Collected: 10/08/19 09:33

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0900	U	0.121	0.121	1.00	0.203	pCi/L	10/18/19 17:08	11/13/19 11:29	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	81.6		40 - 110					10/18/19 17:08	11/13/19 11:29	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.388	U * G	0.607	0.608	1.00	1.02	pCi/L	10/18/19 18:38	11/01/19 17:48	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	81.6		40 - 110					10/18/19 18:38	11/01/19 17:48	1
Y Carrier	54.2		40 - 110					10/18/19 18:38	11/01/19 17:48	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	0.478	U	0.619	0.620	5.00	1.02	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23096 MW-15**

**Lab Sample ID: 400-178037-7**

Date Collected: 10/08/19 10:23

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0326	U	0.115	0.116	1.00	0.239	pCi/L	10/18/19 17:08	11/13/19 11:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.7		40 - 110					10/18/19 17:08	11/13/19 11:29	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.745	U *	0.514	0.518	1.00	0.796	pCi/L	10/18/19 18:38	11/01/19 17:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.7		40 - 110					10/18/19 18:38	11/01/19 17:48	1
Y Carrier	84.9		40 - 110					10/18/19 18:38	11/01/19 17:48	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	0.712	U	0.527	0.531	5.00	0.796	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23097 MW-16**

**Lab Sample ID: 400-178037-8**

Date Collected: 10/08/19 11:12

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0576	U	0.117	0.117	1.00	0.207	pCi/L	10/18/19 17:08	11/13/19 11:29	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	78.8		40 - 110					10/18/19 17:08	11/13/19 11:29	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.691	U *	0.507	0.511	1.00	0.803	pCi/L	10/18/19 18:38	11/01/19 17:51	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	78.8		40 - 110					10/18/19 18:38	11/01/19 17:51	1
Y Carrier	86.4		40 - 110					10/18/19 18:38	11/01/19 17:51	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	0.748	U	0.520	0.524	5.00	0.803	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23098 MW-16 DUP**

**Lab Sample ID: 400-178037-9**

Date Collected: 10/08/19 11:12

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0793	U	0.117	0.117	1.00	0.198	pCi/L	10/18/19 17:08	11/13/19 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.8		40 - 110					10/18/19 17:08	11/13/19 11:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.220	U *	0.451	0.452	1.00	0.767	pCi/L	10/18/19 18:38	11/01/19 17:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.8		40 - 110					10/18/19 18:38	11/01/19 17:51	1
Y Carrier	88.6		40 - 110					10/18/19 18:38	11/01/19 17:51	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	0.299	U	0.466	0.467	5.00	0.767	pCi/L		11/15/19 07:31	1



# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23099 MW-17R**

**Lab Sample ID: 400-178037-10**

Date Collected: 10/08/19 12:19

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0575	U	0.107	0.107	1.00	0.187	pCi/L	10/18/19 17:08	11/13/19 13:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.8		40 - 110					10/18/19 17:08	11/13/19 13:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.530	U *	0.489	0.492	1.00	0.791	pCi/L	10/18/19 18:38	11/01/19 17:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.8		40 - 110					10/18/19 18:38	11/01/19 17:51	1
Y Carrier	83.4		40 - 110					10/18/19 18:38	11/01/19 17:51	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	0.587	U	0.501	0.504	5.00	0.791	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23100 FB-1**

**Lab Sample ID: 400-178037-11**

Date Collected: 10/08/19 12:44

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0464	U	0.0949	0.0950	1.00	0.204	pCi/L	10/18/19 17:08	11/13/19 13:24	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	78.0		40 - 110					10/18/19 17:08	11/13/19 13:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.140	U *	0.440	0.440	1.00	0.762	pCi/L	10/18/19 18:38	11/01/19 17:51	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	78.0		40 - 110					10/18/19 18:38	11/01/19 17:51	1
Y Carrier	82.2		40 - 110					10/18/19 18:38	11/01/19 17:51	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	0.0935	U	0.450	0.450	5.00	0.762	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23101 MW-18**

**Lab Sample ID: 400-178037-12**

Date Collected: 10/08/19 13:33

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.128	U	0.0812	0.0820	1.00	0.216	pCi/L	10/18/19 17:08	11/13/19 13:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.6		40 - 110					10/18/19 17:08	11/13/19 13:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0404	U *	0.457	0.457	1.00	0.818	pCi/L	10/18/19 18:38	11/01/19 17:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.6		40 - 110					10/18/19 18:38	11/01/19 17:51	1
Y Carrier	84.9		40 - 110					10/18/19 18:38	11/01/19 17:51	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	-0.169	U	0.464	0.464	5.00	0.818	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23102 MW-19**

**Lab Sample ID: 400-178037-13**

Date Collected: 10/08/19 14:32

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0784	U	0.118	0.118	1.00	0.201	pCi/L	10/18/19 17:08	11/13/19 13:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.1		40 - 110					10/18/19 17:08	11/13/19 13:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.538	U * G	0.709	0.711	1.00	1.18	pCi/L	10/18/19 18:38	11/01/19 17:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.1		40 - 110					10/18/19 18:38	11/01/19 17:51	1
Y Carrier	57.2		40 - 110					10/18/19 18:38	11/01/19 17:51	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	0.616	U	0.719	0.721	5.00	1.18	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23103 MW-7**

**Lab Sample ID: 400-178037-14**

Date Collected: 10/08/19 15:40

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0406	U	0.117	0.117	1.00	0.214	pCi/L	10/18/19 17:08	11/13/19 13:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	71.8		40 - 110					10/18/19 17:08	11/13/19 13:25	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 * G	0.740	0.741	1.00	1.27	pCi/L	10/18/19 18:38	11/01/19 17:52	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	71.8		40 - 110					10/18/19 18:38	11/01/19 17:52	1
Y Carrier	60.9		40 - 110					10/18/19 18:38	11/01/19 17:52	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	0.345	U	0.749	0.750	5.00	1.27	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23221 MW-10**

**Lab Sample ID: 400-178037-15**

Date Collected: 10/09/19 12:50

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0258	U	0.123	0.123	1.00	0.232	pCi/L	10/18/19 17:08	11/13/19 13:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	61.6		40 - 110					10/18/19 17:08	11/13/19 13:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.716	U * G	0.682	0.685	1.00	1.10	pCi/L	10/18/19 18:38	11/01/19 17:52	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	61.6		40 - 110					10/18/19 18:38	11/01/19 17:52	1
Y Carrier	68.8		40 - 110					10/18/19 18:38	11/01/19 17:52	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	0.742	U	0.693	0.696	5.00	1.10	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23222 MW-8**

**Lab Sample ID: 400-178037-16**

Date Collected: 10/09/19 13:55

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0576	U	0.0881	0.0882	1.00	0.198	pCi/L	10/18/19 17:08	11/13/19 13:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.4		40 - 110					10/18/19 17:08	11/13/19 13:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.474	U *	0.437	0.439	1.00	0.704	pCi/L	10/18/19 18:38	11/01/19 17:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.4		40 - 110					10/18/19 18:38	11/01/19 17:52	1
Y Carrier	83.4		40 - 110					10/18/19 18:38	11/01/19 17:52	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	0.416	U	0.446	0.448	5.00	0.704	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23223 MW-12**

**Lab Sample ID: 400-178037-17**

Date Collected: 10/09/19 15:10

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.154</b>		0.107	0.108	1.00	0.147	pCi/L	10/18/19 17:08	11/13/19 13:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.1		40 - 110					10/18/19 17:08	11/13/19 13:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>1.03</b>	*	0.531	0.539	1.00	0.790	pCi/L	10/18/19 18:38	11/01/19 17:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.1		40 - 110					10/18/19 18:38	11/01/19 17:52	1
Y Carrier	80.0		40 - 110					10/18/19 18:38	11/01/19 17:52	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
<b>Combined Radium 226 + 228</b>	<b>1.18</b>		0.542	0.550	5.00	0.790	pCi/L		11/15/19 07:31	1



# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23224 EB-2**

**Lab Sample ID: 400-178037-18**

Date Collected: 10/10/19 10:50

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0597	U	0.0713	0.0715	1.00	0.175	pCi/L	10/18/19 17:08	11/13/19 13:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		40 - 110					10/18/19 17:08	11/13/19 13:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.111	U*	0.422	0.422	1.00	0.737	pCi/L	10/18/19 18:38	11/01/19 17:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		40 - 110					10/18/19 18:38	11/01/19 17:52	1
Y Carrier	82.2		40 - 110					10/18/19 18:38	11/01/19 17:52	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	0.0516	U	0.428	0.428	5.00	0.737	pCi/L		11/15/19 07:31	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23225 MW-12V**

**Lab Sample ID: 400-178037-19**

Date Collected: 10/10/19 11:30

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.152	U *	0.0965	0.0975	1.00	0.257	pCi/L	10/18/19 19:01	11/14/19 08:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.7		40 - 110					10/18/19 19:01	11/14/19 08:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.599	U	0.616	0.618	1.00	1.00	pCi/L	10/18/19 19:42	11/04/19 17:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.7		40 - 110					10/18/19 19:42	11/04/19 17:46	1
Y Carrier	83.0		40 - 110					10/18/19 19:42	11/04/19 17:46	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	0.446	U	0.624	0.626	5.00	1.00	pCi/L		11/19/19 08:13	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23226 MW-11**

**Lab Sample ID: 400-178037-20**

Date Collected: 10/10/19 13:18

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.132	U *	0.120	0.120	1.00	0.186	pCi/L	10/18/19 19:01	11/14/19 08:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110					10/18/19 19:01	11/14/19 08:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.770		0.385	0.392	1.00	0.560	pCi/L	10/18/19 19:42	11/04/19 17:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110					10/18/19 19:42	11/04/19 17:46	1
Y Carrier	79.3		40 - 110					10/18/19 19:42	11/04/19 17:46	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	0.902		0.403	0.410	5.00	0.560	pCi/L		11/19/19 08:13	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23227 MW-6**

**Lab Sample ID: 400-178037-21**

Date Collected: 10/10/19 10:14

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00584	U *	0.140	0.140	1.00	0.277	pCi/L	10/18/19 19:01	11/14/19 08:43	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	56.2		40 - 110					10/18/19 19:01	11/14/19 08:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.71		0.660	0.678	1.00	0.914	pCi/L	10/18/19 19:42	11/04/19 17:46	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	56.2		40 - 110					10/18/19 19:42	11/04/19 17:46	1
Y Carrier	83.4		40 - 110					10/18/19 19:42	11/04/19 17:46	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	1.71		0.675	0.692	5.00	0.914	pCi/L		11/19/19 08:13	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23228 MW-5**

**Lab Sample ID: 400-178037-22**

Date Collected: 10/10/19 11:11

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0933	U *	0.0994	0.0997	1.00	0.240	pCi/L	10/18/19 19:01	11/14/19 08:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.4		40 - 110					10/18/19 19:01	11/14/19 08:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.904		0.545	0.552	1.00	0.826	pCi/L	10/18/19 19:42	11/04/19 17:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.4		40 - 110					10/18/19 19:42	11/04/19 17:46	1
Y Carrier	80.4		40 - 110					10/18/19 19:42	11/04/19 17:46	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	0.811	U	0.554	0.561	5.00	0.826	pCi/L		11/19/19 08:13	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23229 MW-4**

**Lab Sample ID: 400-178037-23**

Date Collected: 10/10/19 12:09

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0249	U *	0.0930	0.0930	1.00	0.193	pCi/L	10/18/19 19:01	11/14/19 08:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.5		40 - 110					10/18/19 19:01	11/14/19 08:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.05	U G	0.820	0.825	1.00	1.30	pCi/L	10/18/19 19:42	11/04/19 17:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.5		40 - 110					10/18/19 19:42	11/04/19 17:46	1
Y Carrier	40.7		40 - 110					10/18/19 19:42	11/04/19 17:46	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	1.02	U	0.825	0.830	5.00	1.30	pCi/L		11/19/19 08:13	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23230 FB-2**

**Lab Sample ID: 400-178037-24**

Date Collected: 10/10/19 12:24

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0617	U *	0.0794	0.0796	1.00	0.132	pCi/L	10/18/19 19:01	11/14/19 08:43	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.1		40 - 110					10/18/19 19:01	11/14/19 08:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.228	U	0.369	0.369	1.00	0.621	pCi/L	10/18/19 19:42	11/04/19 17:46	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.1		40 - 110					10/18/19 19:42	11/04/19 17:46	1
Y Carrier	81.9		40 - 110					10/18/19 19:42	11/04/19 17:46	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	0.290	U	0.377	0.377	5.00	0.621	pCi/L		11/19/19 08:13	1

# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23231 MW-20**

**Lab Sample ID: 400-178037-25**

Date Collected: 10/10/19 13:03

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.168	U *	0.125	0.126	1.00	0.183	pCi/L	10/18/19 19:01	11/14/19 08:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.5		40 - 110					10/18/19 19:01	11/14/19 08:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.01		0.466	0.475	1.00	0.668	pCi/L	10/18/19 19:42	11/04/19 17:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.5		40 - 110					10/18/19 19:42	11/04/19 17:47	1
Y Carrier	80.7		40 - 110					10/18/19 19:42	11/04/19 17:47	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	1.18		0.482	0.491	5.00	0.668	pCi/L		11/19/19 08:13	1



# Client Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23232 EB-1**

**Lab Sample ID: 400-178037-26**

Date Collected: 10/10/19 13:20

Matrix: Water

Date Received: 10/15/19 13:15

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0129	U *	0.103	0.103	1.00	0.198	pCi/L	10/18/19 19:01	11/14/19 08:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.6		40 - 110					10/18/19 19:01	11/14/19 08:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.477	U	0.406	0.408	1.00	0.791	pCi/L	10/18/19 19:42	11/04/19 17:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.6		40 - 110					10/18/19 19:42	11/04/19 17:47	1
Y Carrier	89.0		40 - 110					10/18/19 19:42	11/04/19 17:47	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	-0.464	U	0.419	0.421	5.00	0.791	pCi/L		11/19/19 08:13	1

# Definitions/Glossary

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

Job ID: 400-178037-1  
SDG: Gorgas Landfill 1246

## Qualifiers

### Rad

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
G	The Sample MDC is greater than the requested RL.
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: 400-178037-1  
 SDG: Gorgas Landfill 1246

## Client Sample ID: AZ23055 MW-1

## Lab Sample ID: 400-178037-1

Date Collected: 10/08/19 11:20

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 11:28	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448537	11/01/19 17:47	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

## Client Sample ID: AZ23056 MW-2

## Lab Sample ID: 400-178037-2

Date Collected: 10/08/19 12:40

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 11:29	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448537	11/01/19 17:47	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

## Client Sample ID: AZ23057 MW-2 DUP

## Lab Sample ID: 400-178037-3

Date Collected: 10/08/19 12:40

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 11:29	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448537	11/01/19 17:48	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

## Client Sample ID: AZ23058 MW-3

## Lab Sample ID: 400-178037-4

Date Collected: 10/08/19 14:15

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 11:29	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448537	11/01/19 17:48	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

# Lab Chronicle

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

## Client Sample ID: AZ23094 MW-13

**Lab Sample ID: 400-178037-5**

Date Collected: 10/08/19 08:42

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 11:29	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448537	11/01/19 17:48	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

## Client Sample ID: AZ23095 MW-14

**Lab Sample ID: 400-178037-6**

Date Collected: 10/08/19 09:33

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 11:29	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448537	11/01/19 17:48	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

## Client Sample ID: AZ23096 MW-15

**Lab Sample ID: 400-178037-7**

Date Collected: 10/08/19 10:23

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 11:29	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448537	11/01/19 17:48	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

## Client Sample ID: AZ23097 MW-16

**Lab Sample ID: 400-178037-8**

Date Collected: 10/08/19 11:12

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 11:29	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:51	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

# Lab Chronicle

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

Job ID: 400-178037-1  
SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23098 MW-16 DUP**

**Lab Sample ID: 400-178037-9**

**Date Collected: 10/08/19 11:12**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 11:30	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:51	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

**Client Sample ID: AZ23099 MW-17R**

**Lab Sample ID: 400-178037-10**

**Date Collected: 10/08/19 12:19**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 13:24	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:51	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

**Client Sample ID: AZ23100 FB-1**

**Lab Sample ID: 400-178037-11**

**Date Collected: 10/08/19 12:44**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 13:24	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:51	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

**Client Sample ID: AZ23101 MW-18**

**Lab Sample ID: 400-178037-12**

**Date Collected: 10/08/19 13:33**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 13:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:51	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

# Lab Chronicle

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

## Client Sample ID: AZ23102 MW-19

## Lab Sample ID: 400-178037-13

Date Collected: 10/08/19 14:32

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 13:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:51	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

## Client Sample ID: AZ23103 MW-7

## Lab Sample ID: 400-178037-14

Date Collected: 10/08/19 15:40

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 13:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:52	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

## Client Sample ID: AZ23221 MW-10

## Lab Sample ID: 400-178037-15

Date Collected: 10/09/19 12:50

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 13:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:52	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

## Client Sample ID: AZ23222 MW-8

## Lab Sample ID: 400-178037-16

Date Collected: 10/09/19 13:55

Matrix: Water

Date Received: 10/15/19 13:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 13:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:52	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

# Lab Chronicle

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23223 MW-12**

**Lab Sample ID: 400-178037-17**

**Date Collected: 10/09/19 15:10**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 13:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:52	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

**Client Sample ID: AZ23224 EB-2**

**Lab Sample ID: 400-178037-18**

**Date Collected: 10/10/19 10:50**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446982	10/18/19 17:08	ORM	TAL SL
Total/NA	Analysis	9315		1	450204	11/13/19 13:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			446984	10/18/19 18:38	ORM	TAL SL
Total/NA	Analysis	9320		1	448532	11/01/19 17:52	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/15/19 07:31	SMP	TAL SL

**Client Sample ID: AZ23225 MW-12V**

**Lab Sample ID: 400-178037-19**

**Date Collected: 10/10/19 11:30**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446985	10/18/19 19:01	ORM	TAL SL
Total/NA	Analysis	9315		1	450354	11/14/19 08:42	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			446988	10/18/19 19:42	ORM	TAL SL
Total/NA	Analysis	9320		1	448682	11/04/19 17:46	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/19/19 08:13	SMP	TAL SL

**Client Sample ID: AZ23226 MW-11**

**Lab Sample ID: 400-178037-20**

**Date Collected: 10/10/19 13:18**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446985	10/18/19 19:01	ORM	TAL SL
Total/NA	Analysis	9315		1	450354	11/14/19 08:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			446988	10/18/19 19:42	ORM	TAL SL
Total/NA	Analysis	9320		1	448682	11/04/19 17:46	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/19/19 08:13	SMP	TAL SL

# Lab Chronicle

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23227 MW-6**

**Lab Sample ID: 400-178037-21**

**Date Collected: 10/10/19 10:14**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446985	10/18/19 19:01	ORM	TAL SL
Total/NA	Analysis	9315		1	450354	11/14/19 08:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			446988	10/18/19 19:42	ORM	TAL SL
Total/NA	Analysis	9320		1	448682	11/04/19 17:46	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/19/19 08:13	SMP	TAL SL

**Client Sample ID: AZ23228 MW-5**

**Lab Sample ID: 400-178037-22**

**Date Collected: 10/10/19 11:11**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446985	10/18/19 19:01	ORM	TAL SL
Total/NA	Analysis	9315		1	450354	11/14/19 08:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			446988	10/18/19 19:42	ORM	TAL SL
Total/NA	Analysis	9320		1	448682	11/04/19 17:46	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/19/19 08:13	SMP	TAL SL

**Client Sample ID: AZ23229 MW-4**

**Lab Sample ID: 400-178037-23**

**Date Collected: 10/10/19 12:09**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446985	10/18/19 19:01	ORM	TAL SL
Total/NA	Analysis	9315		1	450354	11/14/19 08:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			446988	10/18/19 19:42	ORM	TAL SL
Total/NA	Analysis	9320		1	448682	11/04/19 17:46	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/19/19 08:13	SMP	TAL SL

**Client Sample ID: AZ23230 FB-2**

**Lab Sample ID: 400-178037-24**

**Date Collected: 10/10/19 12:24**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446985	10/18/19 19:01	ORM	TAL SL
Total/NA	Analysis	9315		1	450354	11/14/19 08:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			446988	10/18/19 19:42	ORM	TAL SL
Total/NA	Analysis	9320		1	448682	11/04/19 17:46	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/19/19 08:13	SMP	TAL SL



# Lab Chronicle

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

**Client Sample ID: AZ23231 MW-20**

**Lab Sample ID: 400-178037-25**

**Date Collected: 10/10/19 13:03**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446985	10/18/19 19:01	ORM	TAL SL
Total/NA	Analysis	9315		1	450354	11/14/19 08:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			446988	10/18/19 19:42	ORM	TAL SL
Total/NA	Analysis	9320		1	448682	11/04/19 17:47	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/19/19 08:13	SMP	TAL SL

**Client Sample ID: AZ23232 EB-1**

**Lab Sample ID: 400-178037-26**

**Date Collected: 10/10/19 13:20**

**Matrix: Water**

**Date Received: 10/15/19 13:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			446985	10/18/19 19:01	ORM	TAL SL
Total/NA	Analysis	9315		1	450354	11/14/19 08:43	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			446988	10/18/19 19:42	ORM	TAL SL
Total/NA	Analysis	9320		1	448682	11/04/19 17:47	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	450498	11/19/19 08:13	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: 400-178037-1  
 SDG: Gorgas Landfill 1246

## Rad

### Prep Batch: 446982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178037-1	AZ23055 MW-1	Total/NA	Water	PrecSep-21	
400-178037-2	AZ23056 MW-2	Total/NA	Water	PrecSep-21	
400-178037-3	AZ23057 MW-2 DUP	Total/NA	Water	PrecSep-21	
400-178037-4	AZ23058 MW-3	Total/NA	Water	PrecSep-21	
400-178037-5	AZ23094 MW-13	Total/NA	Water	PrecSep-21	
400-178037-6	AZ23095 MW-14	Total/NA	Water	PrecSep-21	
400-178037-7	AZ23096 MW-15	Total/NA	Water	PrecSep-21	
400-178037-8	AZ23097 MW-16	Total/NA	Water	PrecSep-21	
400-178037-9	AZ23098 MW-16 DUP	Total/NA	Water	PrecSep-21	
400-178037-10	AZ23099 MW-17R	Total/NA	Water	PrecSep-21	
400-178037-11	AZ23100 FB-1	Total/NA	Water	PrecSep-21	
400-178037-12	AZ23101 MW-18	Total/NA	Water	PrecSep-21	
400-178037-13	AZ23102 MW-19	Total/NA	Water	PrecSep-21	
400-178037-14	AZ23103 MW-7	Total/NA	Water	PrecSep-21	
400-178037-15	AZ23221 MW-10	Total/NA	Water	PrecSep-21	
400-178037-16	AZ23222 MW-8	Total/NA	Water	PrecSep-21	
400-178037-17	AZ23223 MW-12	Total/NA	Water	PrecSep-21	
400-178037-18	AZ23224 EB-2	Total/NA	Water	PrecSep-21	
MB 160-446982/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-446982/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-178037-1 DU	AZ23055 MW-1	Total/NA	Water	PrecSep-21	
400-178037-6 DU	AZ23095 MW-14	Total/NA	Water	PrecSep-21	

### Prep Batch: 446984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178037-1	AZ23055 MW-1	Total/NA	Water	PrecSep_0	
400-178037-2	AZ23056 MW-2	Total/NA	Water	PrecSep_0	
400-178037-3	AZ23057 MW-2 DUP	Total/NA	Water	PrecSep_0	
400-178037-4	AZ23058 MW-3	Total/NA	Water	PrecSep_0	
400-178037-5	AZ23094 MW-13	Total/NA	Water	PrecSep_0	
400-178037-6	AZ23095 MW-14	Total/NA	Water	PrecSep_0	
400-178037-7	AZ23096 MW-15	Total/NA	Water	PrecSep_0	
400-178037-8	AZ23097 MW-16	Total/NA	Water	PrecSep_0	
400-178037-9	AZ23098 MW-16 DUP	Total/NA	Water	PrecSep_0	
400-178037-10	AZ23099 MW-17R	Total/NA	Water	PrecSep_0	
400-178037-11	AZ23100 FB-1	Total/NA	Water	PrecSep_0	
400-178037-12	AZ23101 MW-18	Total/NA	Water	PrecSep_0	
400-178037-13	AZ23102 MW-19	Total/NA	Water	PrecSep_0	
400-178037-14	AZ23103 MW-7	Total/NA	Water	PrecSep_0	
400-178037-15	AZ23221 MW-10	Total/NA	Water	PrecSep_0	
400-178037-16	AZ23222 MW-8	Total/NA	Water	PrecSep_0	
400-178037-17	AZ23223 MW-12	Total/NA	Water	PrecSep_0	
400-178037-18	AZ23224 EB-2	Total/NA	Water	PrecSep_0	
MB 160-446984/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-446984/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-178037-1 DU	AZ23055 MW-1	Total/NA	Water	PrecSep_0	
400-178037-6 DU	AZ23095 MW-14	Total/NA	Water	PrecSep_0	

### Prep Batch: 446985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178037-19	AZ23225 MW-12V	Total/NA	Water	PrecSep-21	

# QC Association Summary

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

Job ID: 400-178037-1  
SDG: Gorgas Landfill 1246

## Rad (Continued)

### Prep Batch: 446985 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178037-20	AZ23226 MW-11	Total/NA	Water	PrecSep-21	
400-178037-21	AZ23227 MW-6	Total/NA	Water	PrecSep-21	
400-178037-22	AZ23228 MW-5	Total/NA	Water	PrecSep-21	
400-178037-23	AZ23229 MW-4	Total/NA	Water	PrecSep-21	
400-178037-24	AZ23230 FB-2	Total/NA	Water	PrecSep-21	
400-178037-25	AZ23231 MW-20	Total/NA	Water	PrecSep-21	
400-178037-26	AZ23232 EB-1	Total/NA	Water	PrecSep-21	
MB 160-446985/17-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-446985/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-446985/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 446988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-178037-19	AZ23225 MW-12V	Total/NA	Water	PrecSep_0	
400-178037-20	AZ23226 MW-11	Total/NA	Water	PrecSep_0	
400-178037-21	AZ23227 MW-6	Total/NA	Water	PrecSep_0	
400-178037-22	AZ23228 MW-5	Total/NA	Water	PrecSep_0	
400-178037-23	AZ23229 MW-4	Total/NA	Water	PrecSep_0	
400-178037-24	AZ23230 FB-2	Total/NA	Water	PrecSep_0	
400-178037-25	AZ23231 MW-20	Total/NA	Water	PrecSep_0	
400-178037-26	AZ23232 EB-1	Total/NA	Water	PrecSep_0	
MB 160-446988/17-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-446988/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-446988/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

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

**Lab Sample ID: MB 160-446982/22-A**  
**Matrix: Water**  
**Analysis Batch: 450204**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 446982**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.07996	U	0.0910	0.0913	1.00	0.216	pCi/L	10/18/19 17:08	11/13/19 13:25	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					10/18/19 17:08	11/13/19 13:25	1
	65.5									

**Lab Sample ID: LCS 160-446982/1-A**  
**Matrix: Water**  
**Analysis Batch: 450204**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 446982**

Analyte	LCS LCS		Spike	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qual	Uncert. (2σ+/-)					
Radium-226			15.1	13.87		1.48	1.00	0.208	pCi/L	92	75 - 125
Carrier	LCS LCS		Limits								
Ba Carrier	%Yield	Qualifier	40 - 110								
	74.0										

**Lab Sample ID: 400-178037-1 DU**  
**Matrix: Water**  
**Analysis Batch: 450204**

**Client Sample ID: AZ23055 MW-1**  
**Prep Type: Total/NA**  
**Prep Batch: 446982**

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit	
	Result	Qual	Result	Qual	Uncert. (2σ+/-)						
Radium-226	0.0316	U	-0.07823	U	0.0836	1.00	0.202	pCi/L	0.53	1	
Carrier	DU DU		Limits								
Ba Carrier	%Yield	Qualifier	40 - 110								
	72.6										

**Lab Sample ID: 400-178037-6 DU**  
**Matrix: Water**  
**Analysis Batch: 450204**

**Client Sample ID: AZ23095 MW-14**  
**Prep Type: Total/NA**  
**Prep Batch: 446982**

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit	
	Result	Qual	Result	Qual	Uncert. (2σ+/-)						
Radium-226	0.0900	U	-0.01079	U	0.101	1.00	0.203	pCi/L	0.45	1	
Carrier	DU DU		Limits								
Ba Carrier	%Yield	Qualifier	40 - 110								
	80.2										

**Lab Sample ID: MB 160-446985/17-A**  
**Matrix: Water**  
**Analysis Batch: 450352**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 446985**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.02824	U	0.0824	0.0824	1.00	0.175	pCi/L	10/18/19 19:01	11/14/19 08:44	1

Eurofins TestAmerica, Pensacola

# QC Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

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

**Lab Sample ID: MB 160-446985/17-A**  
**Matrix: Water**  
**Analysis Batch: 450352**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 446985**

	<i>MB</i>	<i>MB</i>							
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>		<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>		
<i>Ba Carrier</i>	90.4		40 - 110		10/18/19 19:01	11/14/19 08:44	1		

**Lab Sample ID: LCS 160-446985/1-A**  
**Matrix: Water**  
**Analysis Batch: 450354**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 446985**

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qual</i>	<i>Total Uncert. (2σ+/-)</i>	<i>RL</i>	<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec. Limits</i>	
Radium-226	15.1	12.51		1.34	1.00	0.185	pCi/L	83	75 - 125	

	<i>LCS</i>	<i>LCS</i>	
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Ba Carrier</i>	84.5		40 - 110

**Lab Sample ID: LCSD 160-446985/2-A**  
**Matrix: Water**  
**Analysis Batch: 450354**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 446985**

<i>Analyte</i>	<i>Spike Added</i>	<i>LCSD Result</i>	<i>LCSD Qual</i>	<i>Total Uncert. (2σ+/-)</i>	<i>RL</i>	<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec. Limits</i>	<i>RER</i>	<i>RER Limit</i>
Radium-226	15.1	15.66	*	1.64	1.00	0.213	pCi/L	103	75 - 125	1.06	1

	<i>LCSD</i>	<i>LCSD</i>	
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Ba Carrier</i>	78.2		40 - 110

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

**Lab Sample ID: MB 160-446984/22-A**  
**Matrix: Water**  
**Analysis Batch: 448532**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 446984**

	<i>MB</i>	<i>MB</i>								
<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>Count Uncert. (2σ+/-)</i>	<i>Total Uncert. (2σ+/-)</i>	<i>RL</i>	<i>MDC</i>	<i>Unit</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Radium-228	-0.02888	U G	0.614	0.614	1.00	1.10	pCi/L	10/18/19 18:38	11/01/19 17:52	1

	<i>MB</i>	<i>MB</i>							
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>			
<i>Ba Carrier</i>	65.5		40 - 110	10/18/19 18:38	11/01/19 17:52	1			
<i>Y Carrier</i>	65.8		40 - 110	10/18/19 18:38	11/01/19 17:52	1			

**Lab Sample ID: LCS 160-446984/1-A**  
**Matrix: Water**  
**Analysis Batch: 448537**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 446984**

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qual</i>	<i>Total Uncert. (2σ+/-)</i>	<i>RL</i>	<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec. Limits</i>	
Radium-228	12.6	17.76	*	2.06	1.00	0.659	pCi/L	141	75 - 125	

# QC Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

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

**Lab Sample ID: LCS 160-446984/1-A**  
**Matrix: Water**  
**Analysis Batch: 448537**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 446984**

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	74.0		40 - 110
Y Carrier	81.5		40 - 110

**Lab Sample ID: 400-178037-1 DU**  
**Matrix: Water**  
**Analysis Batch: 448537**

**Client Sample ID: AZ23055 MW-1**  
**Prep Type: Total/NA**  
**Prep Batch: 446984**

Analyte	Sample		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	Limit
	Result	Qual								
Radium-228	1.44	*	0.4852	U *	0.428	1.00	0.681	pCi/L	0.94	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	72.6		40 - 110
Y Carrier	84.1		40 - 110

**Lab Sample ID: 400-178037-6 DU**  
**Matrix: Water**  
**Analysis Batch: 448537**

**Client Sample ID: AZ23095 MW-14**  
**Prep Type: Total/NA**  
**Prep Batch: 446984**

Analyte	Sample		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	Limit
	Result	Qual								
Radium-228	0.388	U * G	0.3987	U *	0.440	1.00	0.718	pCi/L	0.01	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	80.2		40 - 110
Y Carrier	77.0		40 - 110

**Lab Sample ID: MB 160-446988/17-A**  
**Matrix: Water**  
**Analysis Batch: 448717**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 446988**

Analyte	MB		Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-228	0.1676	U	0.445	0.445	1.00	0.762	pCi/L	10/18/19 19:42	11/04/19 17:49	1

	MB	MB		Prepared	Analyzed	Dil Fac
Carrier	%Yield	Qualifier	Limits			
Ba Carrier	90.4		40 - 110	10/18/19 19:42	11/04/19 17:49	1
Y Carrier	78.9		40 - 110	10/18/19 19:42	11/04/19 17:49	1

**Lab Sample ID: LCS 160-446988/1-A**  
**Matrix: Water**  
**Analysis Batch: 448714**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 446988**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits

# QC Sample Results

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

Job ID: 400-178037-1  
 SDG: Gorgas Landfill 1246

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

**Lab Sample ID: LCS 160-446988/1-A**  
**Matrix: Water**  
**Analysis Batch: 448714**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 446988**

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	84.5		40 - 110
Y Carrier	76.3		40 - 110

**Lab Sample ID: LCSD 160-446988/2-A**  
**Matrix: Water**  
**Analysis Batch: 448682**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 446988**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec.		RER	Limit
									Limits	RER		
Radium-228	12.6	12.97		1.58	1.00	0.665	pCi/L	103	75 - 125	0.37	1	

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	78.2		40 - 110
Y Carrier	87.1		40 - 110

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-178037-1 DU**  
**Matrix: Water**  
**Analysis Batch: 450498**

**Client Sample ID: AZ23055 MW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	Limit

**Lab Sample ID: 400-178037-6 DU**  
**Matrix: Water**  
**Analysis Batch: 450498**

**Client Sample ID: AZ23095 MW-14**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	Limit







**Chain of Custody Record**

Client Information (Sub Contract Lab)		Sampler		Carrier Tracking Note(s)		COC No.	
Alabama Power General Test Laboratory		Dallas Genery		Whitmore, Chyenne R		400-56525-24537.1	
744 County Rd 87 GSC#8		Phone:		State of Origin:		Page 2 of 4	
City: Calera		Laura Midkiff		Alabama		Job #:	
State, Zip: AL, 35040		E-Mail: cheyenne.whitmore@testamericainc.com		Preservation Codes:			
Phone: 205-664-6197		Due Date Requested:		M - Heroin			
Email: lmidkiff@southernco.com		TAT Requested (days): Routine		N - None			
Project Name: CCR		PO #:		O - Narcotics			
Project #: 40007143		W/O #:		P - Marijuana			
SSOW#: 744		Sample Date		Q - NARS04			
Site: Gorgas Landfill 1246		Sample Time		R - NARS03			
		Sample Type (C=comp, G=grab)		S - H2SO4			
		Preservation Code		T - TSP Dodecahydrate			
		Matrix (Water, Urine, Blood, etc)		U - Acetone			
		Sample Time		V - MCAA			
		Sample Date		W - pH-45			
		Sample Type (C=comp, G=grab)		X - other (specify)			
		Preservation Code		Other:			
		Sample Time		Total Number of Containers			
		Sample Date		Special Instructions/Note:			
		Sample Type (C=comp, G=grab)		1 MW-13			
		Preservation Code		3 MW-14			
		Matrix (Water, Urine, Blood, etc)		1 MW-15			
		Sample Time		1 MW-16			
		Sample Date		1 MW-16 DUP (Sample Duplicate)			
		Sample Type (C=comp, G=grab)		1 MW-17R			
		Preservation Code		1 FB-1 (Field Blank)			
		Matrix (Water, Urine, Blood, etc)		1 MW-18			
		Sample Time		1 MW-19			
		Sample Date		1 MW-7			
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
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		Sample Type (C=comp, G=grab)					
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		Sample Type (C=comp, G=grab)					
		Preservation Code					
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		Sample Type (C=comp, G=grab)					
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		Preservation Code					
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		Sample Time					
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		Sample Type (C=comp, G=grab)					
		Preservation Code					
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		Sample Type (C=comp, G=grab)					
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		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
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		Sample Type (C=comp, G=grab)					
		Preservation Code					
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		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
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		Sample Type (C=comp, G=grab)					
		Preservation Code					
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		Sample Type (C=comp, G=grab)					
		Preservation Code					
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		Sample Type (C=comp, G=grab)					
		Preservation Code					
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		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
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		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					
		Sample Type (C=comp, G=grab)					
		Preservation Code					
		Matrix (Water, Urine, Blood, etc)					
		Sample Time					
		Sample Date					

Chain of Custody Record

Client Information (Sub Contract Lab)  
 Client Contact: Laura Mickitt  
 Company: Alabama Power General Test Laboratory  
 Address: 744 County Rd 87 CSC#8  
 City: Calera  
 State, Zip: AL, 35040  
 Phone: 205-664-6197  
 Email: lmickitt@southernco.com  
 Project Name: CCR  
 Project # 40007143  
 SSOW#  
 Site: Gorgas Landfill 1246

Sampler: Anthony Goggins  
 Phone:  
 Lab #M: Whitmore, Chyenne R  
 State of Origin: Alabama  
 Carrier Tracking Note:  
 Page: 3 of 4  
 COC No: 400-56525-24537.1  
 Job #:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Other, etc.)	Preservation Code	Field Filtered Sample (Yes or No)		Performance (MS/MSD) (Yes or No)		Analysis Requested	Preservation Codes:	Special Instructions/Note:
						Field Filtered	MS/MSD	Performance	MS/MSD			
AZ23221	10/9/19	12:50	G	Water						SM 4500 F.C	M - Hexane N - Nona O - Ash/JAO2 P - Nitric Acid Q - Nitrous Acid R - NaOH S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 X - EDTA Z - other (specify)	
AZ23222	10/9/19	13:55	G	Water						SM 4500 SO4.F		
AZ23223	10/9/19	15:10	G	Water						9315 Ra226, 9320 Ra228, Ra228Ra228, GPPC		
AZ23224	10/10/19	10:50	G	Water								
AZ23225	10/10/19	11:30	G	Water								
AZ23226	10/10/19	13:18	G	Water								

Method of Shipment:  Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_

43593 Special Instructions/OC Requirements

Empty Kit Relinquished by: Laura Mickitt Date/Time: 10/11/19 13:00  
 Relinquished by: Company  
 Relinquished by: Company  
 Relinquished by: Company

Method of Shipment:  Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_

43593 Special Instructions/OC Requirements

Empty Kit Relinquished by: Laura Mickitt Date/Time: 10/11/19 13:00  
 Relinquished by: Company  
 Relinquished by: Company  
 Relinquished by: Company

Custody Seal Intact:  Custody Seal No.: \_\_\_\_\_

Ver: 09/20/2016







## Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-178037-1  
SDG Number: Gorgas Landfill 1246

**Login Number: 178037**

**List Number: 1**

**Creator: Perez, Trina M**

**List Source: Eurofins TestAmerica, Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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	22.7°C, 21.8°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: 400-178037-1  
SDG Number: Gorgas Landfill 1246

**Login Number: 178037**

**List Number: 2**

**Creator: Hellm, Michael**

**List Source: Eurofins TestAmerica, St. Louis**

**List Creation: 10/17/19 01:06 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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: 400-178037-1  
 SDG: Gorgas Landfill 1246

## 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: 400-178037-1  
 SDG: Gorgas Landfill 1246

## 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**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-1	10/8/2019 10:49	Conductivity	2289.66	uS/cm
MW-1	10/8/2019 10:49	DO	0.83	mg/L
MW-1	10/8/2019 10:49	Depth to Water Detail	92.68	ft
MW-1	10/8/2019 10:49	Oxidation Reduction Potention	177.16	mv
MW-1	10/8/2019 10:49	pH	5.11	pH
MW-1	10/8/2019 10:49	Temperature	20.13	C
MW-1	10/8/2019 10:49	Turbidity	2.53	NTU
MW-1	10/8/2019 10:54	Conductivity	2286.6	uS/cm
MW-1	10/8/2019 10:54	DO	1.18	mg/L
MW-1	10/8/2019 10:54	Depth to Water Detail	0	ft
MW-1	10/8/2019 10:54	Oxidation Reduction Potention	181.94	mv
MW-1	10/8/2019 10:54	pH	5.12	pH
MW-1	10/8/2019 10:54	Temperature	20.69	C
MW-1	10/8/2019 10:54	Turbidity	0	NTU
MW-1	10/8/2019 10:59	Conductivity	2220.19	uS/cm
MW-1	10/8/2019 10:59	DO	1.03	mg/L
MW-1	10/8/2019 10:59	Depth to Water Detail	92.71	ft
MW-1	10/8/2019 10:59	Oxidation Reduction Potention	185	mv
MW-1	10/8/2019 10:59	pH	5.09	pH
MW-1	10/8/2019 10:59	Temperature	20.17	C
MW-1	10/8/2019 10:59	Turbidity	1.46	NTU
MW-1	10/8/2019 11:04	Conductivity	2260.53	uS/cm
MW-1	10/8/2019 11:04	DO	0.53	mg/L
MW-1	10/8/2019 11:04	Depth to Water Detail	92.78	ft
MW-1	10/8/2019 11:04	Oxidation Reduction Potention	186.86	mv
MW-1	10/8/2019 11:04	pH	5.11	pH
MW-1	10/8/2019 11:04	Temperature	19.97	C
MW-1	10/8/2019 11:04	Turbidity	1.3	NTU
MW-1	10/8/2019 11:09	Conductivity	2259.68	uS/cm
MW-1	10/8/2019 11:09	DO	0.43	mg/L
MW-1	10/8/2019 11:09	Depth to Water Detail	92.83	ft
MW-1	10/8/2019 11:09	Oxidation Reduction Potention	188.89	mv
MW-1	10/8/2019 11:09	pH	5.12	pH
MW-1	10/8/2019 11:09	Temperature	19.9	C
MW-1	10/8/2019 11:09	Turbidity	1.31	NTU
MW-1	10/8/2019 11:14	Conductivity	2249.07	uS/cm
MW-1	10/8/2019 11:14	DO	0.5	mg/L
MW-1	10/8/2019 11:14	Depth to Water Detail	92.85	ft
MW-1	10/8/2019 11:14	Oxidation Reduction Potention	191.18	mv
MW-1	10/8/2019 11:14	pH	5.12	pH
MW-1	10/8/2019 11:14	Temperature	19.92	C
MW-1	10/8/2019 11:14	Turbidity	1.53	NTU



**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-2	10/8/2019 12:21	Conductivity	1921.79	uS/cm
MW-2	10/8/2019 12:21	DO	0.33	mg/L
MW-2	10/8/2019 12:21	Depth to Water Detail	85.46	ft
MW-2	10/8/2019 12:21	Oxidation Reduction Potention	130.21	mv
MW-2	10/8/2019 12:21	pH	5.94	pH
MW-2	10/8/2019 12:21	Temperature	19.59	C
MW-2	10/8/2019 12:21	Turbidity	13.6	NTU
MW-2	10/8/2019 12:26	Conductivity	1928.53	uS/cm
MW-2	10/8/2019 12:26	DO	0.27	mg/L
MW-2	10/8/2019 12:26	Depth to Water Detail	85.46	ft
MW-2	10/8/2019 12:26	Oxidation Reduction Potention	124.04	mv
MW-2	10/8/2019 12:26	pH	5.94	pH
MW-2	10/8/2019 12:26	Temperature	19.68	C
MW-2	10/8/2019 12:26	Turbidity	5.11	NTU
MW-2	10/8/2019 12:31	Conductivity	1933.11	uS/cm
MW-2	10/8/2019 12:31	DO	0.24	mg/L
MW-2	10/8/2019 12:31	Depth to Water Detail	85.46	ft
MW-2	10/8/2019 12:31	Oxidation Reduction Potention	119.51	mv
MW-2	10/8/2019 12:31	pH	5.96	pH
MW-2	10/8/2019 12:31	Temperature	19.69	C
MW-2	10/8/2019 12:31	Turbidity	3.46	NTU
MW-2	10/8/2019 12:36	Conductivity	1936.48	uS/cm
MW-2	10/8/2019 12:36	DO	0.22	mg/L
MW-2	10/8/2019 12:36	Depth to Water Detail	85.46	ft
MW-2	10/8/2019 12:36	Oxidation Reduction Potention	116.03	mv
MW-2	10/8/2019 12:36	pH	5.96	pH
MW-2	10/8/2019 12:36	Temperature	19.8	C
MW-2	10/8/2019 12:36	Turbidity	2.03	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-3	10/8/2019 13:46	Conductivity	3115.48	uS/cm
MW-3	10/8/2019 13:46	DO	7.74	mg/L
MW-3	10/8/2019 13:46	Depth to Water Detail	111.06	ft
MW-3	10/8/2019 13:46	Oxidation Reduction Potention	93.51	mv
MW-3	10/8/2019 13:46	pH	6.43	pH
MW-3	10/8/2019 13:46	Temperature	23.75	C
MW-3	10/8/2019 13:46	Turbidity	1.34	NTU
MW-3	10/8/2019 13:51	Conductivity	3650.86	uS/cm
MW-3	10/8/2019 13:51	DO	3.52	mg/L
MW-3	10/8/2019 13:51	Depth to Water Detail	111.2	ft
MW-3	10/8/2019 13:51	Oxidation Reduction Potention	106.39	mv
MW-3	10/8/2019 13:51	pH	5.54	pH
MW-3	10/8/2019 13:51	Temperature	23.7	C
MW-3	10/8/2019 13:51	Turbidity	10.64	NTU
MW-3	10/8/2019 13:56	Conductivity	3854.17	uS/cm
MW-3	10/8/2019 13:56	DO	1.47	mg/L
MW-3	10/8/2019 13:56	Depth to Water Detail	111.31	ft
MW-3	10/8/2019 13:56	Oxidation Reduction Potention	111.16	mv
MW-3	10/8/2019 13:56	pH	5.29	pH
MW-3	10/8/2019 13:56	Temperature	23.44	C
MW-3	10/8/2019 13:56	Turbidity	21.4	NTU
MW-3	10/8/2019 14:01	Conductivity	3860.08	uS/cm
MW-3	10/8/2019 14:01	DO	1.08	mg/L
MW-3	10/8/2019 14:01	Depth to Water Detail	111.48	ft
MW-3	10/8/2019 14:01	Oxidation Reduction Potention	115.38	mv
MW-3	10/8/2019 14:01	pH	5.15	pH
MW-3	10/8/2019 14:01	Temperature	23.41	C
MW-3	10/8/2019 14:01	Turbidity	23.6	NTU
MW-3	10/8/2019 14:06	Conductivity	3858.78	uS/cm
MW-3	10/8/2019 14:06	DO	1.07	mg/L
MW-3	10/8/2019 14:06	Depth to Water Detail	111.63	ft
MW-3	10/8/2019 14:06	Oxidation Reduction Potention	119.32	mv
MW-3	10/8/2019 14:06	pH	5.06	pH
MW-3	10/8/2019 14:06	Temperature	23.65	C
MW-3	10/8/2019 14:06	Turbidity	19.6	NTU
MW-3	10/8/2019 14:11	Conductivity	3857.54	uS/cm
MW-3	10/8/2019 14:11	DO	1.03	mg/L
MW-3	10/8/2019 14:11	Depth to Water Detail	111.76	ft
MW-3	10/8/2019 14:11	Oxidation Reduction Potention	123.34	mv
MW-3	10/8/2019 14:11	pH	4.98	pH
MW-3	10/8/2019 14:11	Temperature	23.37	C
MW-3	10/8/2019 14:11	Turbidity	9.89	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-4	10/10/2019 11:52	Conductivity	3664.05	uS/cm
MW-4	10/10/2019 11:52	DO	1.73	mg/L
MW-4	10/10/2019 11:52	Depth to Water Detail	118.33	ft
MW-4	10/10/2019 11:52	Oxidation Reduction Potention	97.78	mv
MW-4	10/10/2019 11:52	pH	6.17	pH
MW-4	10/10/2019 11:52	Temperature	21.24	C
MW-4	10/10/2019 11:52	Turbidity	0.44	NTU
MW-4	10/10/2019 11:57	Conductivity	3651.98	uS/cm
MW-4	10/10/2019 11:57	DO	1.79	mg/L
MW-4	10/10/2019 11:57	Depth to Water Detail	118.33	ft
MW-4	10/10/2019 11:57	Oxidation Reduction Potention	97.54	mv
MW-4	10/10/2019 11:57	pH	6.11	pH
MW-4	10/10/2019 11:57	Temperature	21.2	C
MW-4	10/10/2019 11:57	Turbidity	0.4	NTU
MW-4	10/10/2019 12:02	Conductivity	3645.46	uS/cm
MW-4	10/10/2019 12:02	DO	1.86	mg/L
MW-4	10/10/2019 12:02	Depth to Water Detail	118.33	ft
MW-4	10/10/2019 12:02	Oxidation Reduction Potention	107.84	mv
MW-4	10/10/2019 12:02	pH	6.14	pH
MW-4	10/10/2019 12:02	Temperature	21.08	C
MW-4	10/10/2019 12:02	Turbidity	0.35	NTU
MW-4	10/10/2019 12:07	Conductivity	3642.62	uS/cm
MW-4	10/10/2019 12:07	DO	1.93	mg/L
MW-4	10/10/2019 12:07	Depth to Water Detail	118.33	ft
MW-4	10/10/2019 12:07	Oxidation Reduction Potention	100.64	mv
MW-4	10/10/2019 12:07	pH	6.15	pH
MW-4	10/10/2019 12:07	Temperature	21.06	C
MW-4	10/10/2019 12:07	Turbidity	0.33	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-5	10/10/2019 10:43	Conductivity	3549.68	uS/cm
MW-5	10/10/2019 10:43	DO	2.53	mg/L
MW-5	10/10/2019 10:43	Depth to Water Detail	126.22	ft
MW-5	10/10/2019 10:43	Oxidation Reduction Potention	37.06	mv
MW-5	10/10/2019 10:43	pH	6.46	pH
MW-5	10/10/2019 10:43	Temperature	23.42	C
MW-5	10/10/2019 10:43	Turbidity	1.81	NTU
MW-5	10/10/2019 10:48	Conductivity	3546.79	uS/cm
MW-5	10/10/2019 10:48	DO	1.01	mg/L
MW-5	10/10/2019 10:48	Depth to Water Detail	126.24	ft
MW-5	10/10/2019 10:48	Oxidation Reduction Potention	33.03	mv
MW-5	10/10/2019 10:48	pH	6.43	pH
MW-5	10/10/2019 10:48	Temperature	23.17	C
MW-5	10/10/2019 10:48	Turbidity	1.07	NTU
MW-5	10/10/2019 10:53	Conductivity	3534.86	uS/cm
MW-5	10/10/2019 10:53	DO	0.72	mg/L
MW-5	10/10/2019 10:53	Depth to Water Detail	126.3	ft
MW-5	10/10/2019 10:53	Oxidation Reduction Potention	30.61	mv
MW-5	10/10/2019 10:53	pH	6.43	pH
MW-5	10/10/2019 10:53	Temperature	23.13	C
MW-5	10/10/2019 10:53	Turbidity	1	NTU
MW-5	10/10/2019 10:58	Conductivity	3539.6	uS/cm
MW-5	10/10/2019 10:58	DO	0.64	mg/L
MW-5	10/10/2019 10:58	Depth to Water Detail	126.32	ft
MW-5	10/10/2019 10:58	Oxidation Reduction Potention	33.01	mv
MW-5	10/10/2019 10:58	pH	6.43	pH
MW-5	10/10/2019 10:58	Temperature	22.99	C
MW-5	10/10/2019 10:58	Turbidity	0.9	NTU
MW-5	10/10/2019 11:03	Conductivity	3537.48	uS/cm
MW-5	10/10/2019 11:03	DO	0.6	mg/L
MW-5	10/10/2019 11:03	Depth to Water Detail	126.33	ft
MW-5	10/10/2019 11:03	Oxidation Reduction Potention	37.57	mv
MW-5	10/10/2019 11:03	pH	6.43	pH
MW-5	10/10/2019 11:03	Temperature	22.82	C
MW-5	10/10/2019 11:03	Turbidity	0.88	NTU
MW-5	10/10/2019 11:08	Conductivity	3518.23	uS/cm
MW-5	10/10/2019 11:08	DO	0.58	mg/L
MW-5	10/10/2019 11:08	Depth to Water Detail	126.33	ft
MW-5	10/10/2019 11:08	Oxidation Reduction Potention	36.17	mv
MW-5	10/10/2019 11:08	pH	6.43	pH
MW-5	10/10/2019 11:08	Temperature	23.2	C
MW-5	10/10/2019 11:08	Turbidity	0.83	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-6	10/10/2019 9:56	Conductivity	3153.03	uS/cm
MW-6	10/10/2019 9:56	DO	0.2	mg/L
MW-6	10/10/2019 9:56	Depth to Water Detail	109.28	ft
MW-6	10/10/2019 9:56	Oxidation Reduction Potention	51.67	mv
MW-6	10/10/2019 9:56	pH	6.15	pH
MW-6	10/10/2019 9:56	Temperature	20.97	C
MW-6	10/10/2019 9:56	Turbidity	0.63	NTU
MW-6	10/10/2019 10:01	Conductivity	3143.3	uS/cm
MW-6	10/10/2019 10:01	DO	0.16	mg/L
MW-6	10/10/2019 10:01	Depth to Water Detail	109.3	ft
MW-6	10/10/2019 10:01	Oxidation Reduction Potention	37.12	mv
MW-6	10/10/2019 10:01	pH	6.15	pH
MW-6	10/10/2019 10:01	Temperature	20.88	C
MW-6	10/10/2019 10:01	Turbidity	1	NTU
MW-6	10/10/2019 10:06	Conductivity	3124.2	uS/cm
MW-6	10/10/2019 10:06	DO	0.14	mg/L
MW-6	10/10/2019 10:06	Depth to Water Detail	109.3	ft
MW-6	10/10/2019 10:06	Oxidation Reduction Potention	30.44	mv
MW-6	10/10/2019 10:06	pH	6.15	pH
MW-6	10/10/2019 10:06	Temperature	20.77	C
MW-6	10/10/2019 10:06	Turbidity	0.77	NTU
MW-6	10/10/2019 10:11	Conductivity	3106.79	uS/cm
MW-6	10/10/2019 10:11	DO	0.13	mg/L
MW-6	10/10/2019 10:11	Depth to Water Detail	109.3	ft
MW-6	10/10/2019 10:11	Oxidation Reduction Potention	18.77	mv
MW-6	10/10/2019 10:11	pH	6.16	pH
MW-6	10/10/2019 10:11	Temperature	20.8	C
MW-6	10/10/2019 10:11	Turbidity	0.71	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-7	10/8/2019 15:22	Conductivity	2783.61	uS/cm
MW-7	10/8/2019 15:22	DO	0.23	mg/L
MW-7	10/8/2019 15:22	Depth to Water Detail	60.44	ft
MW-7	10/8/2019 15:22	Oxidation Reduction Potention	41.23	mv
MW-7	10/8/2019 15:22	pH	6.52	pH
MW-7	10/8/2019 15:22	Temperature	20.13	C
MW-7	10/8/2019 15:22	Turbidity	4.21	NTU
MW-7	10/8/2019 15:27	Conductivity	2681.2	uS/cm
MW-7	10/8/2019 15:27	DO	0.18	mg/L
MW-7	10/8/2019 15:27	Depth to Water Detail	60.44	ft
MW-7	10/8/2019 15:27	Oxidation Reduction Potention	35.85	mv
MW-7	10/8/2019 15:27	pH	6.5	pH
MW-7	10/8/2019 15:27	Temperature	20.19	C
MW-7	10/8/2019 15:27	Turbidity	2.49	NTU
MW-7	10/8/2019 15:32	Conductivity	2634.51	uS/cm
MW-7	10/8/2019 15:32	DO	0.15	mg/L
MW-7	10/8/2019 15:32	Depth to Water Detail	60.44	ft
MW-7	10/8/2019 15:32	Oxidation Reduction Potention	32.98	mv
MW-7	10/8/2019 15:32	pH	6.5	pH
MW-7	10/8/2019 15:32	Temperature	20.25	C
MW-7	10/8/2019 15:32	Turbidity	1.15	NTU
MW-7	10/8/2019 15:37	Conductivity	2604.18	uS/cm
MW-7	10/8/2019 15:37	DO	0.14	mg/L
MW-7	10/8/2019 15:37	Depth to Water Detail	60.44	ft
MW-7	10/8/2019 15:37	Oxidation Reduction Potention	29.01	mv
MW-7	10/8/2019 15:37	pH	6.52	pH
MW-7	10/8/2019 15:37	Temperature	20.25	C
MW-7	10/8/2019 15:37	Turbidity	0.94	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-13	10/8/2019 8:24	Conductivity	3168.5	uS/cm
MW-13	10/8/2019 8:24	DO	1.21	mg/L
MW-13	10/8/2019 8:24	Depth to Water Detail	95.23	ft
MW-13	10/8/2019 8:24	Oxidation Reduction Potention	140.43	mv
MW-13	10/8/2019 8:24	pH	6.45	pH
MW-13	10/8/2019 8:24	Temperature	20.21	C
MW-13	10/8/2019 8:24	Turbidity	1.23	NTU
MW-13	10/8/2019 8:29	Conductivity	3188.3	uS/cm
MW-13	10/8/2019 8:29	DO	0.46	mg/L
MW-13	10/8/2019 8:29	Depth to Water Detail	95.4	ft
MW-13	10/8/2019 8:29	Oxidation Reduction Potention	135.86	mv
MW-13	10/8/2019 8:29	pH	6.42	pH
MW-13	10/8/2019 8:29	Temperature	20.04	C
MW-13	10/8/2019 8:29	Turbidity	0.87	NTU
MW-13	10/8/2019 8:34	Conductivity	3184.9	uS/cm
MW-13	10/8/2019 8:34	DO	0.37	mg/L
MW-13	10/8/2019 8:34	Depth to Water Detail	95.51	ft
MW-13	10/8/2019 8:34	Oxidation Reduction Potention	134.18	mv
MW-13	10/8/2019 8:34	pH	6.41	pH
MW-13	10/8/2019 8:34	Temperature	19.98	C
MW-13	10/8/2019 8:34	Turbidity	0.69	NTU
MW-13	10/8/2019 8:39	Conductivity	3174.5	uS/cm
MW-13	10/8/2019 8:39	DO	0.35	mg/L
MW-13	10/8/2019 8:39	Depth to Water Detail	95.56	ft
MW-13	10/8/2019 8:39	Oxidation Reduction Potention	133.26	mv
MW-13	10/8/2019 8:39	pH	6.34	pH
MW-13	10/8/2019 8:39	Temperature	19.97	C
MW-13	10/8/2019 8:39	Turbidity	0.71	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-14	10/8/2019 9:15	Conductivity	3261.25	uS/cm
MW-14	10/8/2019 9:15	DO	0.42	mg/L
MW-14	10/8/2019 9:15	Depth to Water Detail	89.62	ft
MW-14	10/8/2019 9:15	Oxidation Reduction Potention	81.58	mv
MW-14	10/8/2019 9:15	pH	6.32	pH
MW-14	10/8/2019 9:15	Temperature	19.69	C
MW-14	10/8/2019 9:15	Turbidity	3.23	NTU
MW-14	10/8/2019 9:20	Conductivity	3262.38	uS/cm
MW-14	10/8/2019 9:20	DO	0.3	mg/L
MW-14	10/8/2019 9:20	Depth to Water Detail	89.63	ft
MW-14	10/8/2019 9:20	Oxidation Reduction Potention	76.52	mv
MW-14	10/8/2019 9:20	pH	6.32	pH
MW-14	10/8/2019 9:20	Temperature	19.68	C
MW-14	10/8/2019 9:20	Turbidity	3.34	NTU
MW-14	10/8/2019 9:25	Conductivity	3250.76	uS/cm
MW-14	10/8/2019 9:25	DO	0.24	mg/L
MW-14	10/8/2019 9:25	Depth to Water Detail	89.63	ft
MW-14	10/8/2019 9:25	Oxidation Reduction Potention	75.51	mv
MW-14	10/8/2019 9:25	pH	6.32	pH
MW-14	10/8/2019 9:25	Temperature	19.66	C
MW-14	10/8/2019 9:25	Turbidity	1.69	NTU
MW-14	10/8/2019 9:30	Conductivity	3246.7	uS/cm
MW-14	10/8/2019 9:30	DO	0.23	mg/L
MW-14	10/8/2019 9:30	Depth to Water Detail	89.63	ft
MW-14	10/8/2019 9:30	Oxidation Reduction Potention	70.04	mv
MW-14	10/8/2019 9:30	pH	6.32	pH
MW-14	10/8/2019 9:30	Temperature	19.69	C
MW-14	10/8/2019 9:30	Turbidity	1.2	NTU



**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-15	10/8/2019 10:04	Conductivity	2785.64	uS/cm
MW-15	10/8/2019 10:04	DO	0.34	mg/L
MW-15	10/8/2019 10:04	Depth to Water Detail	68.33	ft
MW-15	10/8/2019 10:04	Oxidation Reduction Potention	77.57	mv
MW-15	10/8/2019 10:04	pH	5.98	pH
MW-15	10/8/2019 10:04	Temperature	19.46	C
MW-15	10/8/2019 10:04	Turbidity	0.73	NTU
MW-15	10/8/2019 10:09	Conductivity	2728.77	uS/cm
MW-15	10/8/2019 10:09	DO	0.71	mg/L
MW-15	10/8/2019 10:09	Depth to Water Detail	68.35	ft
MW-15	10/8/2019 10:09	Oxidation Reduction Potention	77.05	mv
MW-15	10/8/2019 10:09	pH	5.92	pH
MW-15	10/8/2019 10:09	Temperature	19.35	C
MW-15	10/8/2019 10:09	Turbidity	2.21	NTU
MW-15	10/8/2019 10:14	Conductivity	2753.84	uS/cm
MW-15	10/8/2019 10:14	DO	0.56	mg/L
MW-15	10/8/2019 10:14	Depth to Water Detail	68.35	ft
MW-15	10/8/2019 10:14	Oxidation Reduction Potention	72.69	mv
MW-15	10/8/2019 10:14	pH	5.96	pH
MW-15	10/8/2019 10:14	Temperature	19.36	C
MW-15	10/8/2019 10:14	Turbidity	1.74	NTU
MW-15	10/8/2019 10:19	Conductivity	2770.79	uS/cm
MW-15	10/8/2019 10:19	DO	0.31	mg/L
MW-15	10/8/2019 10:19	Depth to Water Detail	68.35	ft
MW-15	10/8/2019 10:19	Oxidation Reduction Potention	68.31	mv
MW-15	10/8/2019 10:19	pH	5.99	pH
MW-15	10/8/2019 10:19	Temperature	19.36	C
MW-15	10/8/2019 10:19	Turbidity	1.45	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-16	10/8/2019 10:54	Conductivity	2667.85	uS/cm
MW-16	10/8/2019 10:54	DO	0.29	mg/L
MW-16	10/8/2019 10:54	Depth to Water Detail	91.92	ft
MW-16	10/8/2019 10:54	Oxidation Reduction Potention	33.58	mv
MW-16	10/8/2019 10:54	pH	6.35	pH
MW-16	10/8/2019 10:54	Temperature	20.05	C
MW-16	10/8/2019 10:54	Turbidity	0.96	NTU
MW-16	10/8/2019 10:59	Conductivity	2668.57	uS/cm
MW-16	10/8/2019 10:59	DO	0.2	mg/L
MW-16	10/8/2019 10:59	Depth to Water Detail	91.92	ft
MW-16	10/8/2019 10:59	Oxidation Reduction Potention	39.83	mv
MW-16	10/8/2019 10:59	pH	6.3	pH
MW-16	10/8/2019 10:59	Temperature	19.99	C
MW-16	10/8/2019 10:59	Turbidity	0.75	NTU
MW-16	10/8/2019 11:04	Conductivity	2664.77	uS/cm
MW-16	10/8/2019 11:04	DO	0.18	mg/L
MW-16	10/8/2019 11:04	Depth to Water Detail	91.92	ft
MW-16	10/8/2019 11:04	Oxidation Reduction Potention	41.85	mv
MW-16	10/8/2019 11:04	pH	6.29	pH
MW-16	10/8/2019 11:04	Temperature	19.97	C
MW-16	10/8/2019 11:04	Turbidity	0.62	NTU
MW-16	10/8/2019 11:09	Conductivity	2660.19	uS/cm
MW-16	10/8/2019 11:09	DO	0.17	mg/L
MW-16	10/8/2019 11:09	Depth to Water Detail	91.92	ft
MW-16	10/8/2019 11:09	Oxidation Reduction Potention	50.07	mv
MW-16	10/8/2019 11:09	pH	6.16	pH
MW-16	10/8/2019 11:09	Temperature	19.95	C
MW-16	10/8/2019 11:09	Turbidity	0.39	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-17R	10/8/2019 11:56	Conductivity	3615.05	uS/cm
MW-17R	10/8/2019 11:56	DO	0.93	mg/L
MW-17R	10/8/2019 11:56	Depth to Water Detail	127.38	ft
MW-17R	10/8/2019 11:56	Oxidation Reduction Potention	38.02	mv
MW-17R	10/8/2019 11:56	pH	5.62	pH
MW-17R	10/8/2019 11:56	Temperature	22.38	C
MW-17R	10/8/2019 11:56	Turbidity	1.56	NTU
MW-17R	10/8/2019 12:01	Conductivity	3636.46	uS/cm
MW-17R	10/8/2019 12:01	DO	0.63	mg/L
MW-17R	10/8/2019 12:01	Depth to Water Detail	127.41	ft
MW-17R	10/8/2019 12:01	Oxidation Reduction Potention	37.78	mv
MW-17R	10/8/2019 12:01	pH	5.67	pH
MW-17R	10/8/2019 12:01	Temperature	22.64	C
MW-17R	10/8/2019 12:01	Turbidity	0.91	NTU
MW-17R	10/8/2019 12:06	Conductivity	3658	uS/cm
MW-17R	10/8/2019 12:06	DO	0.56	mg/L
MW-17R	10/8/2019 12:06	Depth to Water Detail	127.42	ft
MW-17R	10/8/2019 12:06	Oxidation Reduction Potention	32.47	mv
MW-17R	10/8/2019 12:06	pH	5.78	pH
MW-17R	10/8/2019 12:06	Temperature	22.58	C
MW-17R	10/8/2019 12:06	Turbidity	0.67	NTU
MW-17R	10/8/2019 12:11	Conductivity	3670.91	uS/cm
MW-17R	10/8/2019 12:11	DO	0.53	mg/L
MW-17R	10/8/2019 12:11	Depth to Water Detail	127.42	ft
MW-17R	10/8/2019 12:11	Oxidation Reduction Potention	28.14	mv
MW-17R	10/8/2019 12:11	pH	5.84	pH
MW-17R	10/8/2019 12:11	Temperature	22.38	C
MW-17R	10/8/2019 12:11	Turbidity	0.55	NTU
MW-17R	10/8/2019 12:16	Conductivity	3683.72	uS/cm
MW-17R	10/8/2019 12:16	DO	0.52	mg/L
MW-17R	10/8/2019 12:16	Depth to Water Detail	127.42	ft
MW-17R	10/8/2019 12:16	Oxidation Reduction Potention	25.54	mv
MW-17R	10/8/2019 12:16	pH	5.89	pH
MW-17R	10/8/2019 12:16	Temperature	22.55	C
MW-17R	10/8/2019 12:16	Turbidity	0.53	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-18	10/8/2019 13:09	Conductivity	2914.78	uS/cm
MW-18	10/8/2019 13:09	DO	4.55	mg/L
MW-18	10/8/2019 13:09	Depth to Water Detail	112.72	ft
MW-18	10/8/2019 13:09	Oxidation Reduction Potention	63.09	mv
MW-18	10/8/2019 13:09	pH	6.5	pH
MW-18	10/8/2019 13:09	Temperature	22.05	C
MW-18	10/8/2019 13:09	Turbidity	8.26	NTU
MW-18	10/8/2019 13:14	Conductivity	2897.5	uS/cm
MW-18	10/8/2019 13:14	DO	3.23	mg/L
MW-18	10/8/2019 13:14	Depth to Water Detail	112.72	ft
MW-18	10/8/2019 13:14	Oxidation Reduction Potention	66.69	mv
MW-18	10/8/2019 13:14	pH	6.36	pH
MW-18	10/8/2019 13:14	Temperature	21.82	C
MW-18	10/8/2019 13:14	Turbidity	4.8	NTU
MW-18	10/8/2019 13:19	Conductivity	2894.79	uS/cm
MW-18	10/8/2019 13:19	DO	2.97	mg/L
MW-18	10/8/2019 13:19	Depth to Water Detail	112.72	ft
MW-18	10/8/2019 13:19	Oxidation Reduction Potention	63.6	mv
MW-18	10/8/2019 13:19	pH	6.39	pH
MW-18	10/8/2019 13:19	Temperature	21.71	C
MW-18	10/8/2019 13:19	Turbidity	3.43	NTU
MW-18	10/8/2019 13:24	Conductivity	2896.03	uS/cm
MW-18	10/8/2019 13:24	DO	2.85	mg/L
MW-18	10/8/2019 13:24	Depth to Water Detail	112.72	ft
MW-18	10/8/2019 13:24	Oxidation Reduction Potention	62.94	mv
MW-18	10/8/2019 13:24	pH	6.41	pH
MW-18	10/8/2019 13:24	Temperature	21.83	C
MW-18	10/8/2019 13:24	Turbidity	2.91	NTU
MW-18	10/8/2019 13:29	Conductivity	2895.65	uS/cm
MW-18	10/8/2019 13:29	DO	2.81	mg/L
MW-18	10/8/2019 13:29	Depth to Water Detail	112.72	ft
MW-18	10/8/2019 13:29	Oxidation Reduction Potention	62.75	mv
MW-18	10/8/2019 13:29	pH	6.43	pH
MW-18	10/8/2019 13:29	Temperature	21.83	C
MW-18	10/8/2019 13:29	Turbidity	2.13	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-19	10/8/2019 14:14	Conductivity	3247.95	uS/cm
MW-19	10/8/2019 14:14	DO	0.5	mg/L
MW-19	10/8/2019 14:14	Depth to Water Detail	81.53	ft
MW-19	10/8/2019 14:14	Oxidation Reduction Potention	69.37	mv
MW-19	10/8/2019 14:14	pH	6.18	pH
MW-19	10/8/2019 14:14	Temperature	20.77	C
MW-19	10/8/2019 14:14	Turbidity	57	NTU
MW-19	10/8/2019 14:19	Conductivity	3247.75	uS/cm
MW-19	10/8/2019 14:19	DO	0.34	mg/L
MW-19	10/8/2019 14:19	Depth to Water Detail	81.53	ft
MW-19	10/8/2019 14:19	Oxidation Reduction Potention	70.45	mv
MW-19	10/8/2019 14:19	pH	6.11	pH
MW-19	10/8/2019 14:19	Temperature	20.68	C
MW-19	10/8/2019 14:19	Turbidity	14.2	NTU
MW-19	10/8/2019 14:24	Conductivity	3254.86	uS/cm
MW-19	10/8/2019 14:24	DO	0.27	mg/L
MW-19	10/8/2019 14:24	Depth to Water Detail	81.53	ft
MW-19	10/8/2019 14:24	Oxidation Reduction Potention	65.5	mv
MW-19	10/8/2019 14:24	pH	6.16	pH
MW-19	10/8/2019 14:24	Temperature	20.56	C
MW-19	10/8/2019 14:24	Turbidity	9.34	NTU
MW-19	10/8/2019 14:29	Conductivity	3256.36	uS/cm
MW-19	10/8/2019 14:29	DO	0.23	mg/L
MW-19	10/8/2019 14:29	Depth to Water Detail	81.53	ft
MW-19	10/8/2019 14:29	Oxidation Reduction Potention	62.5	mv
MW-19	10/8/2019 14:29	pH	6.19	pH
MW-19	10/8/2019 14:29	Temperature	20.61	C
MW-19	10/8/2019 14:29	Turbidity	4.72	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-20	10/10/2019 12:45	Conductivity	2771.88	uS/cm
MW-20	10/10/2019 12:45	DO	0.21	mg/L
MW-20	10/10/2019 12:45	Depth to Water Detail	24.38	ft
MW-20	10/10/2019 12:45	Oxidation Reduction Potention	-44.87	mv
MW-20	10/10/2019 12:45	pH	6.8	pH
MW-20	10/10/2019 12:45	Temperature	20.31	C
MW-20	10/10/2019 12:45	Turbidity	1.04	NTU
MW-20	10/10/2019 12:50	Conductivity	2752.1	uS/cm
MW-20	10/10/2019 12:50	DO	0.14	mg/L
MW-20	10/10/2019 12:50	Depth to Water Detail	24.94	ft
MW-20	10/10/2019 12:50	Oxidation Reduction Potention	-46.53	mv
MW-20	10/10/2019 12:50	pH	6.79	pH
MW-20	10/10/2019 12:50	Temperature	20.24	C
MW-20	10/10/2019 12:50	Turbidity	0.37	NTU
MW-20	10/10/2019 12:55	Conductivity	2764.89	uS/cm
MW-20	10/10/2019 12:55	DO	0.12	mg/L
MW-20	10/10/2019 12:55	Depth to Water Detail	25.11	ft
MW-20	10/10/2019 12:55	Oxidation Reduction Potention	-47.51	mv
MW-20	10/10/2019 12:55	pH	6.77	pH
MW-20	10/10/2019 12:55	Temperature	20.38	C
MW-20	10/10/2019 12:55	Turbidity	0.43	NTU
MW-20	10/10/2019 13:00	Conductivity	2742.07	uS/cm
MW-20	10/10/2019 13:00	DO	0.12	mg/L
MW-20	10/10/2019 13:00	Depth to Water Detail	25.15	ft
MW-20	10/10/2019 13:00	Oxidation Reduction Potention	-47	mv
MW-20	10/10/2019 13:00	pH	6.78	pH
MW-20	10/10/2019 13:00	Temperature	20.34	C
MW-20	10/10/2019 13:00	Turbidity	0.38	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-8	10/9/2019 13:31	Conductivity	2822.41	uS/cm
MW-8	10/9/2019 13:31	DO	2.56	mg/L
MW-8	10/9/2019 13:31	Depth to Water Detail	64.3	ft
MW-8	10/9/2019 13:31	Oxidation Reduction Potention	0.91	mv
MW-8	10/9/2019 13:31	pH	6.69	pH
MW-8	10/9/2019 13:31	Temperature	24.2	C
MW-8	10/9/2019 13:31	Turbidity	27.5	NTU
MW-8	10/9/2019 13:36	Conductivity	2810.7	uS/cm
MW-8	10/9/2019 13:36	DO	1.04	mg/L
MW-8	10/9/2019 13:36	Depth to Water Detail	64.45	ft
MW-8	10/9/2019 13:36	Oxidation Reduction Potention	-12.38	mv
MW-8	10/9/2019 13:36	pH	6.66	pH
MW-8	10/9/2019 13:36	Temperature	24.05	C
MW-8	10/9/2019 13:36	Turbidity	9.16	NTU
MW-8	10/9/2019 13:41	Conductivity	2812.26	uS/cm
MW-8	10/9/2019 13:41	DO	0.82	mg/L
MW-8	10/9/2019 13:41	Depth to Water Detail	64.55	ft
MW-8	10/9/2019 13:41	Oxidation Reduction Potention	-14.26	mv
MW-8	10/9/2019 13:41	pH	6.66	pH
MW-8	10/9/2019 13:41	Temperature	23.63	C
MW-8	10/9/2019 13:41	Turbidity	6.49	NTU
MW-8	10/9/2019 13:46	Conductivity	2798.05	uS/cm
MW-8	10/9/2019 13:46	DO	0.73	mg/L
MW-8	10/9/2019 13:46	Depth to Water Detail	64.65	ft
MW-8	10/9/2019 13:46	Oxidation Reduction Potention	-15.2	mv
MW-8	10/9/2019 13:46	pH	6.67	pH
MW-8	10/9/2019 13:46	Temperature	23.53	C
MW-8	10/9/2019 13:46	Turbidity	5.22	NTU
MW-8	10/9/2019 13:51	Conductivity	2790.04	uS/cm
MW-8	10/9/2019 13:51	DO	0.68	mg/L
MW-8	10/9/2019 13:51	Depth to Water Detail	64.79	ft
MW-8	10/9/2019 13:51	Oxidation Reduction Potention	-15.62	mv
MW-8	10/9/2019 13:51	pH	6.67	pH
MW-8	10/9/2019 13:51	Temperature	23.45	C
MW-8	10/9/2019 13:51	Turbidity	3.28	NTU

**Alabama Power Company  
Plant Gorgas**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-10	10/9/2019 12:01	Conductivity	1386.1	uS/cm
MW-10	10/9/2019 12:01	DO	1.5	mg/L
MW-10	10/9/2019 12:01	Depth to Water Detail	86.66	ft
MW-10	10/9/2019 12:01	Oxidation Reduction Potention	0.71	mv
MW-10	10/9/2019 12:01	pH	6.5	pH
MW-10	10/9/2019 12:01	Temperature	23.75	C
MW-10	10/9/2019 12:01	Turbidity	27.7	NTU
MW-10	10/9/2019 12:06	Conductivity	1366.24	uS/cm
MW-10	10/9/2019 12:06	DO	1.12	mg/L
MW-10	10/9/2019 12:06	Depth to Water Detail	86.7	ft
MW-10	10/9/2019 12:06	Oxidation Reduction Potention	-15.88	mv
MW-10	10/9/2019 12:06	pH	6.52	pH
MW-10	10/9/2019 12:06	Temperature	23.18	C
MW-10	10/9/2019 12:06	Turbidity	19.6	NTU
MW-10	10/9/2019 12:11	Conductivity	1364.49	uS/cm
MW-10	10/9/2019 12:11	DO	0.93	mg/L
MW-10	10/9/2019 12:11	Depth to Water Detail	86.7	ft
MW-10	10/9/2019 12:11	Oxidation Reduction Potention	-18.58	mv
MW-10	10/9/2019 12:11	pH	6.52	pH
MW-10	10/9/2019 12:11	Temperature	23.18	C
MW-10	10/9/2019 12:11	Turbidity	45.1	NTU
MW-10	10/9/2019 12:16	Conductivity	1362.94	uS/cm
MW-10	10/9/2019 12:16	DO	0.82	mg/L
MW-10	10/9/2019 12:16	Depth to Water Detail	86.76	ft
MW-10	10/9/2019 12:16	Oxidation Reduction Potention	-19.32	mv
MW-10	10/9/2019 12:16	pH	6.52	pH
MW-10	10/9/2019 12:16	Temperature	22.87	C
MW-10	10/9/2019 12:16	Turbidity	37.7	NTU
MW-10	10/9/2019 12:21	Conductivity	1360.92	uS/cm
MW-10	10/9/2019 12:21	DO	0.75	mg/L
MW-10	10/9/2019 12:21	Depth to Water Detail	86.76	ft
MW-10	10/9/2019 12:21	Oxidation Reduction Potention	-19.47	mv
MW-10	10/9/2019 12:21	pH	6.51	pH
MW-10	10/9/2019 12:21	Temperature	23.5	C
MW-10	10/9/2019 12:21	Turbidity	30	NTU
MW-10	10/9/2019 12:26	Conductivity	1364.01	uS/cm
MW-10	10/9/2019 12:26	DO	0.75	mg/L
MW-10	10/9/2019 12:26	Depth to Water Detail	86.76	ft
MW-10	10/9/2019 12:26	Oxidation Reduction Potention	-18.48	mv
MW-10	10/9/2019 12:26	pH	6.51	pH
MW-10	10/9/2019 12:26	Temperature	22.96	C
MW-10	10/9/2019 12:26	Turbidity	23.1	NTU
MW-10	10/9/2019 12:31	Conductivity	1366.9	uS/cm
MW-10	10/9/2019 12:31	DO	0.73	mg/L



**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-10	10/9/2019 12:31	Depth to Water Detail	86.79	ft
MW-10	10/9/2019 12:31	Oxidation Reduction Potention	-17.39	mv
MW-10	10/9/2019 12:31	pH	6.51	pH
MW-10	10/9/2019 12:31	Temperature	22.98	C
MW-10	10/9/2019 12:31	Turbidity	15.2	NTU
MW-10	10/9/2019 12:36	Conductivity	1372.91	uS/cm
MW-10	10/9/2019 12:36	DO	0.72	mg/L
MW-10	10/9/2019 12:36	Depth to Water Detail	86.79	ft
MW-10	10/9/2019 12:36	Oxidation Reduction Potention	-17.32	mv
MW-10	10/9/2019 12:36	pH	6.5	pH
MW-10	10/9/2019 12:36	Temperature	23.39	C
MW-10	10/9/2019 12:36	Turbidity	12.4	NTU
MW-10	10/9/2019 12:41	Conductivity	1373.05	uS/cm
MW-10	10/9/2019 12:41	DO	0.71	mg/L
MW-10	10/9/2019 12:41	Depth to Water Detail	86.79	ft
MW-10	10/9/2019 12:41	Oxidation Reduction Potention	-17.52	mv
MW-10	10/9/2019 12:41	pH	6.5	pH
MW-10	10/9/2019 12:41	Temperature	23.43	C
MW-10	10/9/2019 12:41	Turbidity	10.01	NTU
MW-10	10/9/2019 12:46	Conductivity	1385.36	uS/cm
MW-10	10/9/2019 12:46	DO	0.69	mg/L
MW-10	10/9/2019 12:46	Depth to Water Detail	86.79	ft
MW-10	10/9/2019 12:46	Oxidation Reduction Potention	-17.61	mv
MW-10	10/9/2019 12:46	pH	6.5	pH
MW-10	10/9/2019 12:46	Temperature	22.84	C
MW-10	10/9/2019 12:46	Turbidity	8.28	NTU

**Alabama Power Company  
Plant Gorgas**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
MW-11	10/10/2019 12:25	Conductivity	2906.47	uS/cm
MW-11	10/10/2019 12:25	DO	0.4	mg/L
MW-11	10/10/2019 12:25	Depth to Water Detail	105.1	ft
MW-11	10/10/2019 12:25	Oxidation Reduction Potention	-40.78	mv
MW-11	10/10/2019 12:25	pH	6.69	pH
MW-11	10/10/2019 12:25	Temperature	21.54	C
MW-11	10/10/2019 12:25	Turbidity	2.45	NTU
MW-11	10/10/2019 12:30	Conductivity	2901.98	uS/cm
MW-11	10/10/2019 12:30	DO	0.38	mg/L
MW-11	10/10/2019 12:30	Depth to Water Detail	107.3	ft
MW-11	10/10/2019 12:30	Oxidation Reduction Potention	-43.71	mv
MW-11	10/10/2019 12:30	pH	6.7	pH
MW-11	10/10/2019 12:30	Temperature	21.79	C
MW-11	10/10/2019 12:30	Turbidity	2.54	NTU
MW-11	10/10/2019 12:35	Conductivity	2902.76	uS/cm
MW-11	10/10/2019 12:35	DO	0.59	mg/L
MW-11	10/10/2019 12:35	Depth to Water Detail	107.6	ft
MW-11	10/10/2019 12:35	Oxidation Reduction Potention	-44.99	mv
MW-11	10/10/2019 12:35	pH	6.69	pH
MW-11	10/10/2019 12:35	Temperature	23.08	C
MW-11	10/10/2019 12:35	Turbidity	2.51	NTU
MW-11	10/10/2019 12:40	Conductivity	2896.74	uS/cm
MW-11	10/10/2019 12:40	DO	0.71	mg/L
MW-11	10/10/2019 12:40	Depth to Water Detail	107.95	ft
MW-11	10/10/2019 12:40	Oxidation Reduction Potention	-44.52	mv
MW-11	10/10/2019 12:40	pH	6.69	pH
MW-11	10/10/2019 12:40	Temperature	23.06	C
MW-11	10/10/2019 12:40	Turbidity	3	NTU
MW-11	10/10/2019 12:45	Conductivity	2888.04	uS/cm
MW-11	10/10/2019 12:45	DO	0.71	mg/L
MW-11	10/10/2019 12:45	Depth to Water Detail	108.23	ft
MW-11	10/10/2019 12:45	Oxidation Reduction Potention	-45.03	mv
MW-11	10/10/2019 12:45	pH	6.69	pH
MW-11	10/10/2019 12:45	Temperature	22.92	C
MW-11	10/10/2019 12:45	Turbidity	2.06	NTU
MW-11	10/10/2019 12:50	Conductivity	2882.28	uS/cm
MW-11	10/10/2019 12:50	DO	0.73	mg/L
MW-11	10/10/2019 12:50	Depth to Water Detail	108.42	ft
MW-11	10/10/2019 12:50	Oxidation Reduction Potention	-45.9	mv
MW-11	10/10/2019 12:50	pH	6.69	pH
MW-11	10/10/2019 12:50	Temperature	22.9	C
MW-11	10/10/2019 12:50	Turbidity	1.96	NTU
MW-11	10/10/2019 12:55	Conductivity	2873.57	uS/cm
MW-11	10/10/2019 12:55	DO	0.75	mg/L

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-11	10/10/2019 12:55	Depth to Water Detail	108.62	ft
MW-11	10/10/2019 12:55	Oxidation Reduction Potention	-46.07	mv
MW-11	10/10/2019 12:55	pH	6.69	pH
MW-11	10/10/2019 12:55	Temperature	22.86	C
MW-11	10/10/2019 12:55	Turbidity	1.91	NTU
MW-11	10/10/2019 13:00	Conductivity	2875.65	uS/cm
MW-11	10/10/2019 13:00	DO	0.79	mg/L
MW-11	10/10/2019 13:00	Depth to Water Detail	108.82	ft
MW-11	10/10/2019 13:00	Oxidation Reduction Potention	-46.05	mv
MW-11	10/10/2019 13:00	pH	6.69	pH
MW-11	10/10/2019 13:00	Temperature	22.9	C
MW-11	10/10/2019 13:00	Turbidity	1.94	NTU
MW-11	10/10/2019 13:05	Conductivity	2872.15	uS/cm
MW-11	10/10/2019 13:05	DO	0.88	mg/L
MW-11	10/10/2019 13:05	Depth to Water Detail	108.8	ft
MW-11	10/10/2019 13:05	Oxidation Reduction Potention	-46.37	mv
MW-11	10/10/2019 13:05	pH	6.69	pH
MW-11	10/10/2019 13:05	Temperature	23.12	C
MW-11	10/10/2019 13:05	Turbidity	1.76	NTU
MW-11	10/10/2019 13:10	Conductivity	2867.45	uS/cm
MW-11	10/10/2019 13:10	DO	0.9	mg/L
MW-11	10/10/2019 13:10	Depth to Water Detail	108.75	ft
MW-11	10/10/2019 13:10	Oxidation Reduction Potention	-46.29	mv
MW-11	10/10/2019 13:10	pH	6.69	pH
MW-11	10/10/2019 13:10	Temperature	23.35	C
MW-11	10/10/2019 13:10	Turbidity	1.68	NTU
MW-11	10/10/2019 13:15	Conductivity	2861.83	uS/cm
MW-11	10/10/2019 13:15	DO	0.9	mg/L
MW-11	10/10/2019 13:15	Depth to Water Detail	108.75	ft
MW-11	10/10/2019 13:15	Oxidation Reduction Potention	-45.9	mv
MW-11	10/10/2019 13:15	pH	6.69	pH
MW-11	10/10/2019 13:15	Temperature	23.19	C
MW-11	10/10/2019 13:15	Turbidity	1.79	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-12	10/9/2019 14:51	Conductivity	3631	uS/cm
MW-12	10/9/2019 14:51	DO	1.43	mg/L
MW-12	10/9/2019 14:51	Depth to Water Detail	155.3	ft
MW-12	10/9/2019 14:51	Oxidation Reduction Potention	23.54	mv
MW-12	10/9/2019 14:51	pH	5.79	pH
MW-12	10/9/2019 14:51	Temperature	24.22	C
MW-12	10/9/2019 14:51	Turbidity	9.18	NTU
MW-12	10/9/2019 14:56	Conductivity	3672.71	uS/cm
MW-12	10/9/2019 14:56	DO	0.71	mg/L
MW-12	10/9/2019 14:56	Depth to Water Detail	155.3	ft
MW-12	10/9/2019 14:56	Oxidation Reduction Potention	9.49	mv
MW-12	10/9/2019 14:56	pH	5.84	pH
MW-12	10/9/2019 14:56	Temperature	23.93	C
MW-12	10/9/2019 14:56	Turbidity	8.2	NTU
MW-12	10/9/2019 15:01	Conductivity	3705.43	uS/cm
MW-12	10/9/2019 15:01	DO	0.6	mg/L
MW-12	10/9/2019 15:01	Depth to Water Detail	155.3	ft
MW-12	10/9/2019 15:01	Oxidation Reduction Potention	6.76	mv
MW-12	10/9/2019 15:01	pH	5.84	pH
MW-12	10/9/2019 15:01	Temperature	23.7	C
MW-12	10/9/2019 15:01	Turbidity	6.66	NTU
MW-12	10/9/2019 15:06	Conductivity	3723.63	uS/cm
MW-12	10/9/2019 15:06	DO	0.58	mg/L
MW-12	10/9/2019 15:06	Depth to Water Detail	155.3	ft
MW-12	10/9/2019 15:06	Oxidation Reduction Potention	5.52	mv
MW-12	10/9/2019 15:06	pH	5.85	pH
MW-12	10/9/2019 15:06	Temperature	23.82	C
MW-12	10/9/2019 15:06	Turbidity	4.52	NTU

**Alabama Power Company  
Plant Gorgas**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
MW-12V	10/10/2019 11:04	Conductivity	2722.96	uS/cm
MW-12V	10/10/2019 11:04	DO	0.94	mg/L
MW-12V	10/10/2019 11:04	Depth to Water Detail	156.56	ft
MW-12V	10/10/2019 11:04	Oxidation Reduction Potention	-74.42	mv
MW-12V	10/10/2019 11:04	pH	6.78	pH
MW-12V	10/10/2019 11:04	Temperature	22.83	C
MW-12V	10/10/2019 11:04	Turbidity	14.7	NTU
MW-12V	10/10/2019 11:09	Conductivity	2720.64	uS/cm
MW-12V	10/10/2019 11:09	DO	0.8	mg/L
MW-12V	10/10/2019 11:09	Depth to Water Detail	156.93	ft
MW-12V	10/10/2019 11:09	Oxidation Reduction Potention	-72.55	mv
MW-12V	10/10/2019 11:09	pH	6.77	pH
MW-12V	10/10/2019 11:09	Temperature	22.76	C
MW-12V	10/10/2019 11:09	Turbidity	9.51	NTU
MW-12V	10/10/2019 11:14	Conductivity	2720.46	uS/cm
MW-12V	10/10/2019 11:14	DO	0.72	mg/L
MW-12V	10/10/2019 11:14	Depth to Water Detail	156.93	ft
MW-12V	10/10/2019 11:14	Oxidation Reduction Potention	-71.59	mv
MW-12V	10/10/2019 11:14	pH	6.77	pH
MW-12V	10/10/2019 11:14	Temperature	22.82	C
MW-12V	10/10/2019 11:14	Turbidity	7.23	NTU
MW-12V	10/10/2019 11:19	Conductivity	2727.28	uS/cm
MW-12V	10/10/2019 11:19	DO	0.67	mg/L
MW-12V	10/10/2019 11:19	Depth to Water Detail	157.08	ft
MW-12V	10/10/2019 11:19	Oxidation Reduction Potention	-70.74	mv
MW-12V	10/10/2019 11:19	pH	6.77	pH
MW-12V	10/10/2019 11:19	Temperature	22.66	C
MW-12V	10/10/2019 11:19	Turbidity	5.62	NTU
MW-12V	10/10/2019 11:24	Conductivity	2722.34	uS/cm
MW-12V	10/10/2019 11:24	DO	0.63	mg/L
MW-12V	10/10/2019 11:24	Depth to Water Detail	157.18	ft
MW-12V	10/10/2019 11:24	Oxidation Reduction Potention	-69.85	mv
MW-12V	10/10/2019 11:24	pH	6.77	pH
MW-12V	10/10/2019 11:24	Temperature	22.72	C
MW-12V	10/10/2019 11:24	Turbidity	3.79	NTU

# Appendix C

**1st**  
**Semi-Annual**  
**Monitoring Event**

# Interwell Prediction Limit - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/17/2019, 9:58 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	MW-10	0.1015	n/a	5/15/2019	0.234	Yes	72	13.89	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	MW-12	0.1015	n/a	5/15/2019	0.239	Yes	72	13.89	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	MW-7	3.865	n/a	5/15/2019	15.9	Yes	72	4.167	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-8	3.865	n/a	5/15/2019	52	Yes	72	4.167	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-10	3.865	n/a	5/15/2019	6.93	Yes	72	4.167	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-11	3.865	n/a	5/15/2019	75.4	Yes	72	4.167	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-12	3.865	n/a	5/15/2019	8.51	Yes	72	4.167	sqrt(x)	0.001504	Param Inter 1 of 2
pH (SU)	MW-7	6.23	3.77	5/15/2019	6.61	Yes	74	0	n/a	0.000705	NP Inter (normality) ...
pH (SU)	MW-8	6.23	3.77	5/15/2019	6.6	Yes	74	0	n/a	0.000705	NP Inter (normality) ...
pH (SU)	MW-10	6.23	3.77	5/15/2019	6.37	Yes	74	0	n/a	0.000705	NP Inter (normality) ...
pH (SU)	MW-11	6.23	3.77	5/15/2019	6.62	Yes	74	0	n/a	0.000705	NP Inter (normality) ...



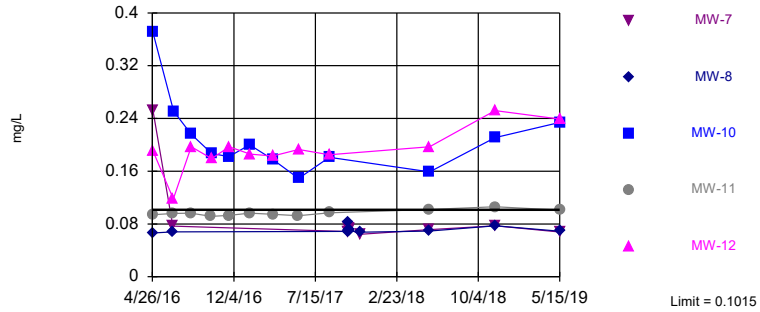
# Interwell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/17/2019, 9:58 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	MW-7	0.1015	n/a	5/15/2019	0.0678	No	72	13.89	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	MW-8	0.1015	n/a	5/15/2019	0.0689	No	72	13.89	n/a	0.000...	NP Inter (normality) ...
<b>Boron (mg/L)</b>	<b>MW-10</b>	<b>0.1015</b>	<b>n/a</b>	<b>5/15/2019</b>	<b>0.234</b>	<b>Yes</b>	<b>72</b>	<b>13.89</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Boron (mg/L)	MW-11	0.1015	n/a	5/15/2019	0.101	No	72	13.89	n/a	0.000...	NP Inter (normality) ...
<b>Boron (mg/L)</b>	<b>MW-12</b>	<b>0.1015</b>	<b>n/a</b>	<b>5/15/2019</b>	<b>0.239</b>	<b>Yes</b>	<b>72</b>	<b>13.89</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Chloride (mg/L)	MW-7	3.865	n/a	5/15/2019	15.9	Yes	72	4.167	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-8	3.865	n/a	5/15/2019	52	Yes	72	4.167	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-10	3.865	n/a	5/15/2019	6.93	Yes	72	4.167	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-11	3.865	n/a	5/15/2019	75.4	Yes	72	4.167	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-12	3.865	n/a	5/15/2019	8.51	Yes	72	4.167	sqrt(x)	0.001504	Param Inter 1 of 2
pH (SU)	MW-7	6.23	3.77	5/15/2019	6.61	Yes	74	0	n/a	0.000705	NP Inter (normality) ...
pH (SU)	MW-8	6.23	3.77	5/15/2019	6.6	Yes	74	0	n/a	0.000705	NP Inter (normality) ...
pH (SU)	MW-10	6.23	3.77	5/15/2019	6.37	Yes	74	0	n/a	0.000705	NP Inter (normality) ...
pH (SU)	MW-11	6.23	3.77	5/15/2019	6.62	Yes	74	0	n/a	0.000705	NP Inter (normality) ...
pH (SU)	MW-12	6.23	3.77	5/15/2019	5.82	No	74	0	n/a	0.000705	NP Inter (normality) ...

Exceeds Limit: MW-10, MW-12

Prediction Limit  
Interwell Non-parametric

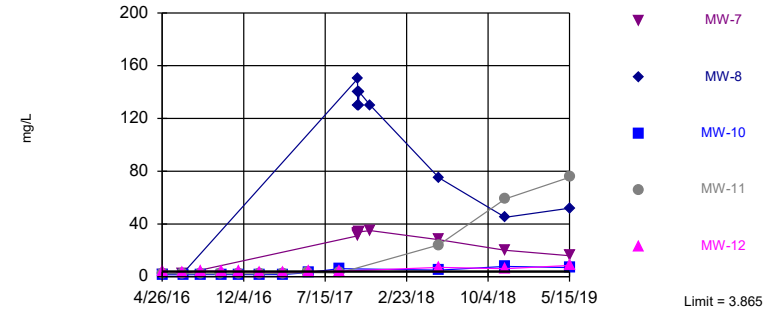


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 72 background values. 13.89% NDs. Annual per-constituent alpha = 0.003697. Individual comparison alpha = 0.0003703 (1 of 2). Comparing 5 points to limit.

Constituent: Boron Analysis Run 12/17/2019 9:57 AM View: Interwell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Exceeds Limit: MW-7, MW-8, MW-10, MW-11, MW-12

Prediction Limit  
Interwell Parametric

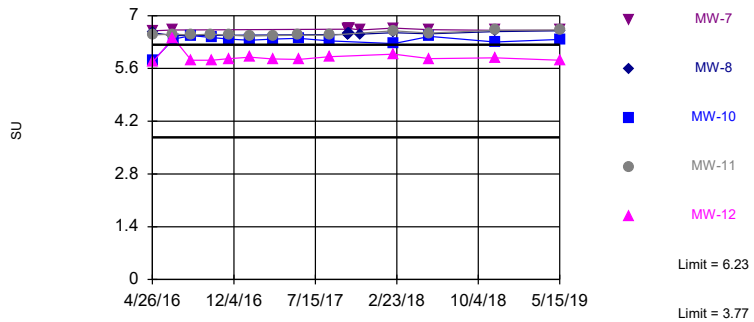


Background Data Summary (based on square root transformation): Mean=1.481, Std. Dev.=0.2655, n=72, 4.167% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9723, critical = 0.954. Kappa = 1.826 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Chloride Analysis Run 12/17/2019 9:57 AM View: Interwell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Exceeds Limits: MW-7, MW-8, MW-10, MW-11

Prediction Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 74 background values. Annual per-constituent alpha = 0.007039. Individual comparison alpha = 0.000705 (1 of 2). Comparing 5 points to limit.

Constituent: pH Analysis Run 12/17/2019 9:57 AM View: Interwell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/17/2019 9:58 AM View: Interwell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4 (Bg)	MW-3 (Bg)	MW-2 (Bg)	MW-1 (Bg)	MW-11	MW-7	MW-10	MW-8	MW-12
4/25/2016	0.0414 (J)	0.028 (J)	0.0241 (J)						
4/26/2016				0.0231 (J)	0.094 (J)				
4/27/2016						0.253	0.371	0.0662 (J)	
4/28/2016									0.19
6/20/2016	0.0434 (J)		0.0284 (J)	0.0227 (J)					
6/21/2016						0.0768 (J)		0.0681 (J)	
6/22/2016		0.0433 (J)			0.0959 (J)				0.118
6/23/2016							0.251		
8/8/2016			0.034 (J)	0.0278 (J)					
8/9/2016	0.0453 (J)	0.0429 (J)			0.0964 (J)				
8/10/2016							0.216		0.197
8/24/2016	0.0451 (J)	0.0431 (J)	0.0316 (J)	0.0247 (J)					
10/3/2016	0.0511 (J)		0.0367 (J)	0.0307 (J)					
10/4/2016		0.04 (J)			0.0916 (J)				
10/5/2016							0.187		0.179
10/26/2016	0.0507 (J)	0.0375 (J)	0.0331 (J)	0.0241 (J)					
11/21/2016	0.0458 (J)	0.0406 (J)	0.035 (J)	0.0202 (J)	0.0929 (J)		0.182		
11/22/2016									0.197
1/17/2017			0.0259 (J)	0.0201 (J)	0.0963 (J)		0.2		
1/18/2017	0.0445 (J)	0.0548 (J)							0.186
3/21/2017					0.0947 (J)		0.178		0.183
3/22/2017	0.0432 (J)	0.0344 (J)	0.0243 (J)	0.0224 (J)					
4/18/2017	0.0409 (J)	<0.203	0.0206 (J)	<0.203					
5/30/2017				<0.203	0.0926 (J)				
5/31/2017	0.0392 (J)	0.0454 (J)	0.0234 (J)				0.149		0.193
8/23/2017	0.042 (J)	0.0425 (J)	0.0267 (J)	0.0253 (J)	0.0968 (J)		0.181		0.185
10/12/2017						0.0685 (J)		0.0687 (J)	
10/13/2017						0.0674 (J)		0.0831 (J)	
10/14/2017						0.0756 (J)		0.0702 (J)	
10/15/2017						0.0719 (J)		0.0702 (J)	
10/16/2017						0.0726 (J)		0.0707 (J)	
10/17/2017						0.0716 (J)		0.0695 (J)	
11/16/2017						0.0644 (J)		0.0675 (J)	
5/22/2018			0.0251 (J)	0.0224 (J)	0.102				
5/23/2018	0.0433 (J)					0.0715 (J)		0.0693 (J)	
5/24/2018		0.0339 (J)					0.159		0.197
6/12/2018	0.0478 (J)	0.0371 (J)	0.0275 (J)	0.0214 (J)					
10/17/2018	0.0468 (J)	0.0596 (J)	0.0321 (J)	0.0216 (J)					
11/19/2018	0.0526 (J)	0.0514 (J)	0.0324 (J)	0.0237 (J)			0.211		0.252
11/20/2018					0.106	0.0772 (J)		0.0771 (J)	
4/10/2019	0.0438 (J)	<0.203	<0.203	<0.203					
5/14/2019	<0.203	<0.203	<0.203	<0.203					
5/15/2019					0.101 (J)	0.0678 (J)	0.234	0.0689 (J)	0.239

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/17/2019 9:58 AM View: Interwell PL

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4 (Bg)	MW-3 (Bg)	MW-2 (Bg)	MW-1 (Bg)	MW-11	MW-7	MW-10	MW-8	MW-12
4/25/2016	1.53	1.32	1.9						
4/26/2016				1.94	2.16				
4/27/2016						1.71	1.46	2.34	
4/28/2016									4.12
6/20/2016	1.85		3.43	2.09					
6/21/2016						2.04		2.29	
6/22/2016		1.46			2.16				3.44
6/23/2016							1.49		
8/8/2016			3.31	2.18					
8/9/2016	1.95	1.35			2.19				
8/10/2016							1.55		4.15
8/24/2016	2.07	1.47	3.23	2.22					
10/3/2016	2.02		3.21	2.34					
10/4/2016		1.59			2.21				
10/5/2016							1.58		4.12
10/26/2016	2.07	1.27	3.35	2.34					
11/21/2016	2.39	1.38	3.34	2.5	2.24		1.62		
11/22/2016									3.98
1/17/2017			3.58	2.68	2.23		1.61		
1/18/2017	1.9	1.34							3.6
3/21/2017					2.5		1.6 (J)		3.6
3/22/2017	1.5 (J)	2	3.4	3.7					
4/18/2017	1.6 (J)	2.2	2.6	2.4					
5/30/2017				2.6	3.2				
5/31/2017	2.1	1.5 (J)	4.4				3.2		3.9
8/23/2017	2.3	1.8 (J)	4.4	2.7	2.8		6.1		4.2
10/12/2017						31		150	
10/13/2017						32		130	
10/14/2017						33		140	
10/15/2017						34		130	
10/16/2017						34		140	
10/17/2017						34		140	
11/16/2017						35		130	
5/22/2018			3.2	2.3	24				
5/23/2018	2					28		75	
5/24/2018		1.6 (J)					5		7.1
6/12/2018	1.7 (J)	1.4 (J)	3.7	2.3					
10/17/2018	1.5 (J)	<2	4.6	1.7 (J)					
11/19/2018	<2	<2	3	1.7 (J)			7.8		6.1
11/20/2018					59	20		45	
4/10/2019	1.88	2.25	1.76	2.35					
5/14/2019	1.82	2.28	2.87	2.28					
5/15/2019					75.4	15.9	6.93	52	8.51

# Prediction Limit

Constituent: pH (SU) Analysis Run 12/17/2019 9:58 AM View: Interwell PL

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4 (Bg)	MW-2 (Bg)	MW-3 (Bg)	MW-1 (Bg)	MW-11	MW-8	MW-10	MW-7	MW-12
4/25/2016	6.22	5.94	5.56						
4/26/2016				5.2	6.49				
4/27/2016						6.55	5.8	6.6	
4/28/2016									5.78
6/20/2016	6.21	5.96		5.18					
6/21/2016						6.47		6.62	
6/22/2016			5.57		6.51				6.41
6/23/2016							6.38		
8/8/2016		5.88		5.12					
8/9/2016	6.11		5.67		6.49				
8/10/2016							6.47		5.82
8/24/2016	6.11		5.63						
10/3/2016	6.13 (D)	5.91 (D)		5.21 (D)					
10/4/2016			5.69 (D)		6.51 (D)				
10/5/2016							6.42 (D)		5.82 (D)
10/26/2016	6.12	5.84	5.56	5.2					
11/21/2016	6.09 (D)	5.82 (D)	5.42 (D)	5.19 (D)	6.48		6.38		
11/22/2016									5.86
1/17/2017		5.87 (D)		5.17 (D)	6.46		6.35		
1/18/2017	6.09 (D)		5.11 (D)						5.9
3/21/2017					6.47		6.38		5.85
3/22/2017	6.15 (D)	6.01 (D)	4.52 (D)	5.2 (D)					
4/18/2017	6.19	6.02	5.84	5.2					
5/30/2017				5.14 (D)	6.48				
5/31/2017	6.13 (D)	5.85 (D)	4.56 (D)				6.4		5.84
8/23/2017	6.12 (D)	5.89 (D)	4.77 (D)	5.12 (D)	6.48		6.33		5.91
10/12/2017						6.5		6.64	
10/13/2017						6.51		6.64	
10/14/2017						6.53		6.66	
10/15/2017						6.53		6.67	
10/16/2017						6.54		6.67	
10/17/2017						6.54		6.66	
11/16/2017						6.51		6.62	
2/13/2018	6.22	6.21	5.67	5.18					
2/14/2018					6.6	6.55		6.67	
2/15/2018							6.26		5.98
5/22/2018		6.04		5.2	6.54				
5/23/2018	6.21					6.52		6.63	
5/24/2018			5.19				6.45		5.86
6/12/2018	6.16	5.95	4.79	5.15					
10/17/2018	6.12	5.9	4.75	5.12					
11/19/2018	6.16	6.03	3.77 (E)	5.09			6.3		5.88
11/20/2018					6.61	6.58		6.61	
4/10/2019	6.14	6.1	5.54	5.11					
5/14/2019	6.23	6.07	5.71	5.19					
5/15/2019					6.62	6.6	6.37	6.61	5.82

# Intrawell Prediction Limit - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/17/2019, 10:23 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>
Calcium (mg/L)	MW-1	162.1	n/a	5/14/2019	167	Yes	11	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-12	397.6	n/a	5/15/2019	411	Yes	8	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-8	1600	n/a	5/15/2019	1640	Yes	8	0	n/a	0.02144	NP Intra (normality) ...
Sulfate (mg/L)	MW-12	2718	n/a	5/15/2019	2800	Yes	8	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-1	2299	n/a	5/14/2019	2340	Yes	11	0	No	0.001504	Param Intra 1 of 2

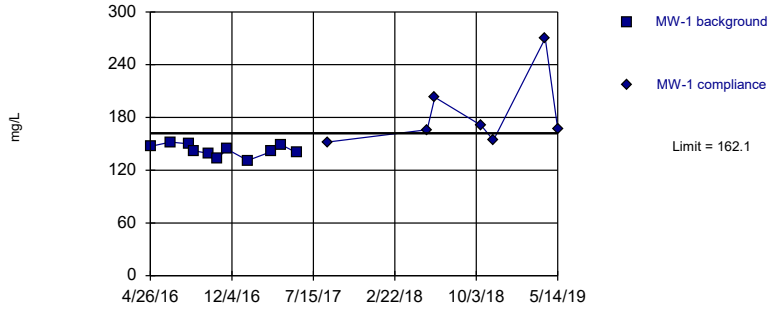
# Intrawell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/17/2019, 10:23 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
<b>Calcium (mg/L)</b>	<b>MW-1</b>	<b>162.1</b>	n/a	<b>5/14/2019</b>	<b>167</b>	<b>Yes</b>	<b>11</b>	<b>0</b>	<b>No</b>	<b>0.001504</b>	<b>Param Intra 1 of 2</b>
Calcium (mg/L)	MW-2	222.4	n/a	5/14/2019	170	No	11	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-3	446.1	n/a	5/14/2019	254	No	11	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-4	428.1	n/a	5/14/2019	254	No	11	0	sqrt(x)	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-7	400.9	n/a	5/15/2019	302	No	8	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-8	317.7	n/a	5/15/2019	305	No	8	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-10	361.1	n/a	5/15/2019	186	No	8	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-11	441.4	n/a	5/15/2019	380	No	8	0	No	0.001504	Param Intra 1 of 2
<b>Calcium (mg/L)</b>	<b>MW-12</b>	<b>397.6</b>	<b>n/a</b>	<b>5/15/2019</b>	<b>411</b>	<b>Yes</b>	<b>8</b>	<b>0</b>	<b>No</b>	<b>0.001504</b>	<b>Param Intra 1 of 2</b>
Fluoride (mg/L)	MW-1	0.214	n/a	5/14/2019	0.119	No	11	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.2479	n/a	5/14/2019	0.164	No	11	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-3	0.4921	n/a	5/14/2019	0.281	No	11	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-4	0.4769	n/a	5/14/2019	0.335	No	11	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-7	0.2318	n/a	5/15/2019	0.169	No	8	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-8	0.2371	n/a	5/15/2019	0.192	No	8	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-10	0.3976	n/a	5/15/2019	0.276	No	8	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-11	0.1841	n/a	5/15/2019	0.1	No	8	12.5	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-12	0.2318	n/a	5/15/2019	0.185	No	8	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-1	1606	n/a	5/14/2019	1560	No	11	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-2	1415	n/a	5/14/2019	873	No	11	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	3520	n/a	5/14/2019	2460	No	11	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3258	n/a	5/14/2019	2240	No	11	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-7	1643	n/a	5/15/2019	1510	No	8	0	No	0.001504	Param Intra 1 of 2
<b>Sulfate (mg/L)</b>	<b>MW-8</b>	<b>1600</b>	<b>n/a</b>	<b>5/15/2019</b>	<b>1640</b>	<b>Yes</b>	<b>8</b>	<b>0</b>	<b>n/a</b>	<b>0.02144</b>	<b>NP Intra (normality) ...</b>
Sulfate (mg/L)	MW-10	1490	n/a	5/15/2019	780	No	8	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-11	1945	n/a	5/15/2019	1510	No	8	0	No	0.001504	Param Intra 1 of 2
<b>Sulfate (mg/L)</b>	<b>MW-12</b>	<b>2718</b>	<b>n/a</b>	<b>5/15/2019</b>	<b>2800</b>	<b>Yes</b>	<b>8</b>	<b>0</b>	<b>No</b>	<b>0.001504</b>	<b>Param Intra 1 of 2</b>
<b>Total Dissolved Solids...</b>	<b>MW-1</b>	<b>2299</b>	<b>n/a</b>	<b>5/14/2019</b>	<b>2340</b>	<b>Yes</b>	<b>11</b>	<b>0</b>	<b>No</b>	<b>0.001504</b>	<b>Param Intra 1 of 2</b>
Total Dissolved Solids...	MW-2	2210	n/a	5/14/2019	1540	No	11	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-3	5173	n/a	5/14/2019	3580	No	11	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-4	4896	n/a	5/14/2019	3130	No	11	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-7	2954	n/a	5/15/2019	2310	No	8	0	x^3	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-8	2964	n/a	5/15/2019	2540	No	8	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-10	2285	n/a	5/15/2019	1230	No	8	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-11	3123	n/a	5/15/2019	2560	No	8	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-12	4298	n/a	5/15/2019	3890	No	8	0	No	0.001504	Param Intra 1 of 2

Exceeds Limit

### Prediction Limit Intrawell Parametric

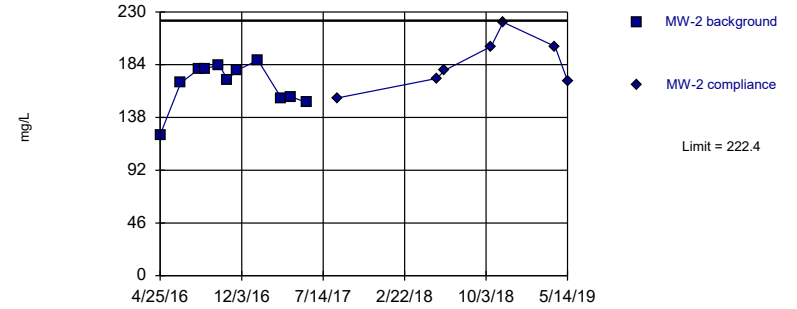


Background Data Summary: Mean=142.5, Std. Dev.=6.743, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9575, critical = 0.792. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 12/17/2019 10:06 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

### Prediction Limit Intrawell Parametric

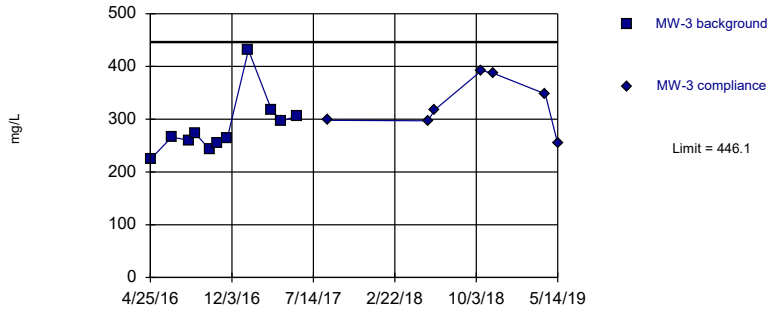


Background Data Summary: Mean=166.8, Std. Dev.=19.2, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8874, critical = 0.792. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 12/17/2019 10:06 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

### Prediction Limit Intrawell Parametric





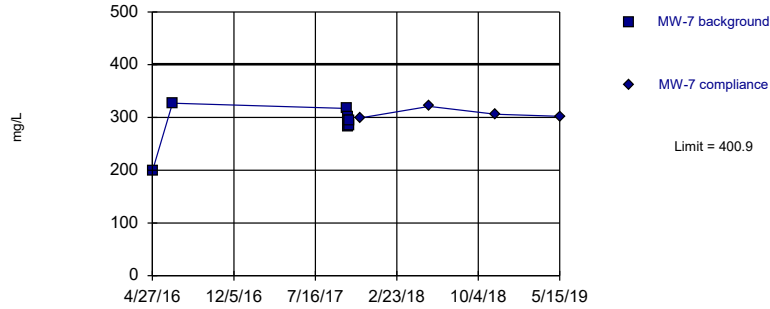
# Prediction Limit

Constituent: Calcium Analysis Run 12/17/2019 10:23 AM View: IntraWell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1	MW-2	MW-2	MW-3	MW-3	MW-4	MW-4
4/25/2016			123		224		261	
4/26/2016	147							
6/20/2016	152		168				295	
6/22/2016					266			
8/8/2016	150		180					
8/9/2016					260		318	
8/24/2016	142		180		274		319	
10/3/2016	139		184				293	
10/4/2016					243			
10/26/2016	133		171		254		311	
11/21/2016	144		179		263		320	
1/17/2017	131		188					
1/18/2017					431		417	
3/22/2017	141		155		318		292	
4/18/2017	149		156		296		302	
5/30/2017	140							
5/31/2017			151		306		284	
8/23/2017		152		155		298		297
5/22/2018		166		172				
5/23/2018								296
5/24/2018						297		
6/12/2018		203		179		318		355
10/17/2018		171		200		392		342
11/19/2018		154		221		387		289
4/10/2019		270		200		348		356
5/14/2019		167		170		254		254

Within Limit

Prediction Limit  
Intrawell Parametric

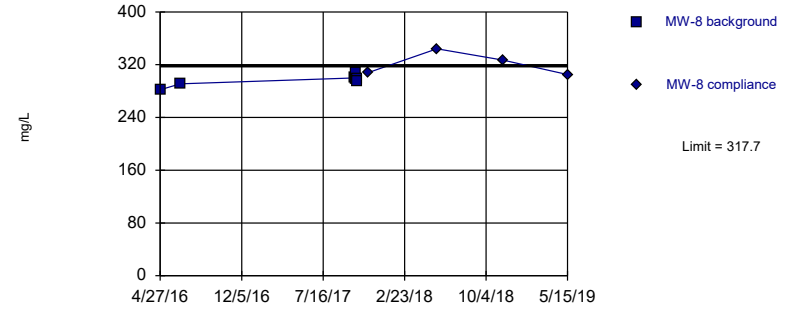


Background Data Summary: Mean=287.4, Std. Dev.=39.22, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7855, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 12/17/2019 10:06 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

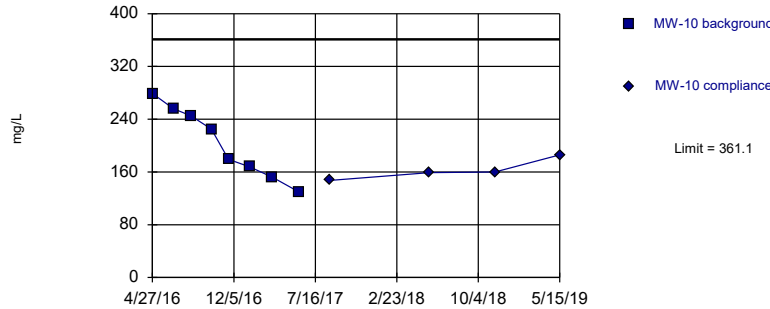


Background Data Summary: Mean=296.3, Std. Dev.=7.402, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.932, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 12/17/2019 10:06 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

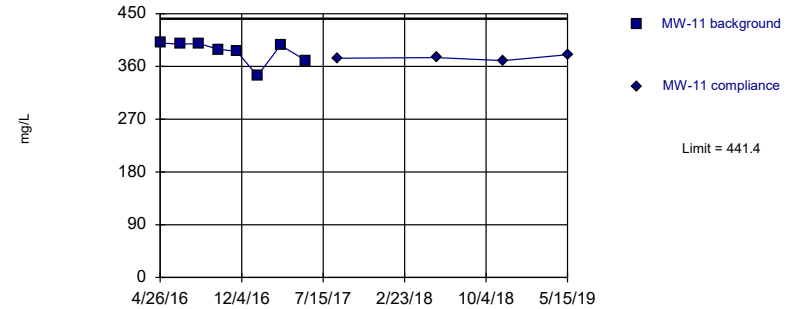


Background Data Summary: Mean=204.3, Std. Dev.=54.18, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9412, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=385.3, Std. Dev.=19.4, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7879, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

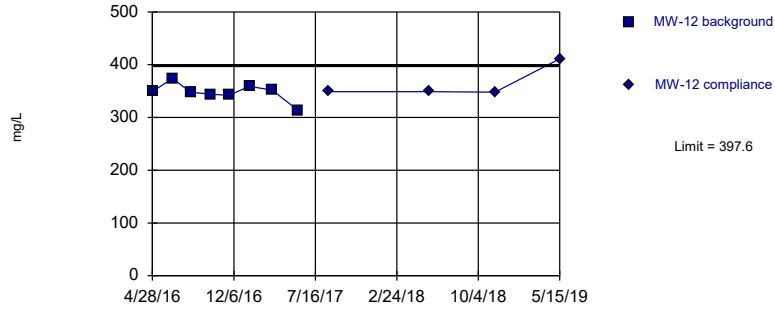
# Prediction Limit

Constituent: Calcium Analysis Run 12/17/2019 10:23 AM View: IntraWell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-7	MW-7	MW-8	MW-8	MW-10	MW-10	MW-11	MW-11
4/26/2016							400	
4/27/2016	198		282		279			
6/21/2016	327		291					
6/22/2016							398	
6/23/2016					256			
8/9/2016							399	
8/10/2016					245			
10/4/2016							389	
10/5/2016					225			
11/21/2016					179		386	
1/17/2017					168		344	
3/21/2017					152		396	
5/30/2017							370	
5/31/2017					130			
8/23/2017						147		374
10/12/2017	317		300					
10/13/2017	302		298					
10/14/2017	283		299					
10/15/2017	294		307					
10/16/2017	284		299					
10/17/2017	294		294					
11/16/2017		299		308				
5/22/2018								375
5/23/2018		321		344				
5/24/2018						159		
11/19/2018						160		
11/20/2018		306		327				370
5/15/2019		302		305		186		380

Exceeds Limit

Prediction Limit  
Intrawell Parametric

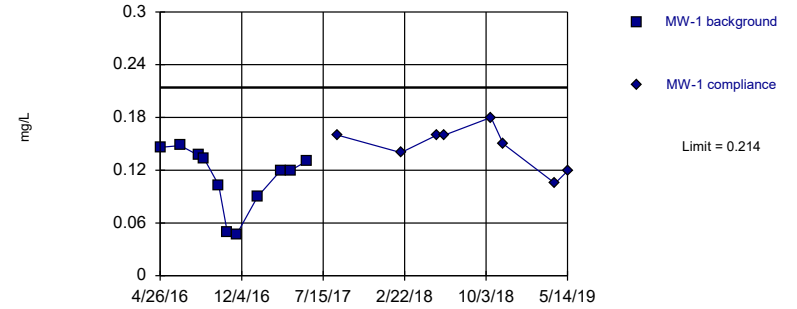


Background Data Summary: Mean=347.6, Std. Dev.=17.28, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9157, critical = 0.749. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

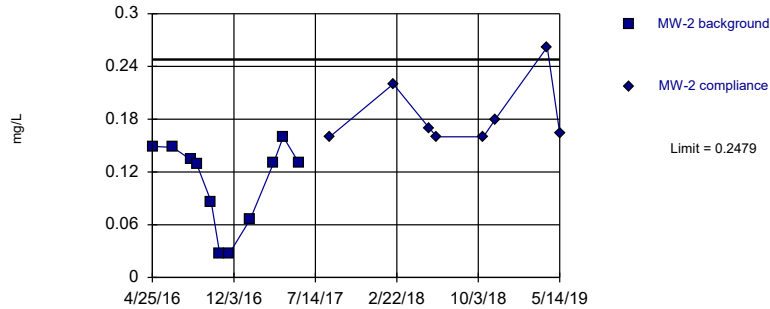


Background Data Summary: Mean=0.1113, Std. Dev.=0.03549, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8585, critical = 0.792. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

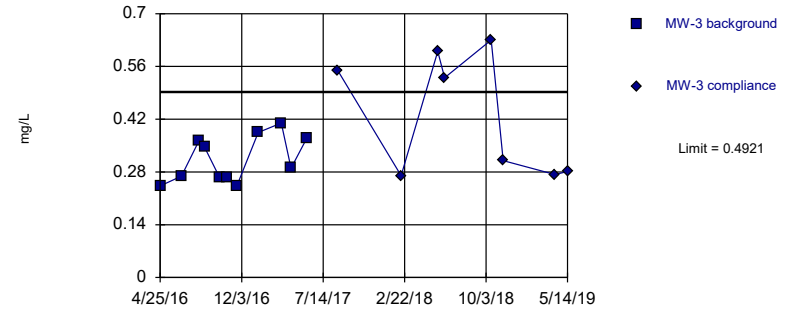


Background Data Summary: Mean=0.1078, Std. Dev.=0.04841, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8409, critical = 0.792. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=0.3138, Std. Dev.=0.06162, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.882, critical = 0.792. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

# Prediction Limit

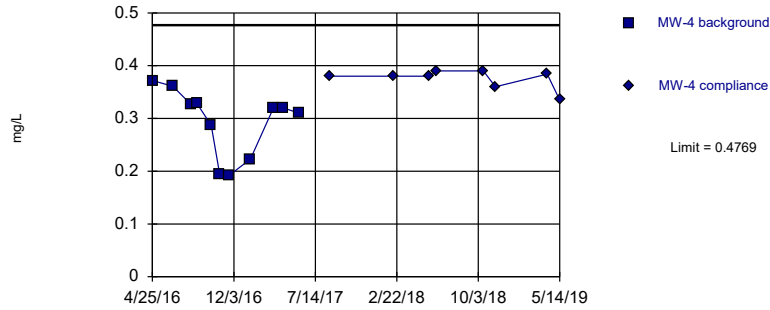
Constituent: Calcium, Fluoride Analysis Run 12/17/2019 10:23 AM View: Intrawell PL

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12	MW-1	MW-1	MW-2	MW-2	MW-3	MW-3
4/25/2016					0.149 (J)		0.243 (J)	
4/26/2016			0.146 (J)					
4/28/2016	349							
6/20/2016			0.148 (J)		0.148 (J)			
6/22/2016	374						0.269 (J)	
8/8/2016			0.137 (J)		0.134 (J)			
8/9/2016							0.363	
8/10/2016	348							
8/24/2016			0.133 (J)		0.129 (J)		0.346	
10/3/2016			0.103 (J)		0.086 (J)			
10/4/2016							0.266 (J)	
10/5/2016	344							
10/26/2016			0.05 (J)		0.027 (J)		0.266 (J)	
11/21/2016			0.047 (J)		0.027 (J)		0.244 (J)	
11/22/2016	342							
1/17/2017			0.09 (J)		0.066 (J)			
1/18/2017	359						0.385	
3/21/2017	352							
3/22/2017			0.12		0.13		0.41	
4/18/2017			0.12		0.16		0.29	
5/30/2017			0.13					
5/31/2017	313				0.13		0.37	
8/23/2017		349		0.16		0.16		0.55
2/13/2018				0.14 (D)		0.22 (D)		0.27 (D)
5/22/2018				0.16		0.17		
5/24/2018		349						0.6
6/12/2018				0.16		0.16		0.53
10/17/2018				0.18		0.16		0.63
11/19/2018		348		0.15		0.18		0.31
4/10/2019				0.105		0.262		0.273
5/14/2019				0.119		0.164		0.281
5/15/2019		411						

Within Limit

Prediction Limit  
Intrawell Parametric

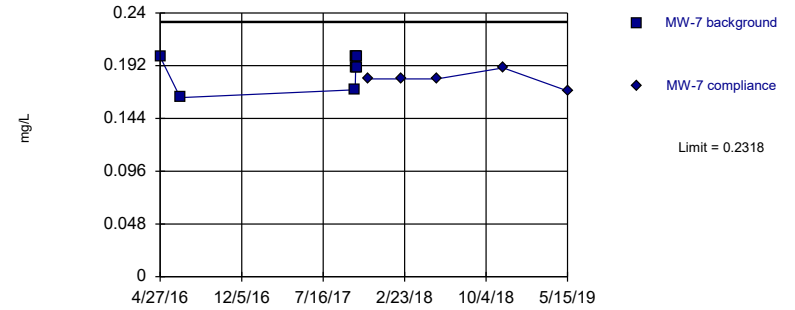


Background Data Summary: Mean=0.294, Std. Dev.=0.06319, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8703, critical = 0.792. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

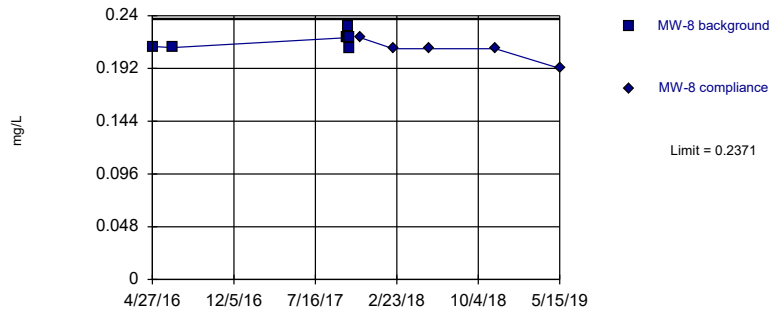


Background Data Summary: Mean=0.1891, Std. Dev.=0.01475, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7675, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

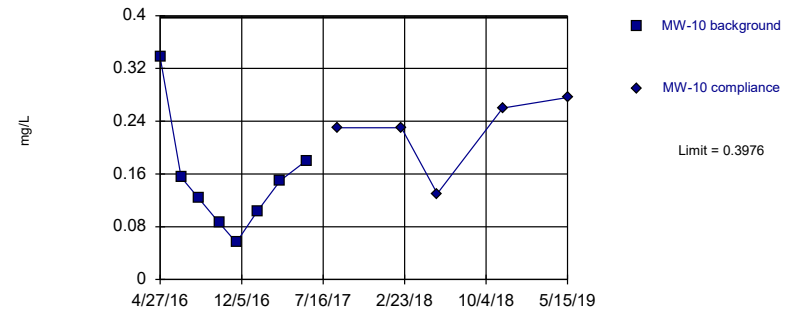


Background Data Summary: Mean=0.2179, Std. Dev.=0.006643, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.865, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric



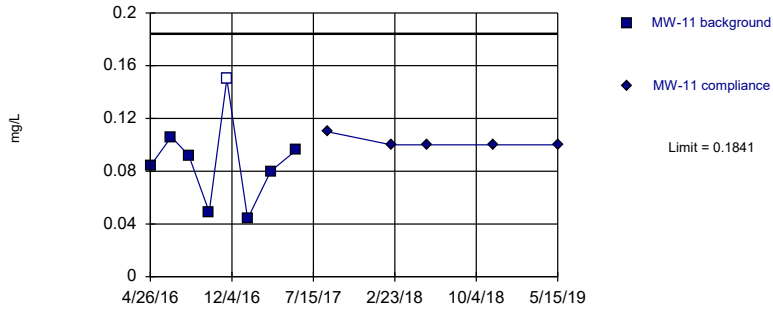
# Prediction Limit

Constituent: Fluoride    Analysis Run 12/17/2019 10:23 AM    View: IntraWell PL  
 Plant William C Gorgas    Client: Southern Company    Data: Gorgas BALF CCR

	MW-4	MW-4	MW-7	MW-7	MW-8	MW-8	MW-10	MW-10
4/25/2016	0.372							
4/27/2016			0.2 (J)		0.212 (J)		0.337	
6/20/2016	0.361							
6/21/2016			0.163 (J)		0.211 (J)			
6/23/2016							0.155 (J)	
8/9/2016	0.326							
8/10/2016							0.123 (J)	
8/24/2016	0.329							
10/3/2016	0.287 (J)							
10/5/2016							0.086 (J)	
10/26/2016	0.194 (J)							
11/21/2016	0.192 (J)						0.056 (J)	
1/17/2017							0.103 (J)	
1/18/2017	0.223 (J)							
3/21/2017							0.15	
3/22/2017	0.32							
4/18/2017	0.32							
5/31/2017	0.31						0.18	
8/23/2017		0.38						0.23
10/12/2017			0.17		0.22			
10/13/2017			0.19		0.23			
10/14/2017			0.2		0.22			
10/15/2017			0.2		0.22			
10/16/2017			0.2		0.22			
10/17/2017			0.19		0.21			
11/16/2017				0.18		0.22		
2/13/2018		0.38 (D)						
2/14/2018				0.18 (D)		0.21 (D)		
2/15/2018								0.23 (D)
5/23/2018		0.38		0.18		0.21		
5/24/2018								0.13
6/12/2018		0.39						
10/17/2018		0.39						
11/19/2018		0.36						0.26
11/20/2018				0.19		0.21		
4/10/2019		0.384						
5/14/2019		0.335						
5/15/2019				0.169		0.192		0.276

Within Limit

Prediction Limit  
 Intrawell Parametric

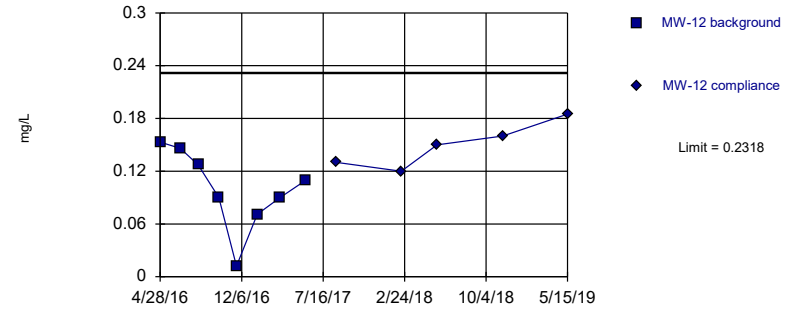


Background Data Summary: Mean=0.08763, Std. Dev.=0.03335, n=8, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9375, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
 Intrawell Parametric

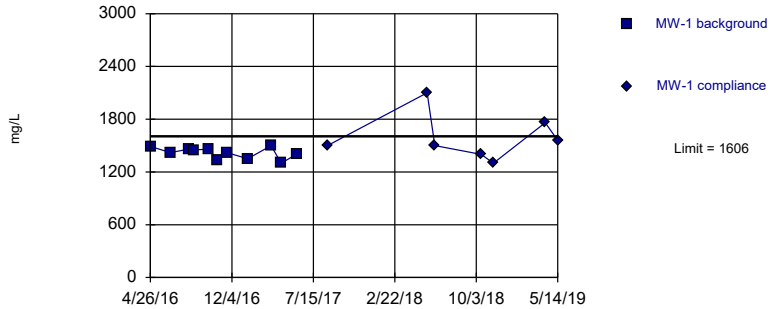


Background Data Summary: Mean=0.09988, Std. Dev.=0.04557, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9357, critical = 0.749. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
 Intrawell Parametric

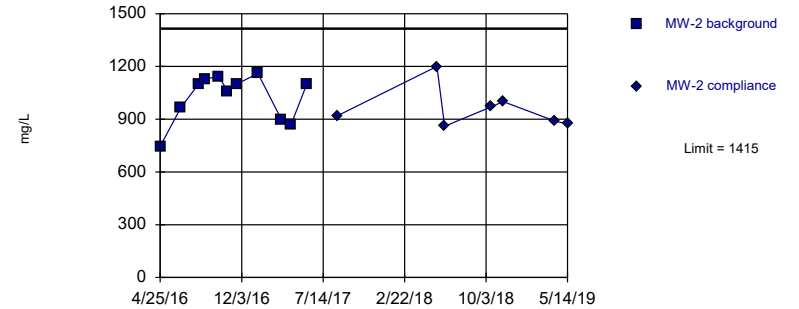


Background Data Summary: Mean=1416, Std. Dev.=65.62, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9344, critical = 0.792. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

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 overridden to 2.894.

Constituent: Sulfate Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



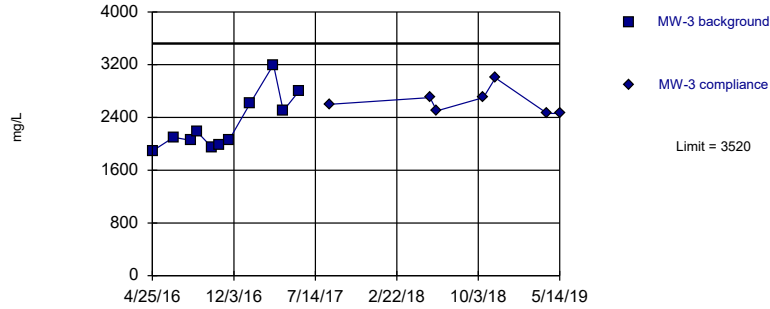
# Prediction Limit

Constituent: Fluoride, Sulfate    Analysis Run 12/17/2019 10:23 AM    View: Intrawell PL

Plant William C Gorgas    Client: Southern Company    Data: Gorgas BALF CCR

	MW-11	MW-11	MW-12	MW-12	MW-1	MW-1	MW-2	MW-2
4/25/2016							745	
4/26/2016	0.084 (J)				1490			
4/28/2016			0.153 (J)					
6/20/2016					1420		964	
6/22/2016	0.106 (J)		0.146 (J)					
8/8/2016					1460		1100	
8/9/2016	0.092 (J)							
8/10/2016			0.127 (J)					
8/24/2016					1450		1130	
10/3/2016					1460		1140	
10/4/2016	0.049 (J)							
10/5/2016			0.09 (J)					
10/26/2016					1330		1060	
11/21/2016	<0.3				1420		1100	
11/22/2016			0.012 (J)					
1/17/2017	0.044 (J)				1350		1160	
1/18/2017			0.071 (J)					
3/21/2017	0.08 (J)		0.09 (J)					
3/22/2017					1500		900	
4/18/2017					1300		870	
5/30/2017	0.096 (J)				1400			
5/31/2017			0.11				1100	
8/23/2017		0.11		0.13		1500		920
2/14/2018		0.1 (D)						
2/15/2018				0.12 (D)				
5/22/2018		0.1				2100		1200
5/24/2018				0.15				
6/12/2018						1500		860
10/17/2018						1400		970
11/19/2018				0.16		1300		1000
11/20/2018		0.1						
4/10/2019						1760		889
5/14/2019						1560		873
5/15/2019		0.1		0.185				

Within Limit Prediction Limit  
Intrawell Parametric



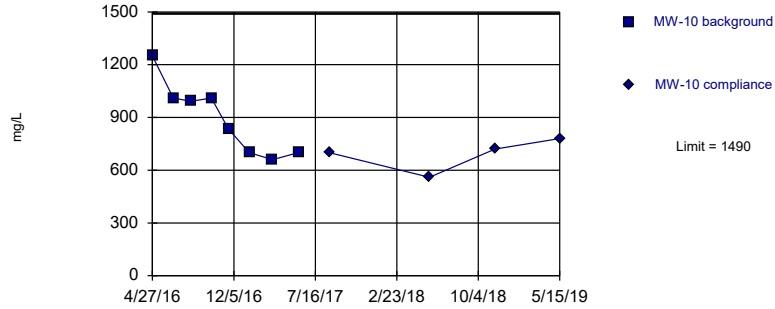
# Prediction Limit

Constituent: Sulfate Analysis Run 12/17/2019 10:23 AM View: Intrawell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3	MW-4	MW-4	MW-7	MW-7	MW-8	MW-8
4/25/2016	1890		2260					
4/27/2016					1050		1550	
6/20/2016			2500					
6/21/2016					1410		1470	
6/22/2016	2100							
8/9/2016	2050		2750					
8/24/2016	2190		2770					
10/3/2016			3060					
10/4/2016	1950							
10/26/2016	1980		2650					
11/21/2016	2060		2720					
1/18/2017	2620		2650					
3/22/2017	3200		2700					
4/18/2017	2500		2400					
5/31/2017	2800		2700					
8/23/2017		2600		2700				
10/12/2017					1400		1400	
10/13/2017					1400		1600	
10/14/2017					1300		1400	
10/15/2017					1300		1400	
10/16/2017					1300		1400	
10/17/2017					1300		1400	
11/16/2017						1300		1400
5/23/2018				2400		1900		2100
5/24/2018		2700						
6/12/2018		2500		2600				
10/17/2018		2700		2600				
11/19/2018		3000		2400				
11/20/2018						1100		1400
4/10/2019		2460		2090				
5/14/2019		2460		2240				
5/15/2019						1510		1640

Within Limit

Prediction Limit  
Intrawell Parametric

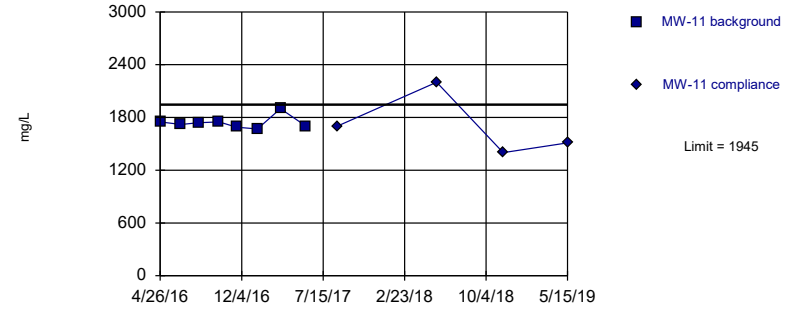


Background Data Summary: Mean=894.5, Std. Dev.=205.9, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.904, critical = 0.749. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

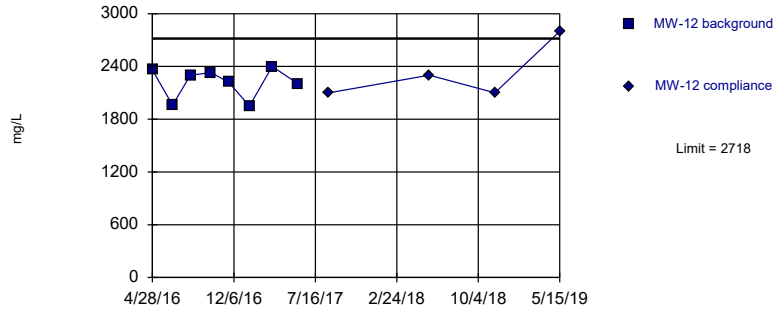


Background Data Summary: Mean=1740, Std. Dev.=70.91, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.802, critical = 0.749. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Exceeds Limit

Prediction Limit  
Intrawell Parametric

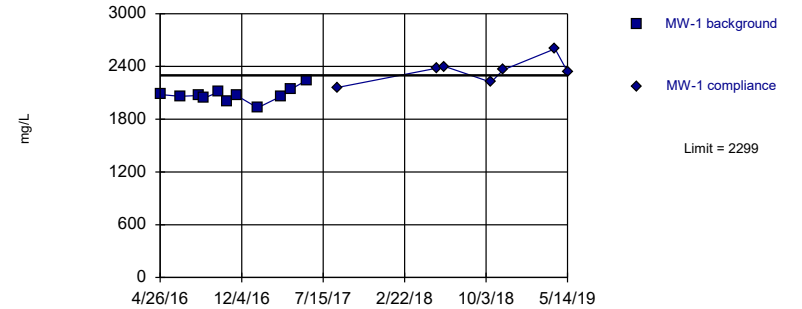


Background Data Summary: Mean=2215, Std. Dev.=173.7, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8595, critical = 0.749. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Exceeds Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=2073, Std. Dev.=78.11, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9394, critical = 0.792. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

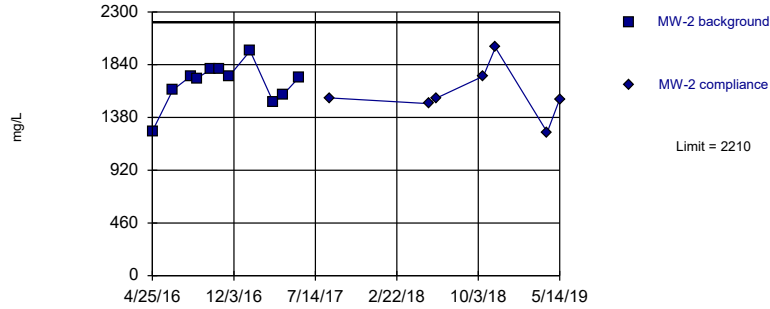
# Prediction Limit

Constituent: Sulfate, Total Dissolved Solids Analysis Run 12/17/2019 10:23 AM View: Intrawell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-10	MW-10	MW-11	MW-11	MW-12	MW-12	MW-1	MW-1
4/26/2016			1750				2080 (D)	
4/27/2016	1250							
4/28/2016					2360			
6/20/2016							2060 (D)	
6/22/2016			1720		1960			
6/23/2016	1010							
8/8/2016							2070 (D)	
8/9/2016			1740					
8/10/2016	992				2300			
8/24/2016							2040 (D)	
10/3/2016							2110 (D)	
10/4/2016			1750					
10/5/2016	1010				2330			
10/26/2016							2000 (D)	
11/21/2016	834		1690				2070 (D)	
11/22/2016					2220			
1/17/2017	700		1670				1930 (D)	
1/18/2017					1950			
3/21/2017	660		1900		2400			
3/22/2017							2060 (D)	
4/18/2017							2140 (D)	
5/30/2017			1700				2240 (D)	
5/31/2017	700				2200			
8/23/2017		700		1700		2100		2160 (D)
5/22/2018				2200				2380 (D)
5/24/2018		560				2300		
6/12/2018								2400
10/17/2018								2220
11/19/2018		720				2100		2360
11/20/2018				1400				
4/10/2019								2600 (D)
5/14/2019								2340 (D)
5/15/2019		780		1510		2800		

Within Limit

Prediction Limit  
Intrawell Parametric

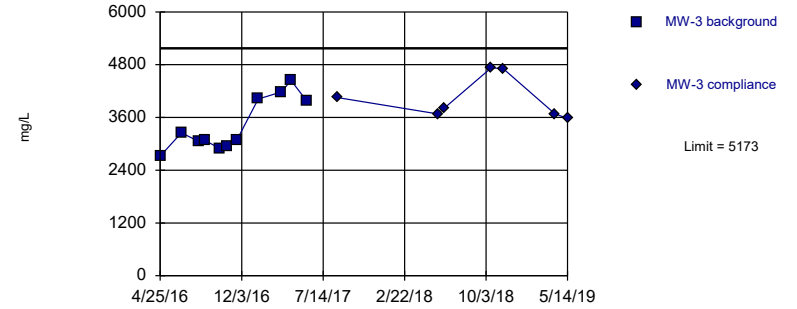


Background Data Summary: Mean=1678, Std. Dev.=183.7, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9179, critical = 0.792. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

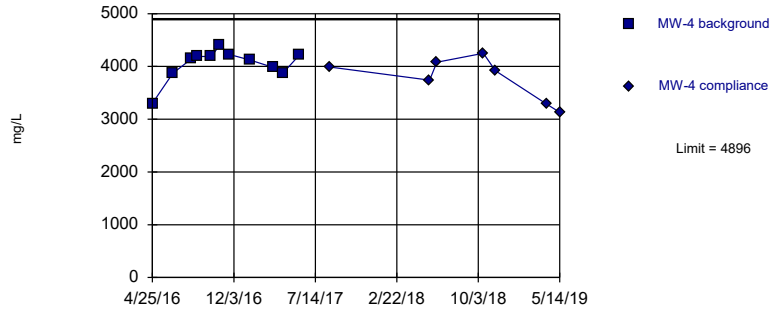


Background Data Summary: Mean=3422, Std. Dev.=605.1, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8605, critical = 0.792. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

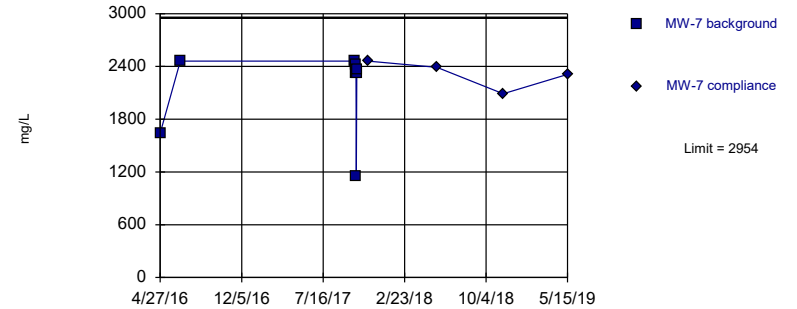


Background Data Summary: Mean=4046, Std. Dev.=293.5, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8289, critical = 0.792. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric



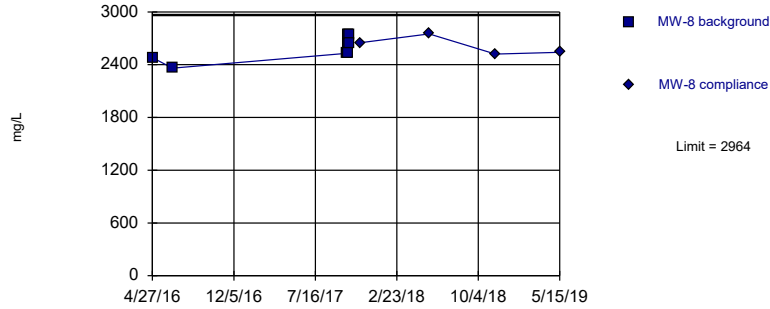
Background Data Summary (based on cube transformation): Mean=1.1e10, Std. Dev.=5.1e9, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7542, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Within Limit

Prediction Limit  
Intrawell Parametric

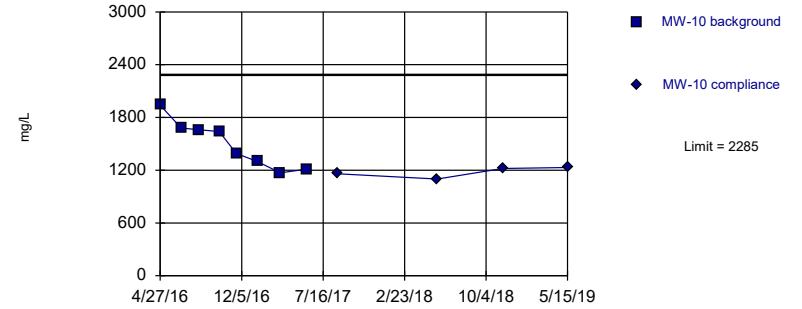


Background Data Summary: Mean=2583, Std. Dev.=132, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9411, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 12/17/2019 10:07 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

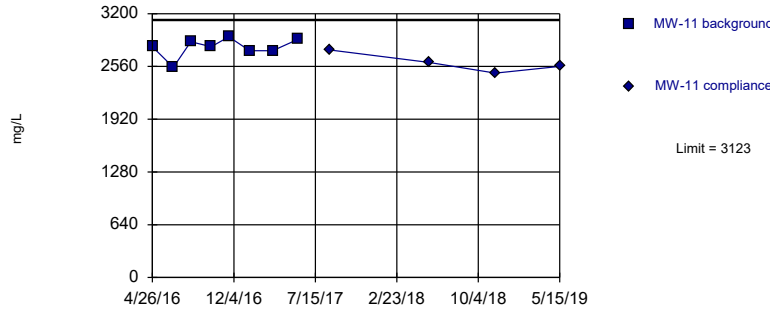


Background Data Summary: Mean=1499, Std. Dev.=271.6, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9261, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 12/17/2019 10:08 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

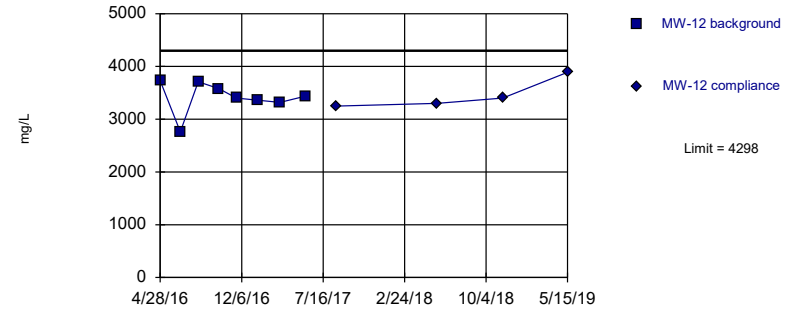


Background Data Summary: Mean=2790, Std. Dev.=115.1, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.89, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 12/17/2019 10:08 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=3413, Std. Dev.=306, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8607, critical = 0.749. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 12/17/2019 10:08 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

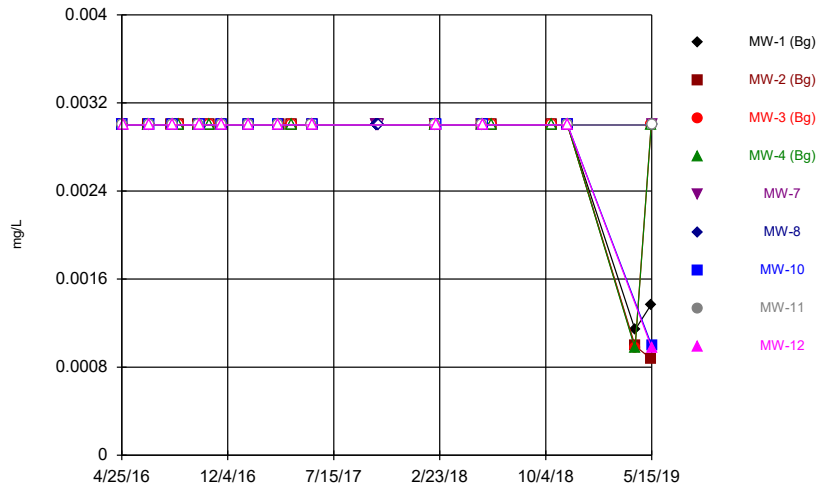


# Prediction Limit

Constituent: Total Dissolved Solids Analysis Run 12/17/2019 10:23 AM View: IntraWell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

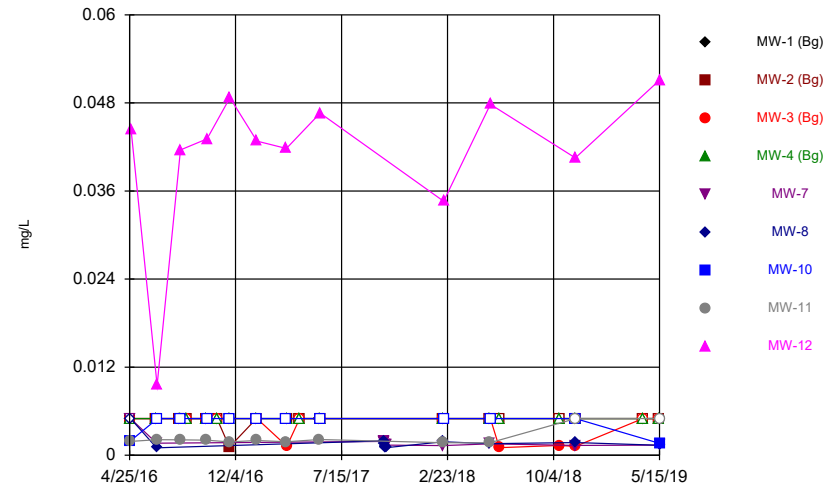
	MW-8	MW-8	MW-10	MW-10	MW-11	MW-11	MW-12	MW-12
4/26/2016					2800			
4/27/2016	2480		1940					
4/28/2016							3730	
6/21/2016	2360							
6/22/2016					2550		2760	
6/23/2016			1680					
8/9/2016					2860			
8/10/2016			1660				3710	
10/4/2016					2800			
10/5/2016			1640				3580	
11/21/2016			1390		2920			
11/22/2016							3400	
1/17/2017			1300		2750			
1/18/2017							3360	
3/21/2017			1170		2750		3320	
5/30/2017					2890			
5/31/2017			1210				3440	
8/23/2017				1160		2760		3250
10/12/2017	2530							
10/13/2017	2740							
10/14/2017	2630							
10/15/2017	2530							
10/16/2017	2740							
10/17/2017	2650							
11/16/2017		2650						
5/22/2018						2610		
5/23/2018		2750						
5/24/2018				1100				3300
11/19/2018				1220				3400
11/20/2018		2520				2480		
5/15/2019		2540		1230		2560		3890

Time Series



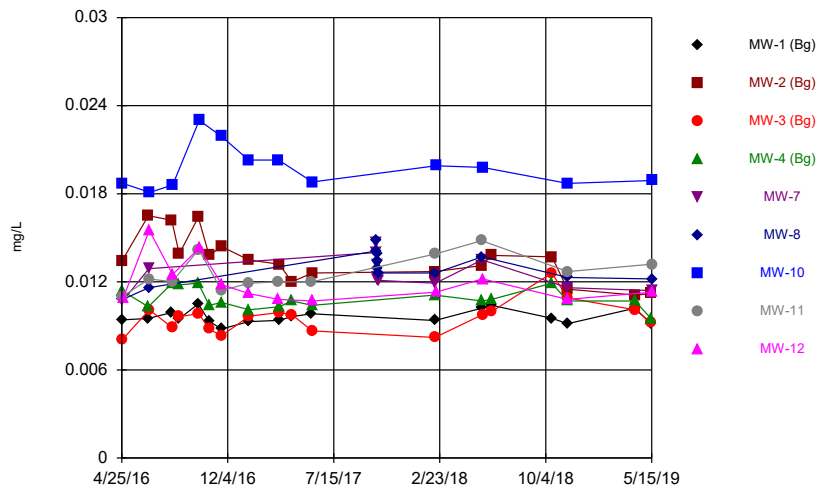
Constituent: Antimony Analysis Run 12/17/2019 10:26 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



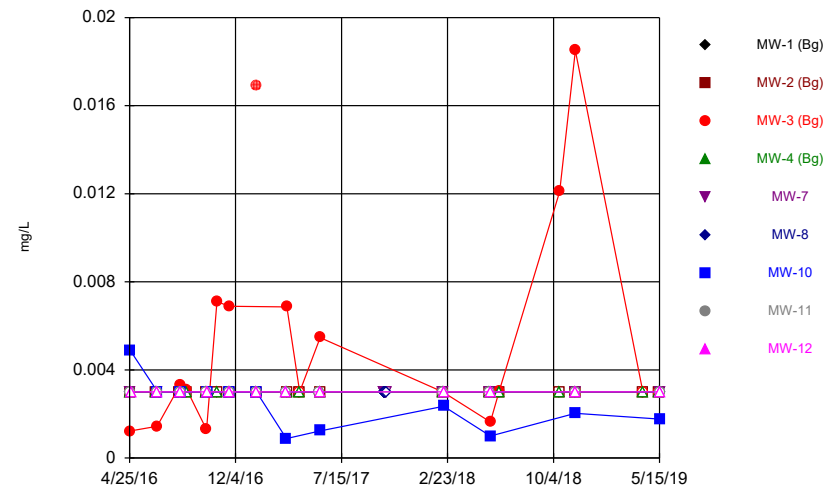
Constituent: Arsenic Analysis Run 12/17/2019 10:26 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



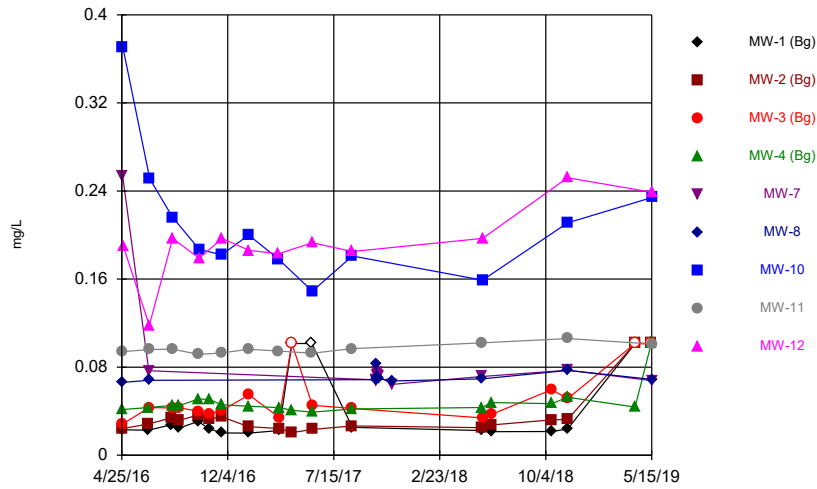
Constituent: Barium Analysis Run 12/17/2019 10:26 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



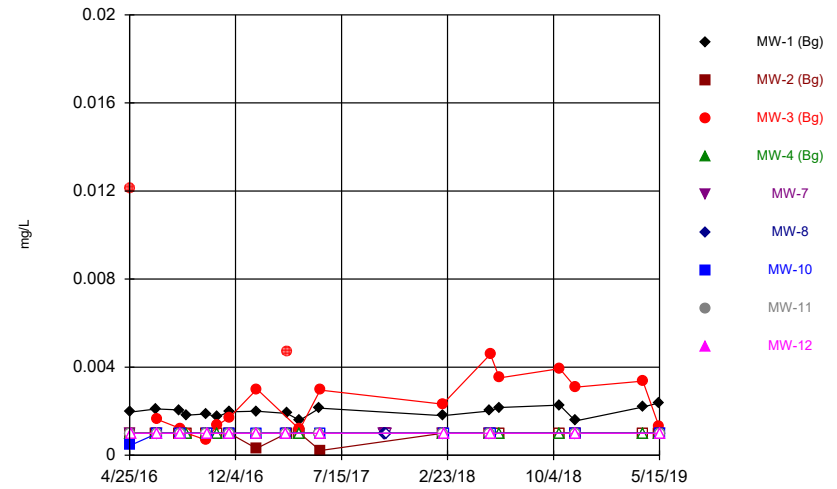
Constituent: Beryllium Analysis Run 12/17/2019 10:26 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



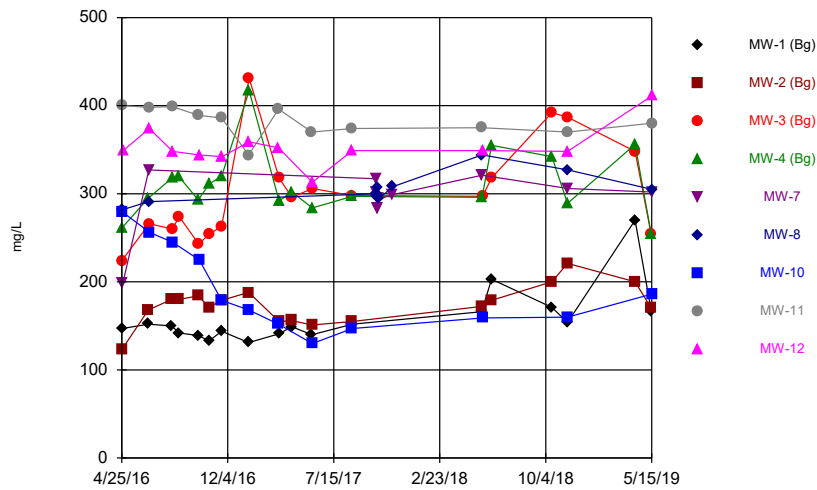
Constituent: Boron Analysis Run 12/17/2019 10:26 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



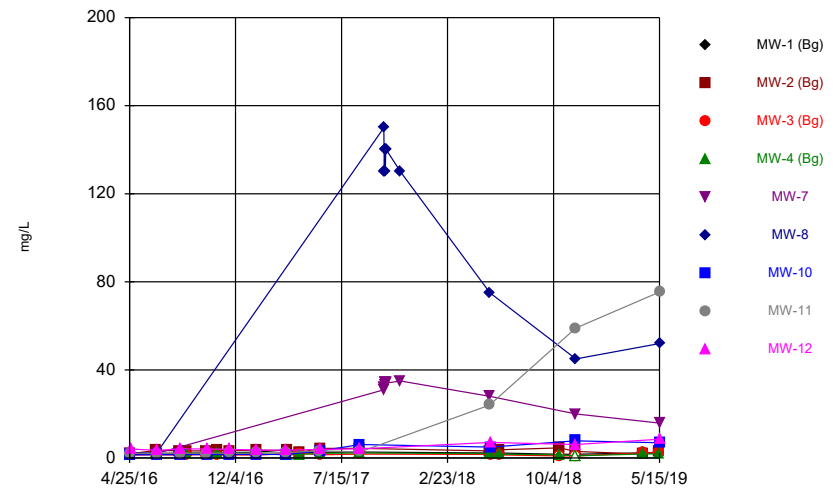
Constituent: Cadmium Analysis Run 12/17/2019 10:26 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



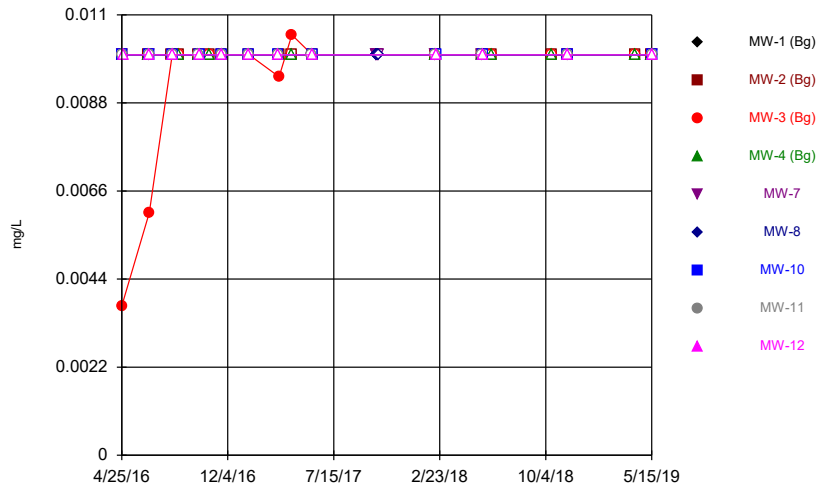
Constituent: Calcium Analysis Run 12/17/2019 10:26 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



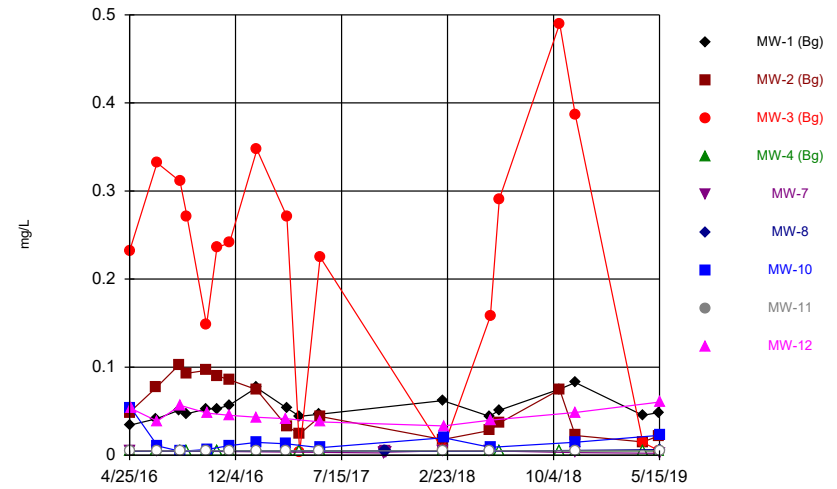
Constituent: Chloride Analysis Run 12/17/2019 10:26 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



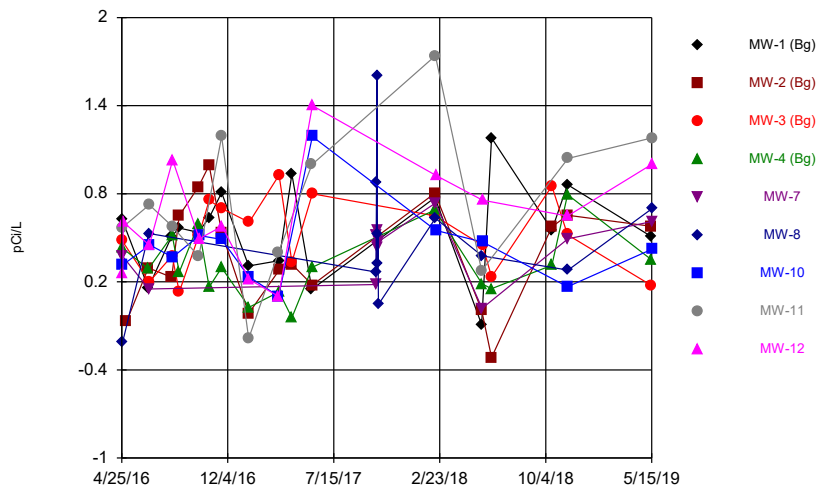
Constituent: Chromium Analysis Run 12/17/2019 10:26 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



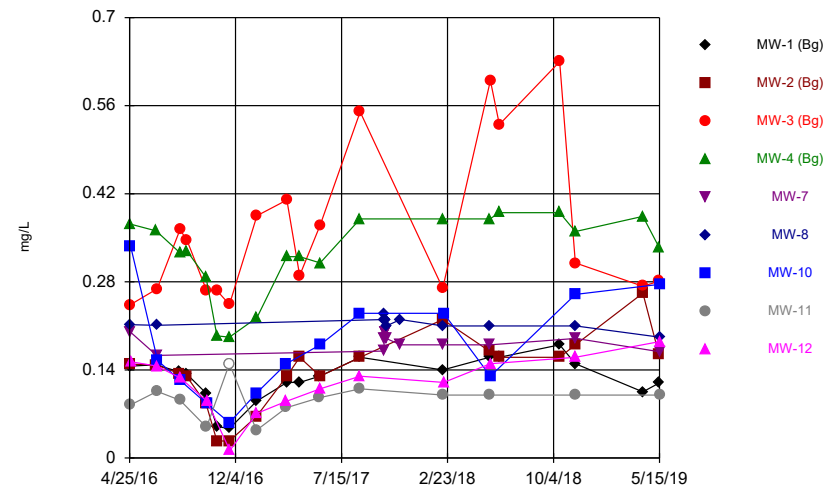
Constituent: Cobalt Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



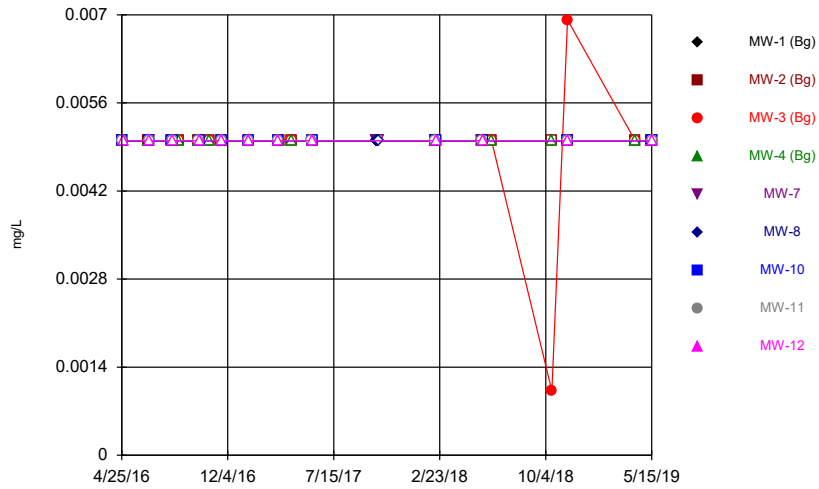
Constituent: Combined Radium 226 + 228 Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



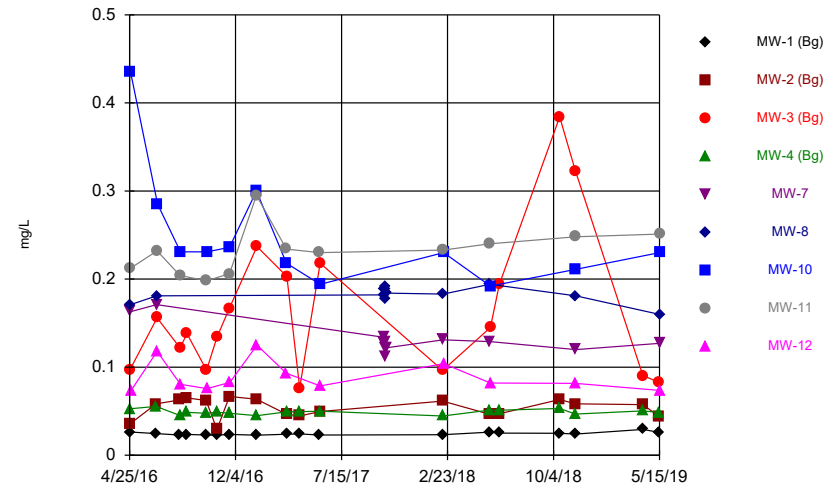
Constituent: Fluoride Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



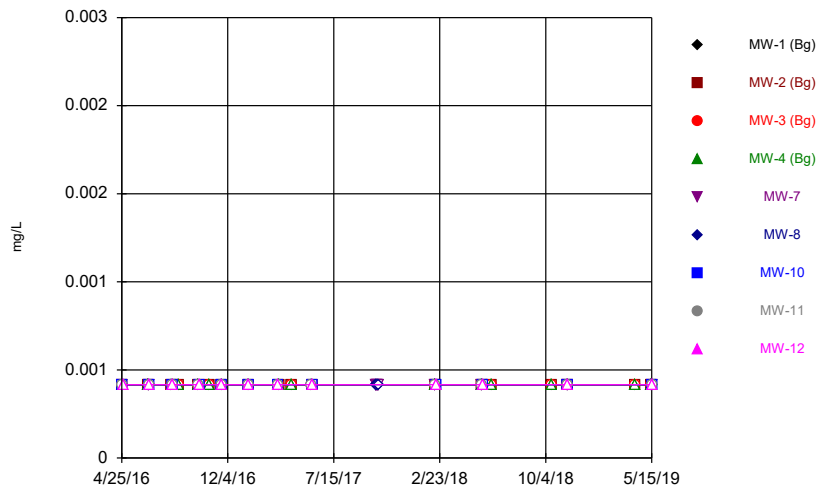
Constituent: Lead Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



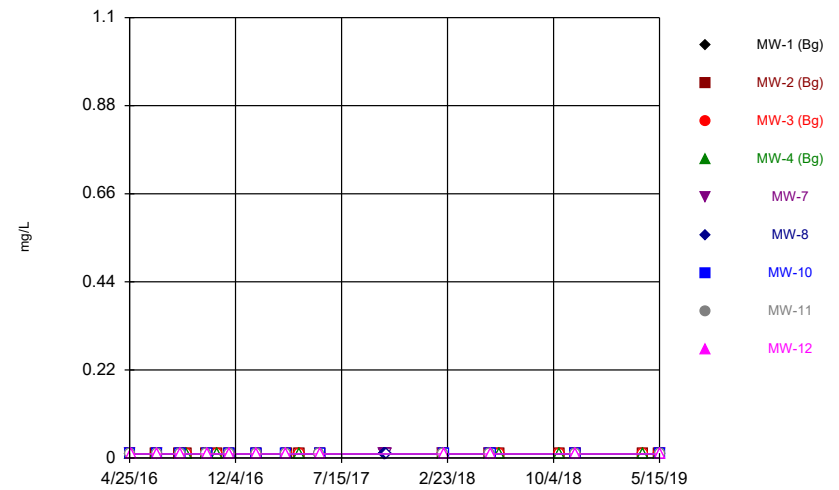
Constituent: Lithium Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



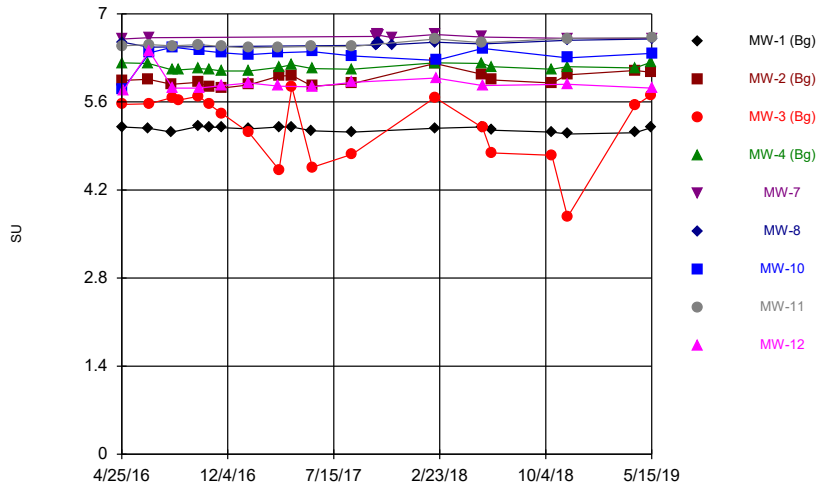
Constituent: Mercury Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



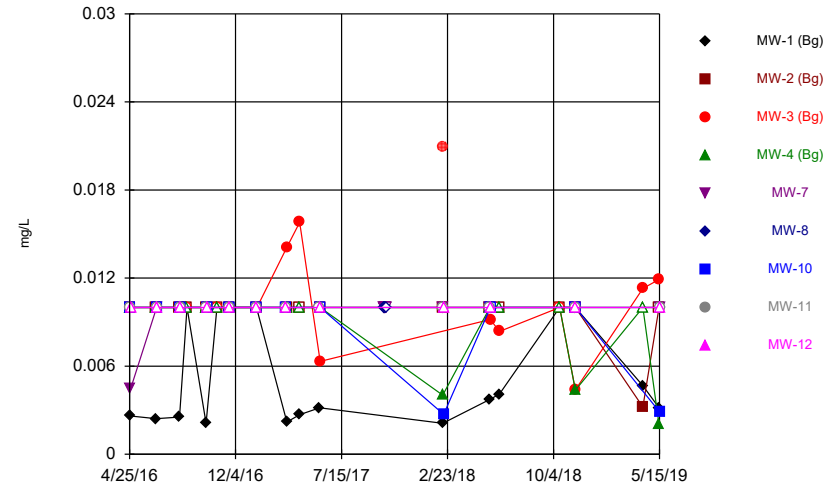
Constituent: Molybdenum Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



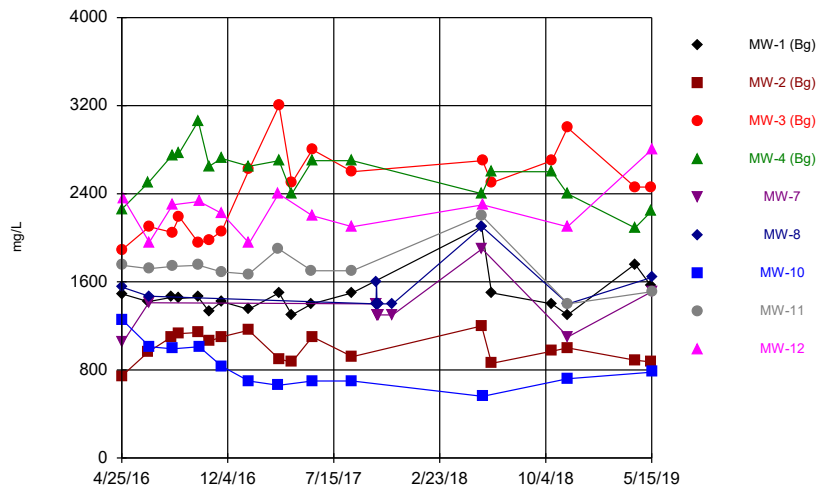
Constituent: pH Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



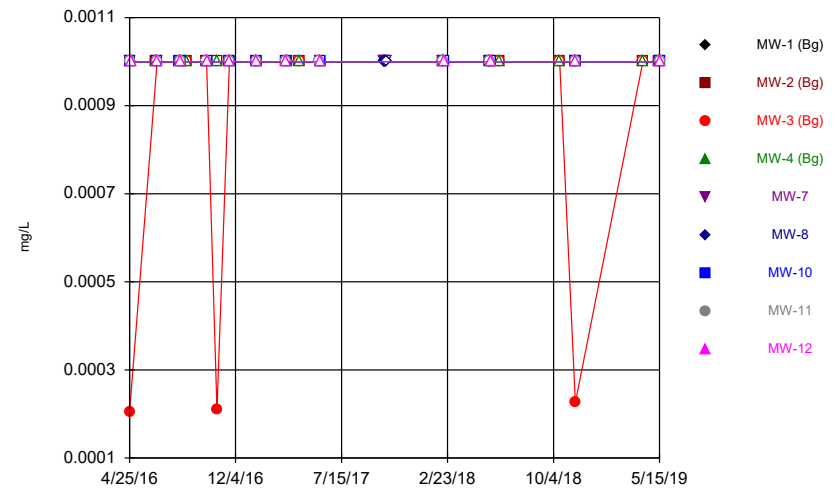
Constituent: Selenium Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



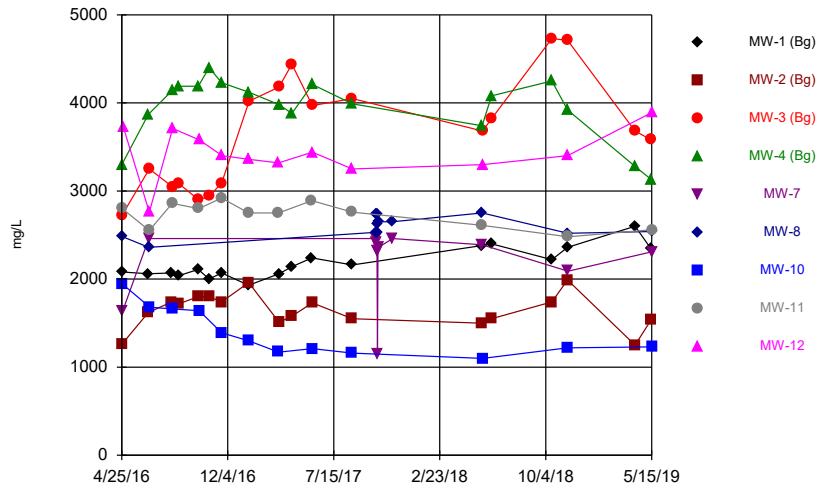
Constituent: Sulfate Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



Constituent: Thallium Analysis Run 12/17/2019 10:27 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



Constituent: Total Dissolved Solids    Analysis Run 12/17/2019 10:27 AM    View: Time Series  
Plant William C Gorgas    Client: Southern Company    Data: Gorgas BALF CCR

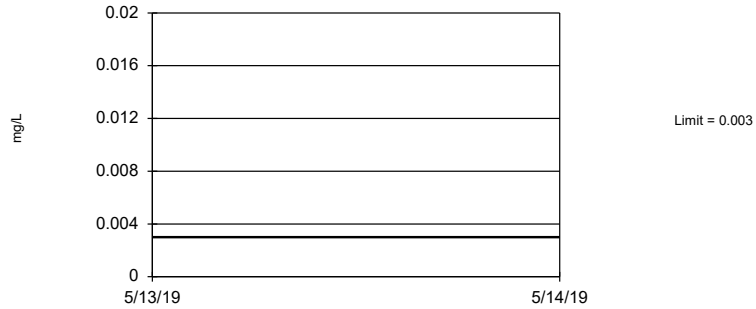
# Upper Tolerance Limits - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/17/2019, 10:29 AM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.003	n/a	72	n/a	n/a	91.67	n/a	n/a	0.02489	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	72	n/a	n/a	93.06	n/a	n/a	0.02489	NP Inter(NDs)
Barium (mg/L)	0.0165	n/a	72	n/a	n/a	0	n/a	n/a	0.02489	NP Inter(normal...
Beryllium (mg/L)	0.0185	n/a	71	n/a	n/a	81.69	n/a	n/a	0.0262	NP Inter(NDs)
Cadmium (mg/L)	0.00459	n/a	70	n/a	n/a	50	n/a	n/a	0.02758	NP Inter(normal...
Chromium (mg/L)	0.0105	n/a	72	n/a	n/a	94.44	n/a	n/a	0.02489	NP Inter(NDs)
Cobalt (mg/L)	0.49	n/a	72	n/a	n/a	25	n/a	n/a	0.02489	NP Inter(normal...
Combined Radium 226 + 228 (pCi/L)	1.042	n/a	68	0.4422	0.3011	0	None	No	0.05	Inter
Fluoride (mg/L)	0.5466	n/a	76	0.47	0.1367	0	None	sqrt(x)	0.05	Inter
Lead (mg/L)	0.00692	n/a	72	n/a	n/a	97.22	n/a	n/a	0.02489	NP Inter(NDs)
Lithium (mg/L)	0.384	n/a	72	n/a	n/a	0	n/a	n/a	0.02489	NP Inter(normal...
Mercury (mg/L)	0.0005	n/a	72	n/a	n/a	100	n/a	n/a	0.02489	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	72	n/a	n/a	100	n/a	n/a	0.02489	NP Inter(NDs)
Selenium (mg/L)	0.0158	n/a	71	n/a	n/a	66.2	n/a	n/a	0.0262	NP Inter(normal...
Thallium (mg/L)	0.001	n/a	72	n/a	n/a	95.83	n/a	n/a	0.02489	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 72 background values. 91.67% NDs. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02489.

Constituent: Antimony Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 72 background values. 93.06% NDs. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02489.

Constituent: Arsenic Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

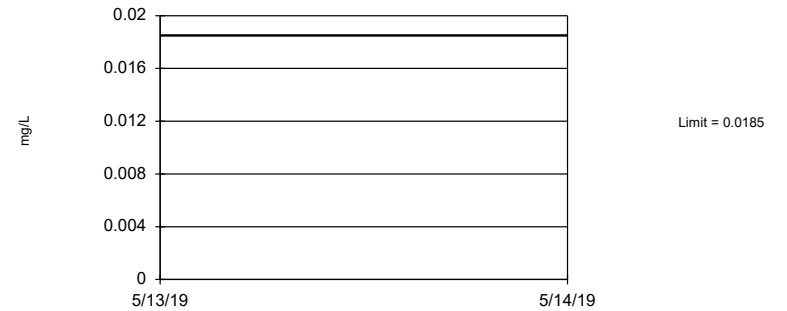
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 72 background values. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02489.

Constituent: Barium Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

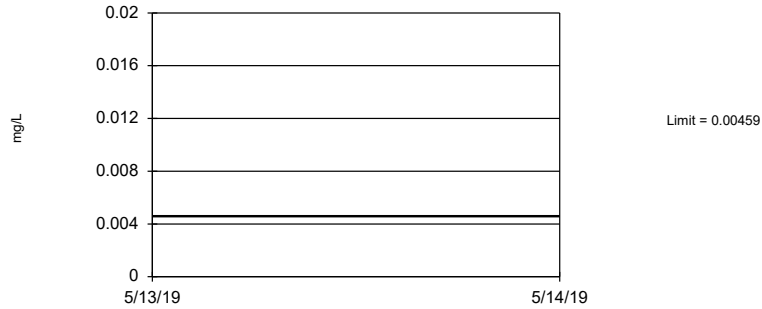
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 71 background values. 81.69% 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: Beryllium Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

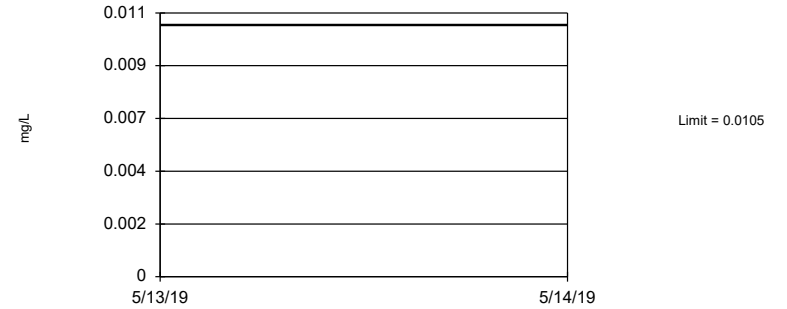
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 70 background values. 50% 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: Cadmium Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

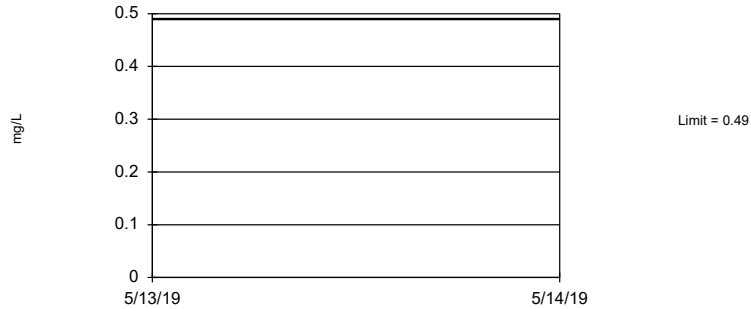
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 72 background values. 94.44% NDs. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02489.

Constituent: Chromium Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

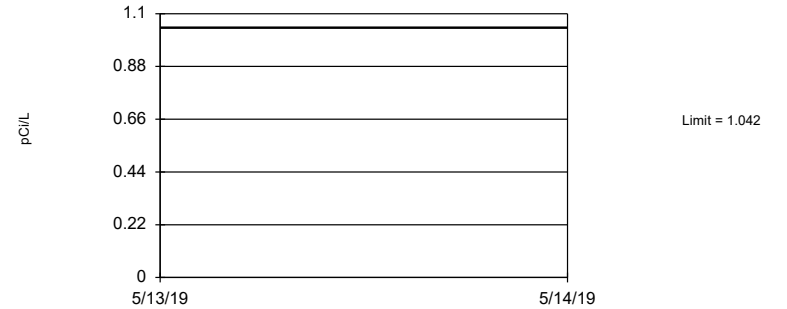
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 72 background values. 25% NDs. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02489.

Constituent: Cobalt Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

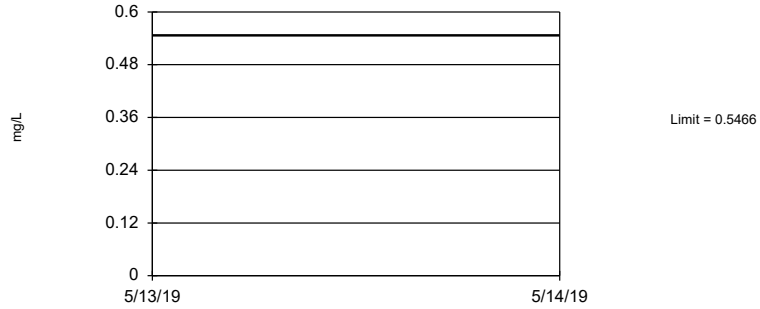
### Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary: Mean=0.4422, Std. Dev.=0.3011, n=68. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9907, critical = 0.95. Report alpha = 0.05.

Constituent: Combined Radium 226 + 228 Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

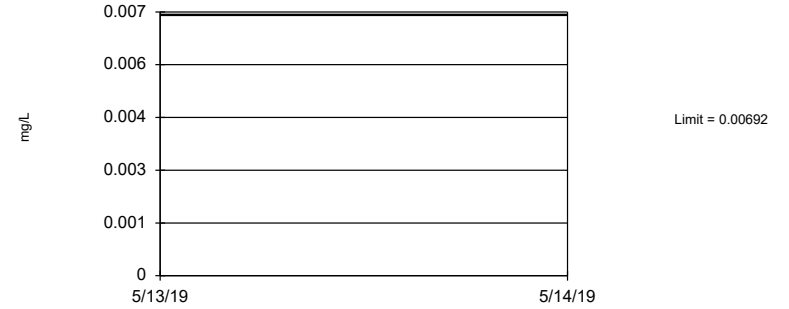
### Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary (based on square root transformation): Mean=0.47, Std. Dev.=0.1367, n=76. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9763, critical = 0.957. Report alpha = 0.05.

Constituent: Fluoride Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

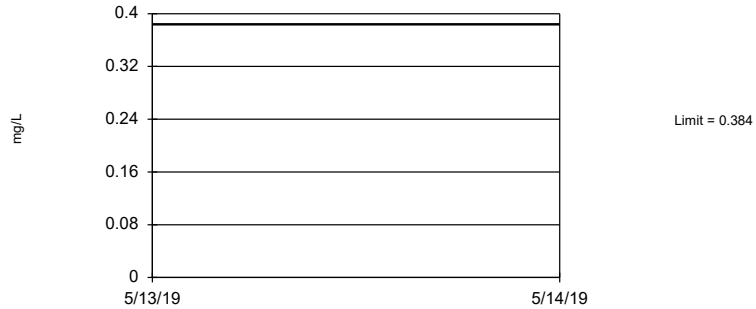
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 72 background values. 97.22% NDs. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02489.

Constituent: Lead Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

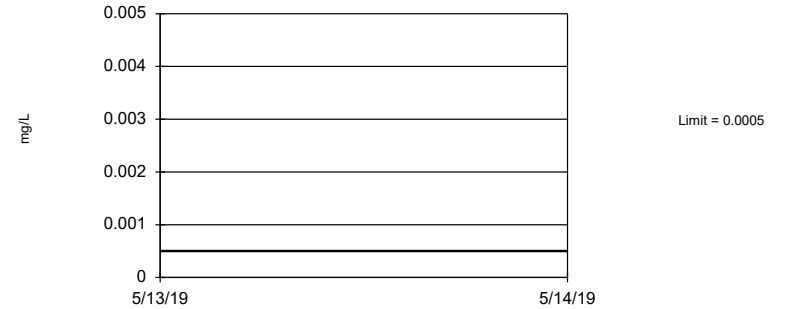
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 72 background values. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02489.

Constituent: Lithium Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02489.

Constituent: Mercury Analysis Run 12/17/2019 10:28 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

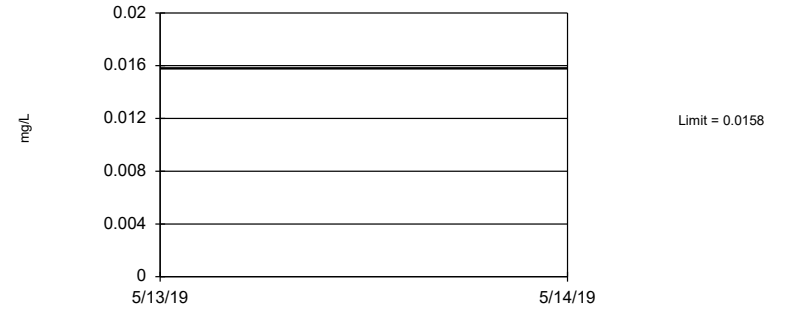
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02489.

Constituent: Molybdenum Analysis Run 12/17/2019 10:29 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

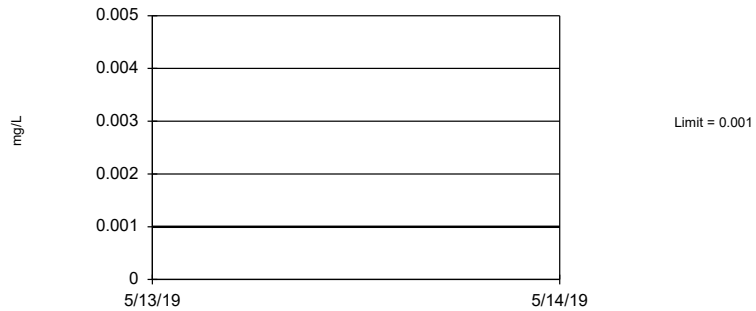
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 71 background values. 66.2% 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: Selenium Analysis Run 12/17/2019 10:29 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 72 background values. 95.83% NDs. 93.95% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02489.

Constituent: Thallium Analysis Run 12/17/2019 10:29 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

# Confidence Intervals - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/17/2019, 10:35 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>
Arsenic (mg/L)	MW-12	0.04802	0.03576	0.01	Yes	12	0	x^2	0.01	Param.

# Confidence Intervals - All Results

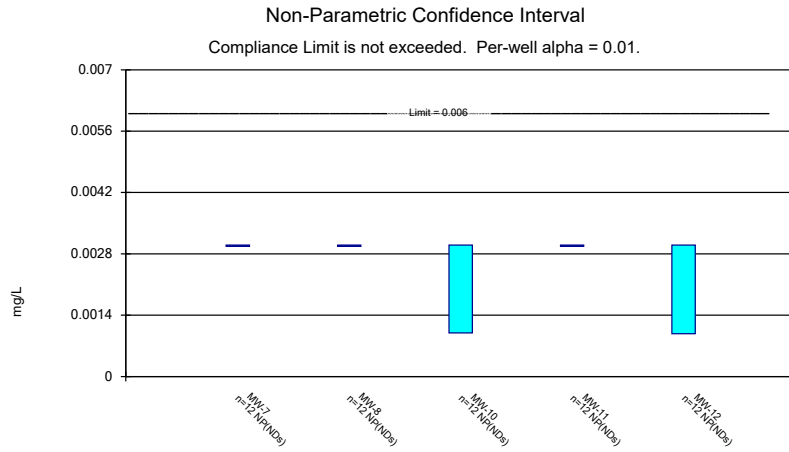
Plant William C Gorgas    Client: Southern Company    Data: Gorgas BALF CCR    Printed 12/17/2019, 10:35 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	MW-7	0.003	0.003	0.006	No	12	100	No	0.01	NP (NDs)
Antimony (mg/L)	MW-8	0.003	0.003	0.006	No	12	100	No	0.01	NP (NDs)
Antimony (mg/L)	MW-10	0.003	0.000996	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	MW-11	0.003	0.003	0.006	No	12	100	No	0.01	NP (NDs)
Antimony (mg/L)	MW-12	0.003	0.000977	0.006	No	12	91.67	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-7	0.00188	0.00131	0.01	No	12	8.333	No	0.01	NP (normality)
Arsenic (mg/L)	MW-8	0.00197	0.00103	0.01	No	12	8.333	No	0.01	NP (normality)
Arsenic (mg/L)	MW-10	0.005	0.00196	0.01	No	12	83.33	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-11	0.005	0.00171	0.01	No	12	16.67	No	0.01	NP (normality)
<b>Arsenic (mg/L)</b>	<b>MW-12</b>	<b>0.04802</b>	<b>0.03576</b>	<b>0.01</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>x^2</b>	<b>0.01</b>	<b>Param.</b>
Barium (mg/L)	MW-7	0.01345	0.01164	2	No	12	0	No	0.01	Param.
Barium (mg/L)	MW-8	0.0138	0.01202	2	No	12	0	No	0.01	Param.
Barium (mg/L)	MW-10	0.0209	0.0186	2	No	12	0	No	0.01	Param.
Barium (mg/L)	MW-11	0.01353	0.01169	2	No	12	0	No	0.01	Param.
Barium (mg/L)	MW-12	0.0143	0.0108	2	No	12	0	No	0.01	NP (normality)
Beryllium (mg/L)	MW-7	0.003	0.003	0.004	No	12	100	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-8	0.003	0.003	0.004	No	12	100	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-10	0.0043	0.001667	0.004	No	12	41.67	No	0.01	Param.
Beryllium (mg/L)	MW-11	0.003	0.003	0.004	No	12	100	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-12	0.003	0.003	0.004	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-7	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-8	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-10	0.001	0.000452	0.005	No	12	91.67	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-11	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-12	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	MW-7	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	MW-8	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	MW-10	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	MW-11	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	MW-12	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Cobalt (mg/L)	MW-7	0.005235	0.003135	0.49	No	12	33.33	No	0.01	Param.
Cobalt (mg/L)	MW-8	0.005442	0.004538	0.49	No	12	0	No	0.01	Param.
Cobalt (mg/L)	MW-10	0.02241	0.007441	0.49	No	12	0	x^(1/3)	0.01	Param.
Cobalt (mg/L)	MW-11	0.005	0.005	0.49	No	12	100	No	0.01	NP (NDs)
Cobalt (mg/L)	MW-12	0.05184	0.03916	0.49	No	12	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-7	0.5766	0.2546	5	No	12	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-8	0.8512	0.1397	5	No	12	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-10	0.6222	0.2344	5	No	12	0	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-11	1.145	0.3354	5	No	12	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-12	0.9252	0.3771	5	No	13	0	No	0.01	Param.
Fluoride (mg/L)	MW-7	0.1952	0.1759	4	No	13	0	No	0.01	Param.
Fluoride (mg/L)	MW-8	0.221	0.2075	4	No	13	0	No	0.01	Param.
Fluoride (mg/L)	MW-10	0.2399	0.1164	4	No	13	0	No	0.01	Param.
Fluoride (mg/L)	MW-11	0.1129	0.07336	4	No	13	7.692	No	0.01	Param.
Fluoride (mg/L)	MW-12	0.1524	0.08511	4	No	13	0	No	0.01	Param.
Lead (mg/L)	MW-7	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	MW-8	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	MW-10	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	MW-11	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	MW-12	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lithium (mg/L)	MW-7	0.163	0.12	0.384	No	12	0	No	0.01	NP (normality)
Lithium (mg/L)	MW-8	0.1892	0.1745	0.384	No	12	0	No	0.01	Param.
Lithium (mg/L)	MW-10	0.3	0.194	0.384	No	12	0	No	0.01	NP (normality)
Lithium (mg/L)	MW-11	0.2526	0.2112	0.384	No	12	0	No	0.01	Param.
Lithium (mg/L)	MW-12	0.118	0.0736	0.384	No	12	0	No	0.01	NP (normality)
Mercury (mg/L)	MW-7	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Mercury (mg/L)	MW-8	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Mercury (mg/L)	MW-10	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Mercury (mg/L)	MW-11	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Mercury (mg/L)	MW-12	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-7	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-8	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-10	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-11	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-12	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Selenium (mg/L)	MW-7	0.01	0.00445	0.05	No	12	91.67	No	0.01	NP (NDs)
Selenium (mg/L)	MW-8	0.01	0.01	0.05	No	12	100	No	0.01	NP (NDs)
Selenium (mg/L)	MW-10	0.01	0.00289	0.05	No	12	83.33	No	0.01	NP (NDs)

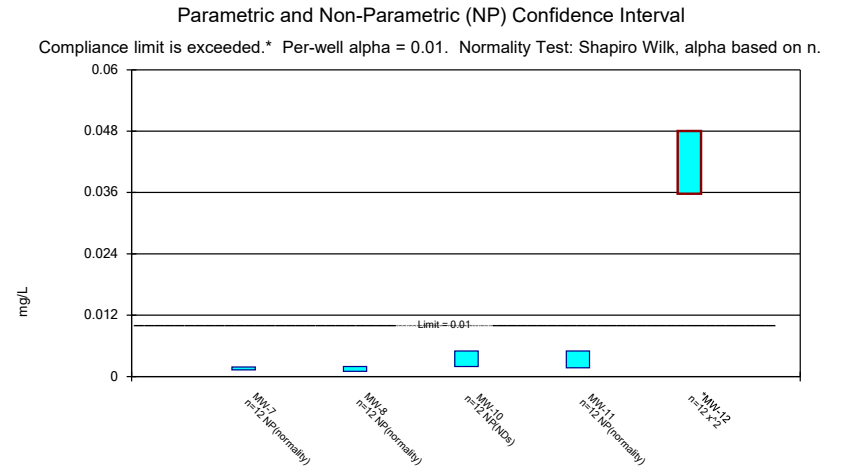
# Confidence Intervals - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 12/17/2019, 10:35 AM

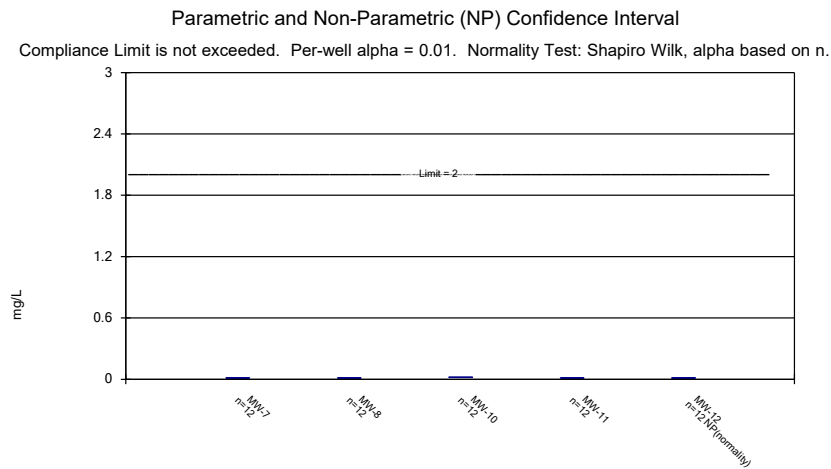
<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Selenium (mg/L)	MW-11	0.01	0.01	0.05	No	12	100	No	0.01	NP (NDs)
Selenium (mg/L)	MW-12	0.01	0.01	0.05	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-7	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-8	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-10	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-11	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-12	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)



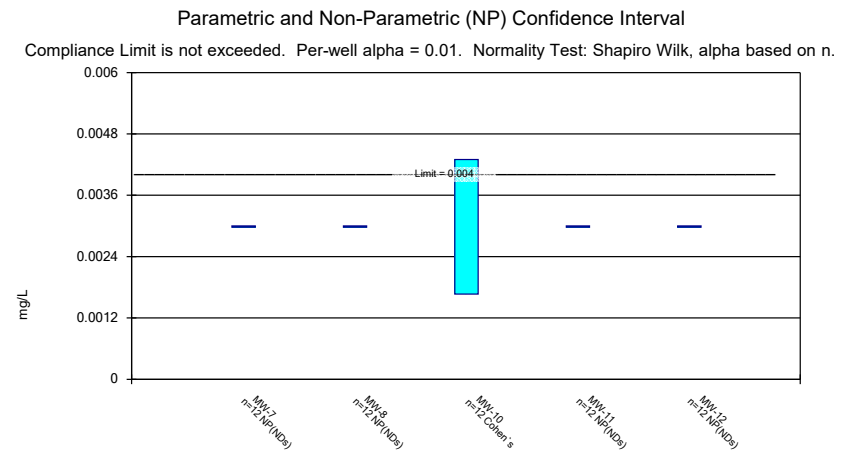
Constituent: Antimony Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Arsenic Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

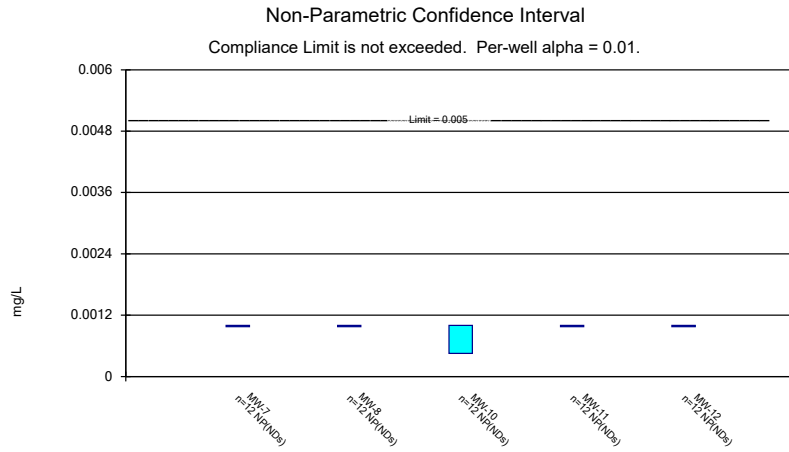


Constituent: Barium Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

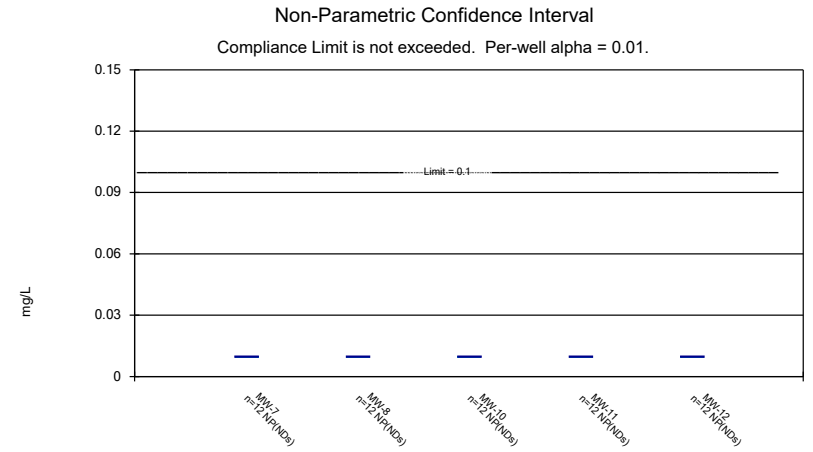


Constituent: Beryllium Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

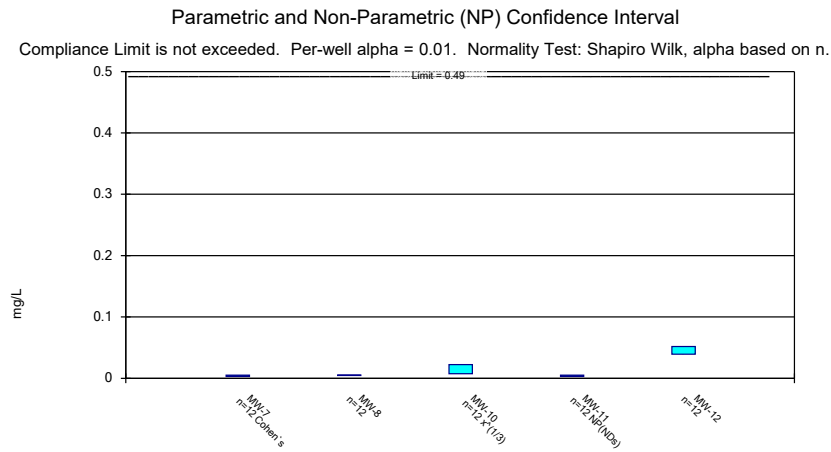




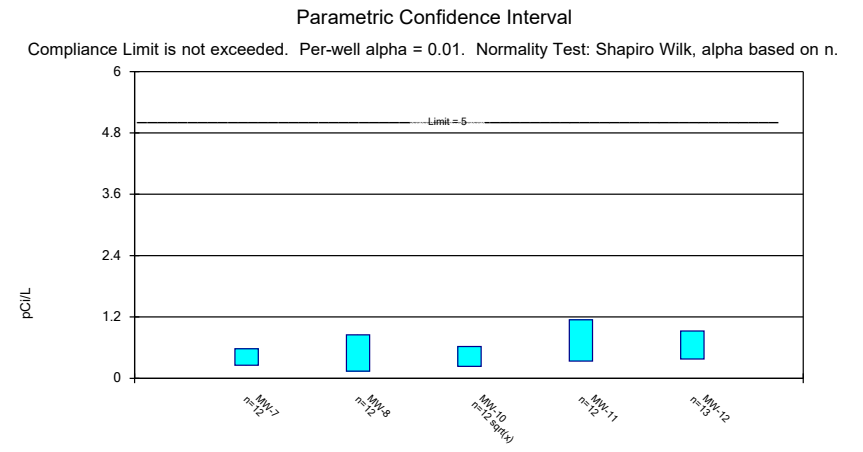
Constituent: Cadmium Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Chromium Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



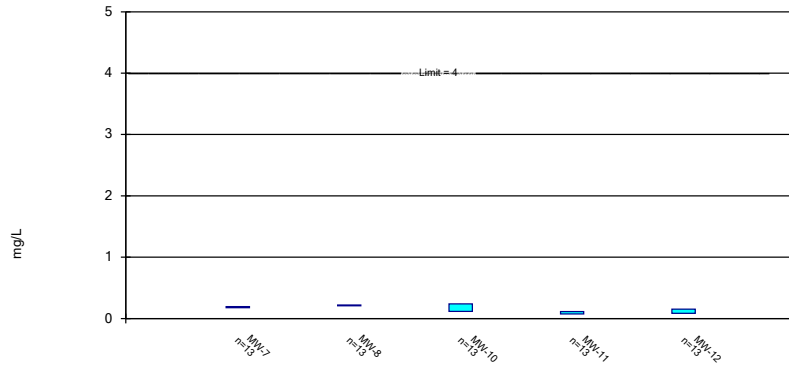
Constituent: Cobalt Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Combined Radium 226 + 228 Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Parametric Confidence Interval

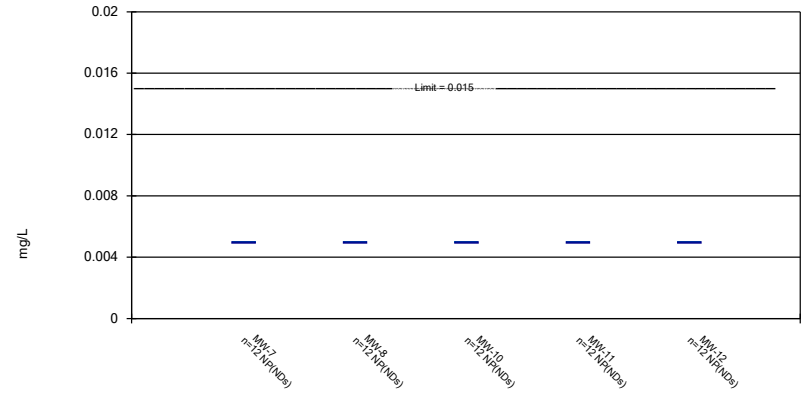
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Non-Parametric Confidence Interval

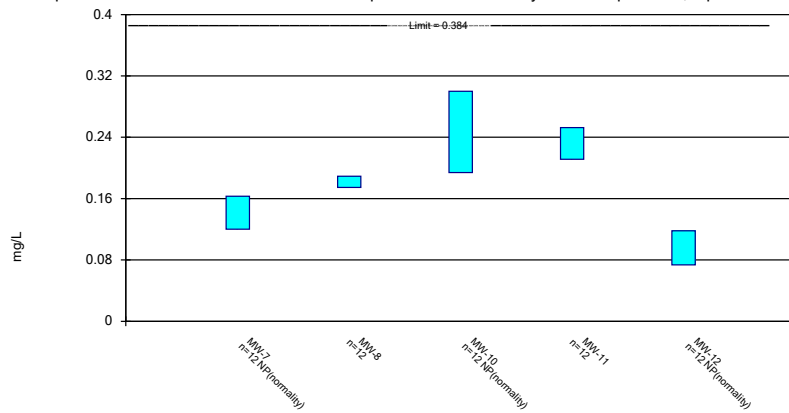
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Parametric and Non-Parametric (NP) Confidence Interval

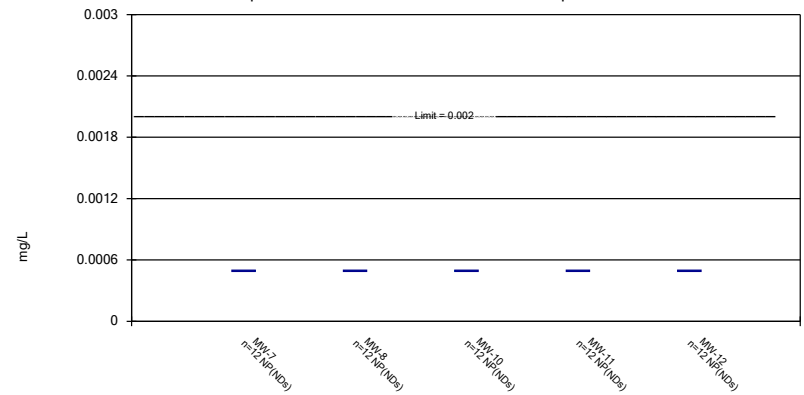
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



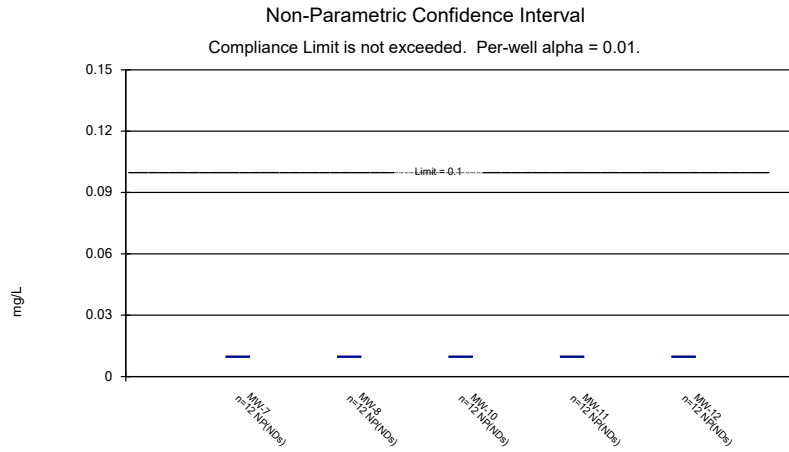
Constituent: Lithium Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Non-Parametric Confidence Interval

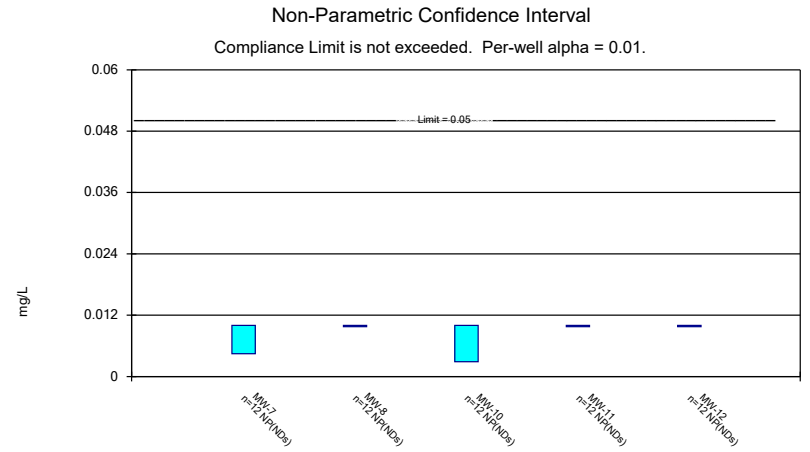
Compliance Limit is not exceeded. Per-well alpha = 0.01.



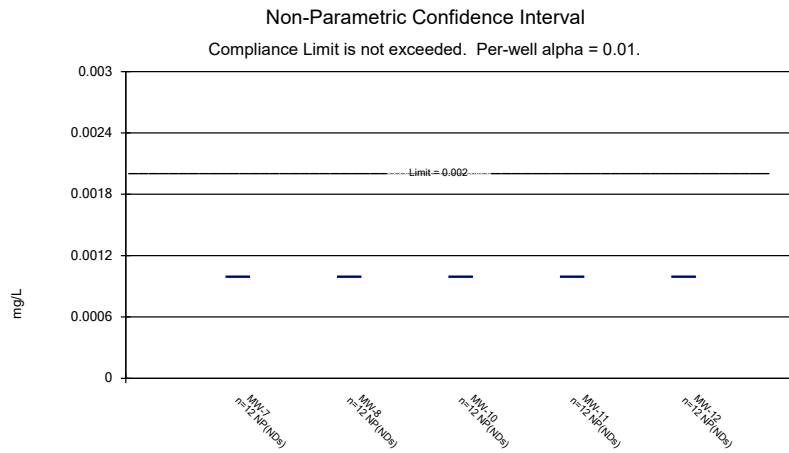
Constituent: Mercury Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Molybdenum Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Selenium Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Thallium Analysis Run 12/17/2019 10:34 AM View: Confidence Intervals  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

**2nd**  
**Semi-Annual**  
**Monitoring Event**

# Interwell Prediction Limit - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 1/21/2020, 8:36 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	MW-10	0.0596	n/a	10/9/2019	0.181	Yes	80	12.5	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	MW-11	0.0596	n/a	10/10/2019	0.109	Yes	80	12.5	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	MW-12	0.0596	n/a	10/9/2019	0.315	Yes	80	12.5	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	MW-7	3.927	n/a	10/8/2019	16.8	Yes	80	3.75	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-8	3.927	n/a	10/9/2019	39.2	Yes	80	3.75	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-10	3.927	n/a	10/9/2019	4.51	Yes	80	3.75	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-11	3.927	n/a	10/10/2019	84.6	Yes	80	3.75	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-12	3.927	n/a	10/9/2019	8.73	Yes	80	3.75	sqrt(x)	0.001504	Param Inter 1 of 2
pH (SU)	MW-7	6.23	3.77	10/8/2019	6.52	Yes	82	0	n/a	0.000...	NP Inter (normality) ...
pH (SU)	MW-8	6.23	3.77	10/9/2019	6.67	Yes	82	0	n/a	0.000...	NP Inter (normality) ...
pH (SU)	MW-10	6.23	3.77	10/9/2019	6.5	Yes	82	0	n/a	0.000...	NP Inter (normality) ...
pH (SU)	MW-11	6.23	3.77	10/10/2019	6.69	Yes	82	0	n/a	0.000...	NP Inter (normality) ...

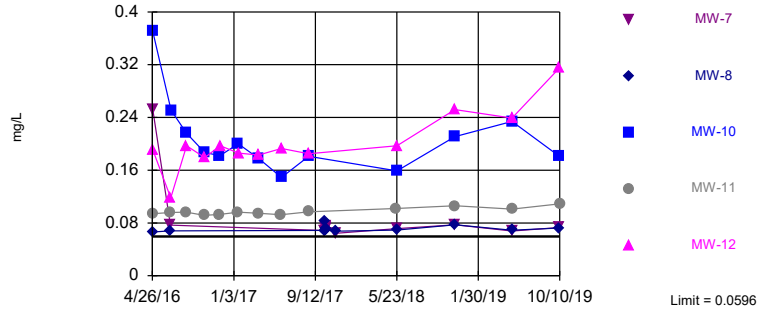
# Interwell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 1/21/2020, 8:36 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	MW-7	0.0596	n/a	10/8/2019	0.073	No	80	12.5	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	MW-8	0.0596	n/a	10/9/2019	0.0723	No	80	12.5	n/a	0.000...	NP Inter (normality) ...
<b>Boron (mg/L)</b>	<b>MW-10</b>	<b>0.0596</b>	<b>n/a</b>	<b>10/9/2019</b>	<b>0.181</b>	<b>Yes</b>	<b>80</b>	<b>12.5</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Boron (mg/L)	MW-11	0.0596	n/a	10/10/2019	0.109	Yes	80	12.5	n/a	0.000...	NP Inter (normality) ...
Boron (mg/L)	MW-12	0.0596	n/a	10/9/2019	0.315	Yes	80	12.5	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	MW-7	3.927	n/a	10/8/2019	16.8	Yes	80	3.75	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-8	3.927	n/a	10/9/2019	39.2	Yes	80	3.75	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-10	3.927	n/a	10/9/2019	4.51	Yes	80	3.75	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-11	3.927	n/a	10/10/2019	84.6	Yes	80	3.75	sqrt(x)	0.001504	Param Inter 1 of 2
Chloride (mg/L)	MW-12	3.927	n/a	10/9/2019	8.73	Yes	80	3.75	sqrt(x)	0.001504	Param Inter 1 of 2
pH (SU)	MW-7	6.23	3.77	10/8/2019	6.52	Yes	82	0	n/a	0.000...	NP Inter (normality) ...
pH (SU)	MW-8	6.23	3.77	10/9/2019	6.67	Yes	82	0	n/a	0.000...	NP Inter (normality) ...
pH (SU)	MW-10	6.23	3.77	10/9/2019	6.5	Yes	82	0	n/a	0.000...	NP Inter (normality) ...
pH (SU)	MW-11	6.23	3.77	10/10/2019	6.69	Yes	82	0	n/a	0.000...	NP Inter (normality) ...
pH (SU)	MW-12	6.23	3.77	10/9/2019	5.85	No	82	0	n/a	0.000...	NP Inter (normality) ...

Exceeds Limit: MW-10, MW-11, MW-12

Prediction Limit  
Interwell Non-parametric

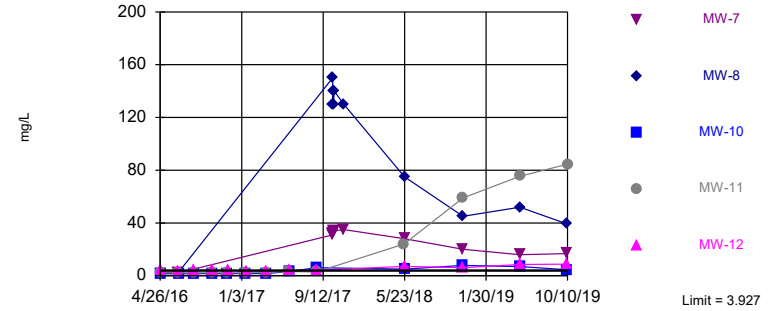


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. 12.5% NDs. Annual per-constituent alpha = 0.002988. Individual comparison alpha = 0.0002992 (1 of 2). Comparing 5 points to limit.

Constituent: Boron Analysis Run 1/21/2020 8:35 AM View: Interwell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Exceeds Limit: MW-7, MW-8, MW-10, MW-11, MW-12

Prediction Limit  
Interwell Parametric

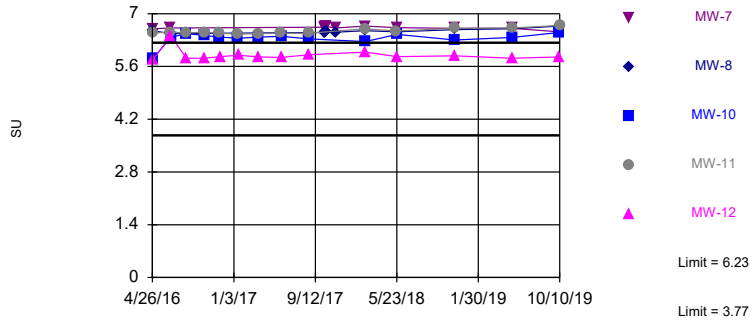


Background Data Summary (based on square root transformation): Mean=1.487, Std. Dev.=0.2721, n=80, 3.75% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9672, critical = 0.957. Kappa = 1.818 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Chloride Analysis Run 1/21/2020 8:35 AM View: Interwell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Exceeds Limits: MW-7, MW-8, MW-10, MW-11

Prediction Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 82 background values. Annual per-constituent alpha = 0.00573. Individual comparison alpha = 0.0005738 (1 of 2). Comparing 5 points to limit.

Constituent: pH Analysis Run 1/21/2020 8:35 AM View: Interwell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/21/2020 8:36 AM View: Interwell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3 (Bg)	MW-2 (Bg)	MW-4 (Bg)	MW-1 (Bg)	MW-11	MW-10	MW-7	MW-8	MW-12
4/25/2016	0.028 (J)	0.0241 (J)	0.0414 (J)						
4/26/2016				0.0231 (J)	0.094 (J)				
4/27/2016						0.371	0.253	0.0662 (J)	
4/28/2016									0.19
6/20/2016		0.0284 (J)	0.0434 (J)	0.0227 (J)					
6/21/2016							0.0768 (J)	0.0681 (J)	
6/22/2016	0.0433 (J)				0.0959 (J)				0.118
6/23/2016						0.251			
8/8/2016		0.034 (J)		0.0278 (J)					
8/9/2016	0.0429 (J)		0.0453 (J)		0.0964 (J)				
8/10/2016						0.216			0.197
8/24/2016	0.0431 (J)	0.0316 (J)	0.0451 (J)	0.0247 (J)					
10/3/2016		0.0367 (J)	0.0511 (J)	0.0307 (J)					
10/4/2016	0.04 (J)				0.0916 (J)				
10/5/2016						0.187			0.179
10/26/2016	0.0375 (J)	0.0331 (J)	0.0507 (J)	0.0241 (J)					
11/21/2016	0.0406 (J)	0.035 (J)	0.0458 (J)	0.0202 (J)	0.0929 (J)	0.182			
11/22/2016									0.197
1/17/2017		0.0259 (J)		0.0201 (J)	0.0963 (J)	0.2			
1/18/2017	0.0548 (J)		0.0445 (J)						0.186
3/21/2017					0.0947 (J)	0.178			0.183
3/22/2017	0.0344 (J)	0.0243 (J)	0.0432 (J)	0.0224 (J)					
4/18/2017	<0.1	0.0206 (J)	0.0409 (J)	<0.1					
5/30/2017				<0.1	0.0926 (J)				
5/31/2017	0.0454 (J)	0.0234 (J)	0.0392 (J)			0.149			0.193
8/23/2017	0.0425 (J)	0.0267 (J)	0.042 (J)	0.0253 (J)	0.0968 (J)	0.181			0.185
10/12/2017							0.0685 (J)	0.0687 (J)	
10/13/2017							0.0674 (J)	0.0831 (J)	
10/14/2017							0.0756 (J)	0.0702 (J)	
10/15/2017							0.0719 (J)	0.0702 (J)	
10/16/2017							0.0726 (J)	0.0707 (J)	
10/17/2017							0.0716 (J)	0.0695 (J)	
11/16/2017							0.0644 (J)	0.0675 (J)	
5/22/2018		0.0251 (J)		0.0224 (J)	0.102				
5/23/2018			0.0433 (J)				0.0715 (J)	0.0693 (J)	
5/24/2018	0.0339 (J)					0.159			0.197
6/12/2018	0.0371 (J)	0.0275 (J)	0.0478 (J)	0.0214 (J)					
10/17/2018	0.0596 (J)	0.0321 (J)	0.0468 (J)	0.0216 (J)					
11/19/2018	0.0514 (J)	0.0324 (J)	0.0526 (J)	0.0237 (J)		0.211			0.252
11/20/2018					0.106		0.0772 (J)	0.0771 (J)	
4/10/2019	<0.1	<0.1	0.0438 (J)	0.0304 (J)					
5/14/2019	<0.1	<0.1	<0.1	<0.1					
5/15/2019					0.101 (J)	0.234	0.0678 (J)	0.0689 (J)	0.239
10/8/2019	0.0537 (J)	0.0371 (J)		<0.1			0.073 (J)		
10/9/2019						0.181		0.0723 (J)	0.315
10/10/2019			0.0487 (J)		0.109				
10/16/2019	0.05 (J)	0.0419 (J)	0.0505 (J)	0.0385 (J)					



# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/21/2020 8:36 AM View: Interwell PL

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3 (Bg)	MW-2 (Bg)	MW-4 (Bg)	MW-1 (Bg)	MW-11	MW-10	MW-7	MW-8	MW-12
4/25/2016	1.32	1.9	1.53						
4/26/2016				1.94	2.16				
4/27/2016						1.46	1.71	2.34	
4/28/2016									4.12
6/20/2016		3.43	1.85	2.09					
6/21/2016							2.04	2.29	
6/22/2016	1.46				2.16				3.44
6/23/2016						1.49			
8/8/2016		3.31		2.18					
8/9/2016	1.35		1.95		2.19				
8/10/2016						1.55			4.15
8/24/2016	1.47	3.23	2.07	2.22					
10/3/2016		3.21	2.02	2.34					
10/4/2016	1.59				2.21				
10/5/2016						1.58			4.12
10/26/2016	1.27	3.35	2.07	2.34					
11/21/2016	1.38	3.34	2.39	2.5	2.24	1.62			
11/22/2016									3.98
1/17/2017		3.58		2.68	2.23	1.61			
1/18/2017	1.34		1.9						3.6
3/21/2017					2.5	1.6 (J)			3.6
3/22/2017	2	3.4	1.5 (J)	3.7					
4/18/2017	2.2	2.6	1.6 (J)	2.4					
5/30/2017				2.6	3.2				
5/31/2017	1.5 (J)	4.4	2.1			3.2			3.9
8/23/2017	1.8 (J)	4.4	2.3	2.7	2.8	6.1			4.2
10/12/2017							31	150	
10/13/2017							32	130	
10/14/2017							33	140	
10/15/2017							34	130	
10/16/2017							34	140	
10/17/2017							34	140	
11/16/2017							35	130	
5/22/2018		3.2		2.3	24				
5/23/2018			2				28	75	
5/24/2018	1.6 (J)					5			7.1
6/12/2018	1.4 (J)	3.7	1.7 (J)	2.3					
10/17/2018	<2	4.6	1.5 (J)	1.7 (J)					
11/19/2018	<2	3	<2	1.7 (J)		7.8			6.1
11/20/2018					59		20	45	
4/10/2019	2.25	1.76	1.88	2.36					
5/14/2019	2.28	2.98	1.82	2.28					
5/15/2019					75.4	6.93	15.9	52	8.51
10/8/2019	1.36	4.26		2.31			16.8		
10/9/2019						4.51		39.2	8.73
10/10/2019			1.93		84.6				
10/16/2019	1.4	4.04	1.92	2.42					

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/21/2020 8:37 AM View: Interwell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4 (Bg)	MW-3 (Bg)	MW-2 (Bg)	MW-1 (Bg)	MW-11	MW-8	MW-7	MW-10	MW-12
4/25/2016	6.22	5.56	5.94						
4/26/2016				5.2	6.49				
4/27/2016						6.55	6.6	5.8	
4/28/2016									5.78
6/20/2016	6.21		5.96	5.18					
6/21/2016						6.47	6.62		
6/22/2016		5.57			6.51				6.41
6/23/2016								6.38	
8/8/2016			5.88	5.12					
8/9/2016	6.11	5.67			6.49				
8/10/2016								6.47	5.82
8/24/2016	6.11	5.63							
10/3/2016	6.13 (D)		5.91 (D)	5.21 (D)					
10/4/2016		5.69 (D)			6.51 (D)				
10/5/2016								6.42 (D)	5.82 (D)
10/26/2016	6.12	5.56	5.84	5.2					
11/21/2016	6.09 (D)	5.42 (D)	5.82 (D)	5.19 (D)	6.48			6.38	
11/22/2016									5.86
1/17/2017			5.87 (D)	5.17 (D)	6.46			6.35	
1/18/2017	6.09 (D)	5.11 (D)							5.9
3/21/2017					6.47			6.38	5.85
3/22/2017	6.15 (D)	4.52 (D)	6.01 (D)	5.2 (D)					
4/18/2017	6.19	5.84	6.02	5.2					
5/30/2017				5.14 (D)	6.48				
5/31/2017	6.13 (D)	4.56 (D)	5.85 (D)					6.4	5.84
8/23/2017	6.12 (D)	4.77 (D)	5.89 (D)	5.12 (D)	6.48			6.33	5.91
10/12/2017						6.5	6.64		
10/13/2017						6.51	6.64		
10/14/2017						6.53	6.66		
10/15/2017						6.53	6.67		
10/16/2017						6.54	6.67		
10/17/2017						6.54	6.66		
11/16/2017						6.51	6.62		
2/13/2018	6.22	5.67	6.21	5.18					
2/14/2018					6.6	6.55	6.67		
2/15/2018								6.26	5.98
5/22/2018			6.04	5.2	6.54				
5/23/2018	6.21					6.52	6.63		
5/24/2018		5.19						6.45	5.86
6/12/2018	6.16	4.79	5.95	5.15					
10/17/2018	6.12	4.75	5.9	5.12					
11/19/2018	6.16	3.77 (E)	6.03	5.09				6.3	5.88
11/20/2018					6.61	6.58	6.61		
4/10/2019	6.14	5.54	6.1	5.11					
5/14/2019	6.23	5.71	6.07	5.19					
5/15/2019					6.62	6.6	6.61	6.37	5.82
10/8/2019		4.98	5.96	5.12			6.52		
10/9/2019						6.67		6.5	5.85
10/10/2019	6.15				6.69				
10/16/2019	6.19	4.51	5.98	5.16					

# Intrawell Prediction Limit - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 1/21/2020, 8:40 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>
Total Dissolved Solids...	MW-1	2698	n/a	10/16/2019	3650	Yes	18	0	No	0.001504	Param Intra 1 of 2

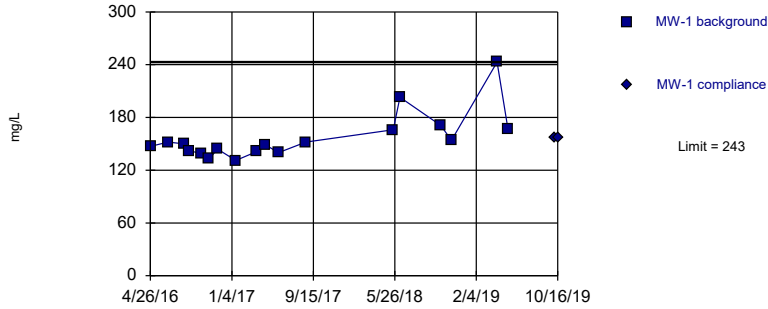
# Intrawell Prediction Limit - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 1/21/2020, 8:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Calcium (mg/L)	MW-1	243	n/a	10/16/2019	157	No	18	0	n/a	0.005373	NP Intra (normality) ...
Calcium (mg/L)	MW-2	237.6	n/a	10/16/2019	194	No	18	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-3	465.1	n/a	10/16/2019	346	No	18	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-4	421.6	n/a	10/16/2019	356	No	18	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-7	359.1	n/a	10/8/2019	294	No	12	0	x^3	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-8	352.3	n/a	10/9/2019	329	No	12	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-10	330.9	n/a	10/9/2019	146	No	12	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-11	429.4	n/a	10/10/2019	373	No	12	0	No	0.001504	Param Intra 1 of 2
Calcium (mg/L)	MW-12	419.3	n/a	10/9/2019	359	No	12	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-1	0.229	n/a	10/16/2019	0.0756	No	19	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.3085	n/a	10/16/2019	0.114	No	19	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-3	0.8536	n/a	10/16/2019	0.106	No	19	0	ln(x)	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-4	0.4691	n/a	10/16/2019	0.302	No	19	0	x^2	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-7	0.223	n/a	10/8/2019	0.183	No	13	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-8	0.2406	n/a	10/9/2019	0.189	No	13	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-10	0.4183	n/a	10/9/2019	0.142	No	13	0	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-11	0.1702	n/a	10/10/2019	0.0915	No	13	7.692	No	0.001504	Param Intra 1 of 2
Fluoride (mg/L)	MW-12	0.2498	n/a	10/9/2019	0.215	No	13	0	No	0.001504	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	1368	n/a	10/16/2019	1170	No	18	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	3530	n/a	10/16/2019	2820	No	18	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-4	3242	n/a	10/16/2019	3050	No	18	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-7	1974	n/a	10/8/2019	1570	No	12	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-8	2100	n/a	10/9/2019	1550	No	12	0	n/a	0.01077	NP Intra (normality) ...
Sulfate (mg/L)	MW-10	1401	n/a	10/9/2019	748	No	12	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-11	2290	n/a	10/10/2019	719	No	12	0	No	0.001504	Param Intra 1 of 2
Sulfate (mg/L)	MW-12	2911	n/a	10/9/2019	2550	No	12	0	No	0.001504	Param Intra 1 of 2
<b>Total Dissolved Solids...</b>	<b>MW-1</b>	<b>2698</b>	<b>n/a</b>	<b>10/16/2019</b>	<b>3650</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>No</b>	<b>0.001504</b>	<b>Param Intra 1 of 2</b>
Total Dissolved Solids...	MW-2	2227	n/a	10/16/2019	1830	No	18	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-3	5480	n/a	10/16/2019	4210	No	18	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-4	4849	n/a	10/16/2019	4060	No	18	0	x^2	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-7	2723	n/a	10/8/2019	2340	No	12	0	x^5	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-8	2941	n/a	10/9/2019	2590	No	12	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-10	2173	n/a	10/9/2019	1120	No	12	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-11	3144	n/a	10/10/2019	2460	No	12	0	No	0.001504	Param Intra 1 of 2
Total Dissolved Solids...	MW-12	4265	n/a	10/9/2019	4090	No	12	0	No	0.001504	Param Intra 1 of 2

Within Limit

Prediction Limit  
Intrawell Non-parametric

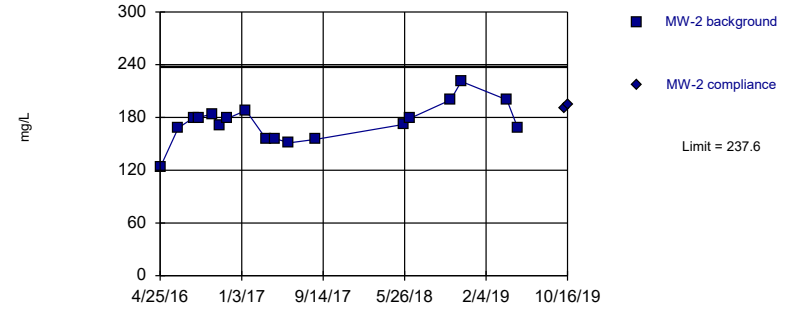


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Constituent: Calcium Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric



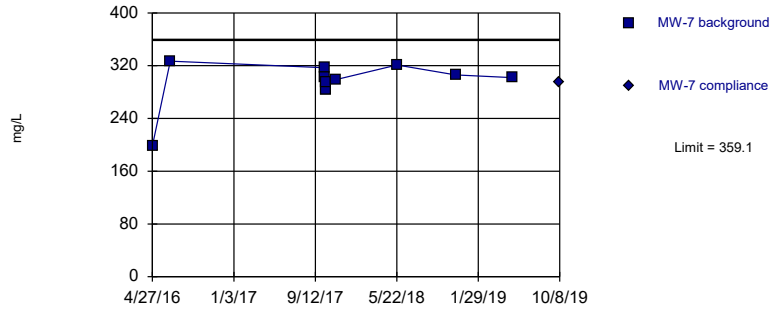
# Prediction Limit

Constituent: Calcium Analysis Run 1/21/2020 8:40 AM View: Intrawell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-1	MW-1	MW-2	MW-2	MW-3	MW-3	MW-4	MW-4
4/25/2016			123		224		261	
4/26/2016	147							
6/20/2016	152		168				295	
6/22/2016					266			
8/8/2016	150		180					
8/9/2016					260		318	
8/24/2016	142		180		274		319	
10/3/2016	139		184				293	
10/4/2016					243			
10/26/2016	133		171		254		311	
11/21/2016	144		179		263		320	
1/17/2017	131		188					
1/18/2017					431		417	
3/22/2017	141		155		318		292	
4/18/2017	149		156		296		302	
5/30/2017	140							
5/31/2017			151		306		284	
8/23/2017	152		155		298		297	
5/22/2018	166		172					
5/23/2018							296	
5/24/2018					297			
6/12/2018	203		179		318		355	
10/17/2018	171		200		392		342	
11/19/2018	154		221		387		289	
4/10/2019	243		200		348		356	
5/14/2019	167		168		254		254	
10/8/2019		157		190		371		
10/10/2019								302
10/16/2019		157		194		346		356

Within Limit

Prediction Limit  
Intrawell Parametric

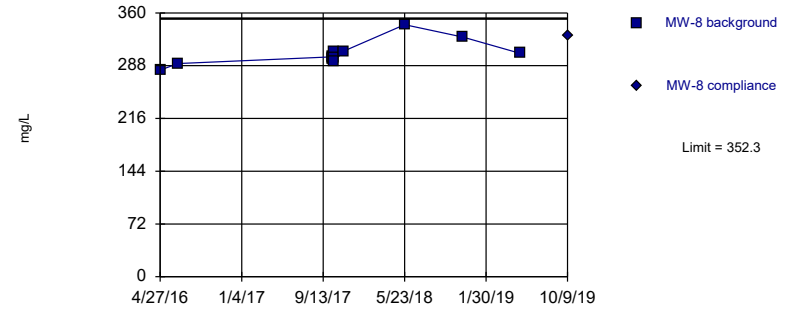


Background Data Summary (based on cube transformation): Mean=2.6e7, Std. Dev.=6944823, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8464, critical = 0.805. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

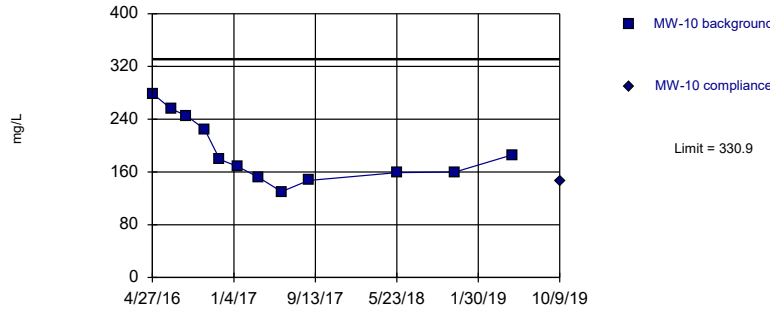


Background Data Summary: Mean=304.5, Std. Dev.=16.53, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8722, critical = 0.805. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

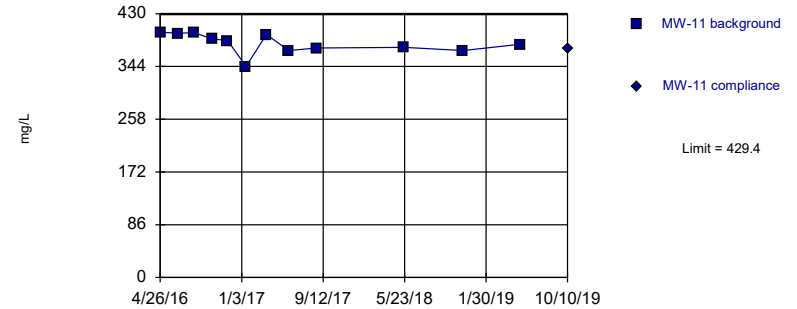


Background Data Summary: Mean=190.5, Std. Dev.=48.52, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.902, critical = 0.805. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=381.8, Std. Dev.=16.45, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9022, critical = 0.805. Kappa overridden to 2.894.

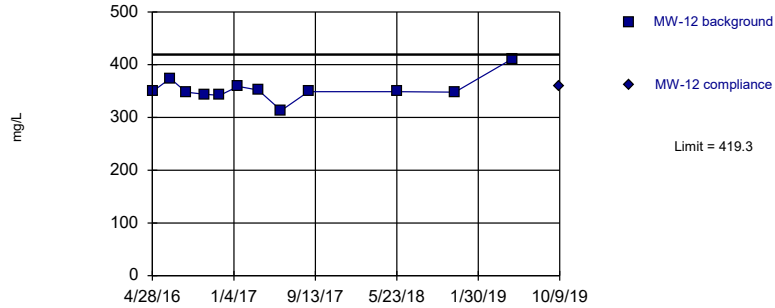
Constituent: Calcium Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR





Within Limit

Prediction Limit  
Intrawell Parametric

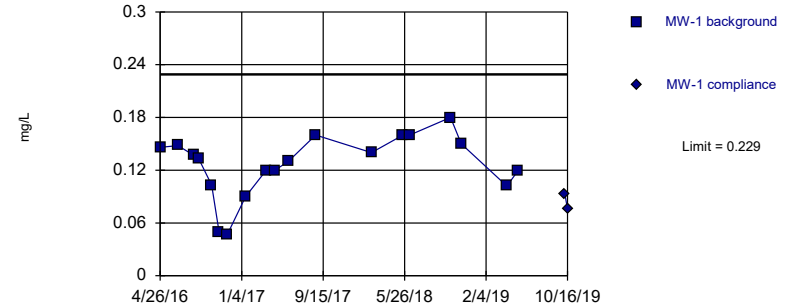


Background Data Summary: Mean=353.2, Std. Dev.=22.85, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8182, critical = 0.805. Kappa overridden to 2.894.

Constituent: Calcium Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

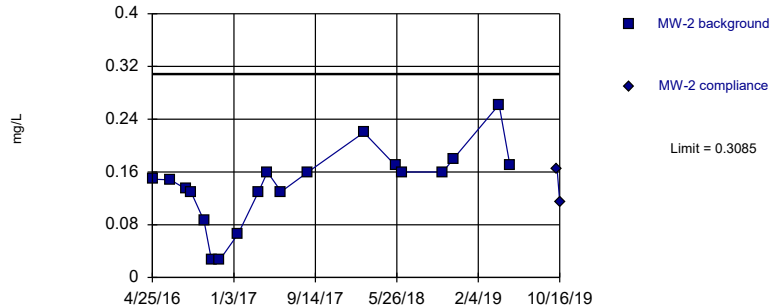


Background Data Summary: Mean=0.1261, Std. Dev.=0.03556, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9188, critical = 0.863. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

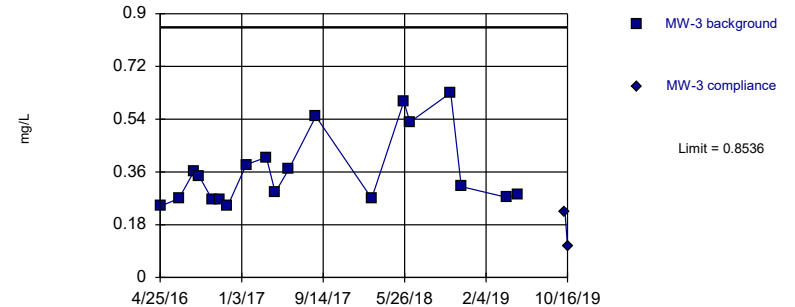


Background Data Summary: Mean=0.1404, Std. Dev.=0.05808, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9263, critical = 0.863. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=-1.063, Std. Dev.=0.3126, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.875, critical = 0.863. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

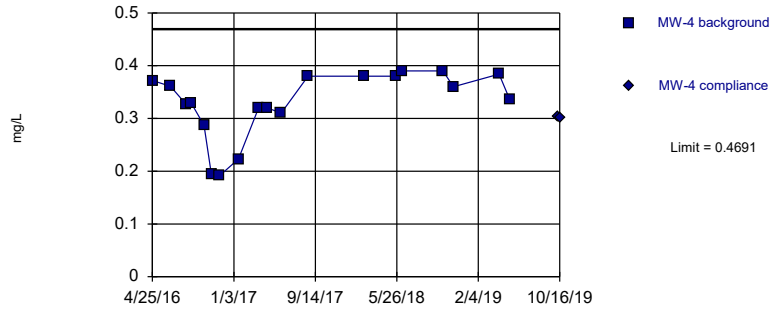
# Prediction Limit

Constituent: Calcium, Fluoride Analysis Run 1/21/2020 8:40 AM View: Intrawell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-12	MW-12	MW-1	MW-1	MW-2	MW-2	MW-3	MW-3
4/25/2016					0.149 (J)		0.243 (J)	
4/26/2016			0.146 (J)					
4/28/2016	349							
6/20/2016			0.148 (J)		0.148 (J)			
6/22/2016	374						0.269 (J)	
8/8/2016			0.137 (J)		0.134 (J)			
8/9/2016							0.363	
8/10/2016	348							
8/24/2016			0.133 (J)		0.129 (J)		0.346	
10/3/2016			0.103 (J)		0.086 (J)			
10/4/2016							0.266 (J)	
10/5/2016	344							
10/26/2016			0.05 (J)		0.027 (J)		0.266 (J)	
11/21/2016			0.047 (J)		0.027 (J)		0.244 (J)	
11/22/2016	342							
1/17/2017			0.09 (J)		0.066 (J)			
1/18/2017	359						0.385	
3/21/2017	352							
3/22/2017			0.12		0.13		0.41	
4/18/2017			0.12		0.16		0.29	
5/30/2017			0.13					
5/31/2017	313				0.13		0.37	
8/23/2017	349		0.16		0.16		0.55	
2/13/2018			0.14 (D)		0.22 (D)		0.27 (D)	
5/22/2018			0.16		0.17			
5/24/2018	349						0.6	
6/12/2018			0.16		0.16		0.53	
10/17/2018			0.18		0.16		0.63	
11/19/2018	348		0.15		0.18		0.31	
4/10/2019			0.102		0.262		0.273	
5/14/2019			0.119		0.17		0.281	
5/15/2019	411							
10/8/2019				0.0924 (J)		0.164		0.225
10/9/2019		359						
10/16/2019				0.0756 (J)		0.114		0.106

Within Limit

### Prediction Limit Intrawell Parametric

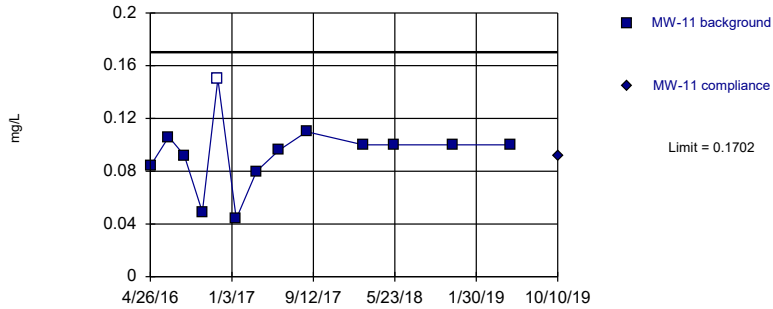


# Prediction Limit

Constituent: Fluoride Analysis Run 1/21/2020 8:40 AM View: Intrawell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-4	MW-4	MW-7	MW-7	MW-8	MW-8	MW-10	MW-10
4/25/2016	0.372							
4/27/2016			0.2 (J)		0.212 (J)		0.337	
6/20/2016	0.361							
6/21/2016			0.163 (J)		0.211 (J)			
6/23/2016							0.155 (J)	
8/9/2016	0.326							
8/10/2016							0.123 (J)	
8/24/2016	0.329							
10/3/2016	0.287 (J)							
10/5/2016							0.086 (J)	
10/26/2016	0.194 (J)							
11/21/2016	0.192 (J)						0.056 (J)	
1/17/2017							0.103 (J)	
1/18/2017	0.223 (J)							
3/21/2017							0.15	
3/22/2017	0.32							
4/18/2017	0.32							
5/31/2017	0.31						0.18	
8/23/2017	0.38						0.23	
10/12/2017			0.17		0.22			
10/13/2017			0.19		0.23			
10/14/2017			0.2		0.22			
10/15/2017			0.2		0.22			
10/16/2017			0.2		0.22			
10/17/2017			0.19		0.21			
11/16/2017			0.18		0.22			
2/13/2018	0.38 (D)							
2/14/2018			0.18 (D)		0.21 (D)			
2/15/2018							0.23 (D)	
5/23/2018	0.38		0.18		0.21			
5/24/2018							0.13	
6/12/2018	0.39							
10/17/2018	0.39							
11/19/2018	0.36						0.26	
11/20/2018			0.19		0.21			
4/10/2019	0.384							
5/14/2019	0.335							
5/15/2019			0.169		0.192		0.276	
10/8/2019				0.183				
10/9/2019						0.189		0.142
10/10/2019		0.304						
10/16/2019		0.302						

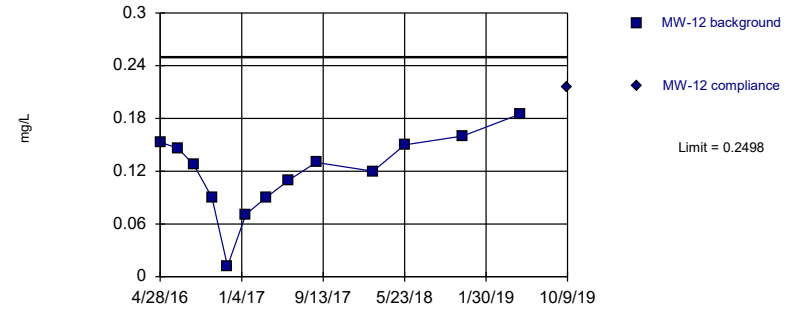
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=0.09315, Std. Dev.=0.02661, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8943, critical = 0.814. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

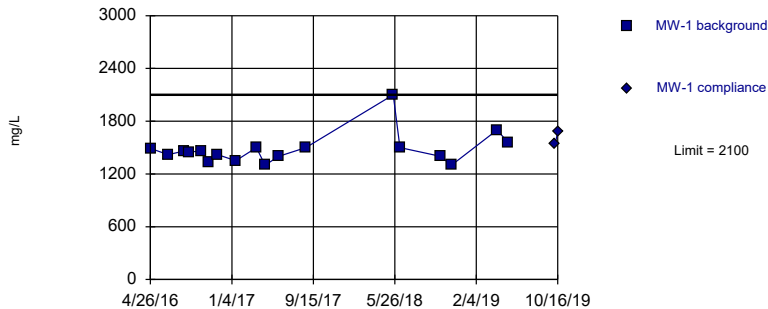
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=0.1188, Std. Dev.=0.04526, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9427, critical = 0.814. Kappa overridden to 2.894.

Constituent: Fluoride Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

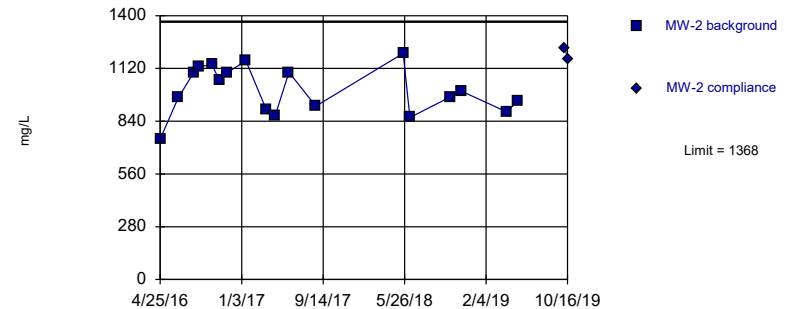
Within Limit Prediction Limit  
Intrawell Non-parametric



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 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

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 overridden to 2.894.

Constituent: Sulfate Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

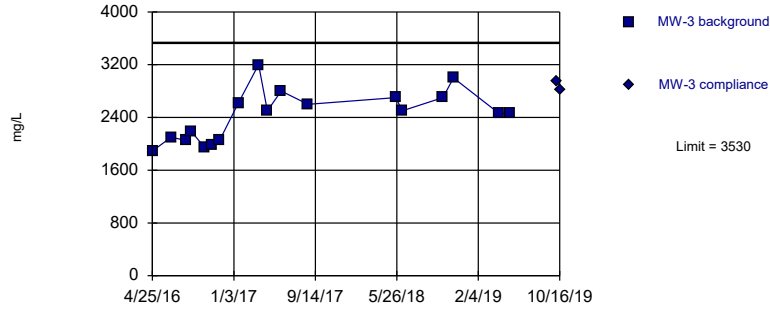
# Prediction Limit

Constituent: Fluoride, Sulfate    Analysis Run 1/21/2020 8:40 AM    View: IntraWell PL  
 Plant William C Gorgas    Client: Southern Company    Data: Gorgas BALF CCR

	MW-11	MW-11	MW-12	MW-12	MW-1	MW-1	MW-2	MW-2
4/25/2016							745	
4/26/2016	0.084 (J)				1490			
4/28/2016			0.153 (J)					
6/20/2016					1420		964	
6/22/2016	0.106 (J)		0.146 (J)					
8/8/2016					1460		1100	
8/9/2016	0.092 (J)							
8/10/2016			0.127 (J)					
8/24/2016					1450		1130	
10/3/2016					1460		1140	
10/4/2016	0.049 (J)							
10/5/2016			0.09 (J)					
10/26/2016					1330		1060	
11/21/2016	<0.3				1420		1100	
11/22/2016			0.012 (J)					
1/17/2017	0.044 (J)				1350		1160	
1/18/2017			0.071 (J)					
3/21/2017	0.08 (J)		0.09 (J)					
3/22/2017					1500		900	
4/18/2017					1300		870	
5/30/2017	0.096 (J)				1400			
5/31/2017			0.11				1100	
8/23/2017	0.11		0.13		1500		920	
2/14/2018	0.1 (D)							
2/15/2018			0.12 (D)					
5/22/2018	0.1				2100		1200	
5/24/2018			0.15					
6/12/2018					1500		860	
10/17/2018					1400		970	
11/19/2018			0.16		1300		1000	
11/20/2018	0.1							
4/10/2019					1700		889	
5/14/2019					1560		948	
5/15/2019	0.1		0.185					
10/8/2019						1540		1230
10/9/2019				0.215				
10/10/2019		0.0915 (J)						
10/16/2019						1680		1170

Within Limit

### Prediction Limit Intrawell Parametric

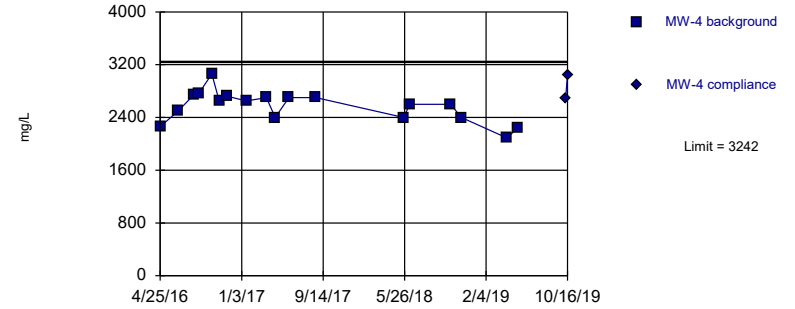


Background Data Summary: Mean=2431, Std. Dev.=379.6, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9476, critical = 0.858. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

### Prediction Limit Intrawell Parametric

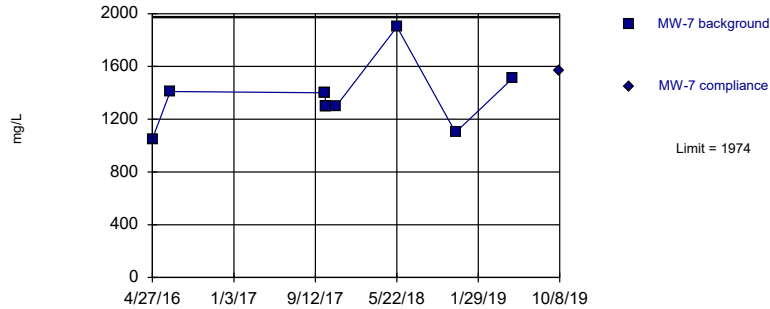


Background Data Summary: Mean=2566, Std. Dev.=233.5, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9529, critical = 0.858. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

### Prediction Limit Intrawell Parametric

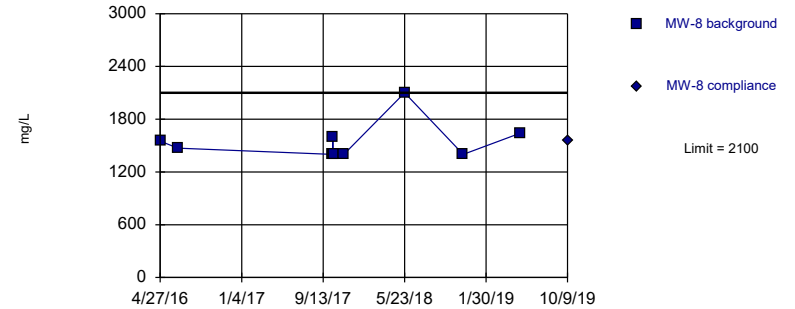


Background Data Summary: Mean=1356, Std. Dev.=213.5, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8496, critical = 0.805. Kappa overridden to 2.894.

Constituent: Sulfate Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

### Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 12 background values. Well-constituent pair annual alpha = 0.02143. Individual comparison alpha = 0.01077 (1 of 2).

Constituent: Sulfate Analysis Run 1/21/2020 8:38 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

# Prediction Limit

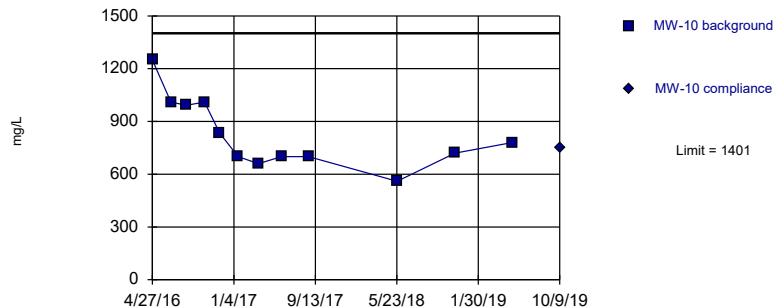
Constituent: Sulfate Analysis Run 1/21/2020 8:40 AM View: IntraWell PL  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-3	MW-3	MW-4	MW-4	MW-7	MW-7	MW-8	MW-8
4/25/2016	1890		2260					
4/27/2016					1050		1550	
6/20/2016			2500					
6/21/2016					1410		1470	
6/22/2016	2100							
8/9/2016	2050		2750					
8/24/2016	2190		2770					
10/3/2016			3060					
10/4/2016	1950							
10/26/2016	1980		2650					
11/21/2016	2060		2720					
1/18/2017	2620		2650					
3/22/2017	3200		2700					
4/18/2017	2500		2400					
5/31/2017	2800		2700					
8/23/2017	2600		2700					
10/12/2017					1400		1400	
10/13/2017					1400		1600	
10/14/2017					1300		1400	
10/15/2017					1300		1400	
10/16/2017					1300		1400	
10/17/2017					1300		1400	
11/16/2017					1300		1400	
5/23/2018			2400		1900		2100	
5/24/2018	2700							
6/12/2018	2500		2600					
10/17/2018	2700		2600					
11/19/2018	3000		2400					
11/20/2018					1100		1400	
4/10/2019	2460		2090					
5/14/2019	2460		2240					
5/15/2019					1510		1640	
10/8/2019		2950				1570		
10/9/2019								1550
10/10/2019				2690				
10/16/2019		2820		3050				



Within Limit

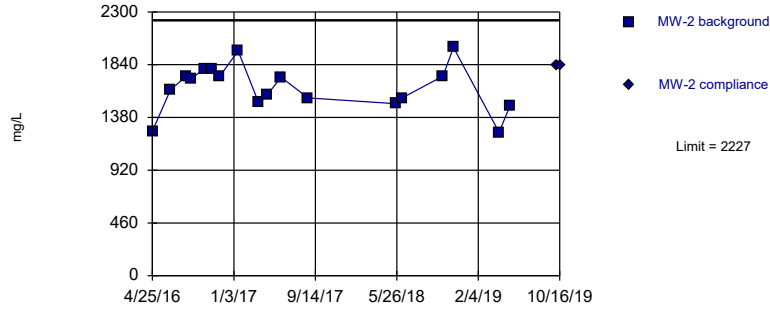
Prediction Limit  
Intrawell Parametric





Within Limit

Prediction Limit  
Intrawell Parametric

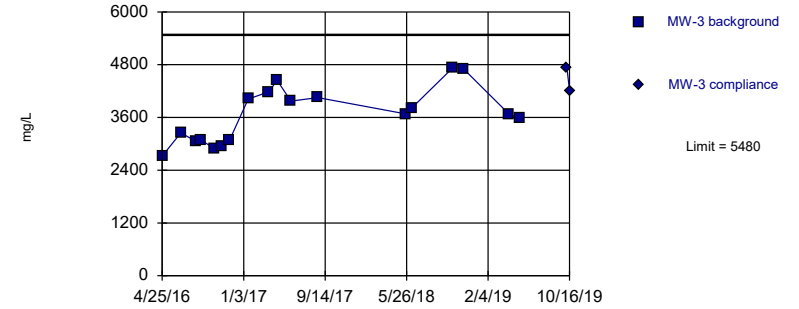


Background Data Summary: Mean=1640, Std. Dev.=202.8, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.952, critical = 0.858. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:39 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

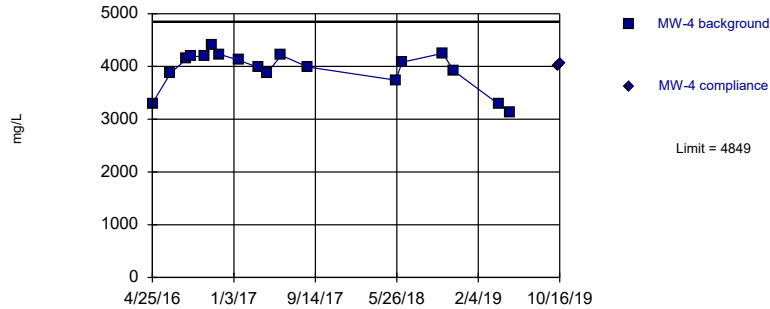


Background Data Summary: Mean=3661, Std. Dev.=628.6, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9455, critical = 0.858. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:39 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

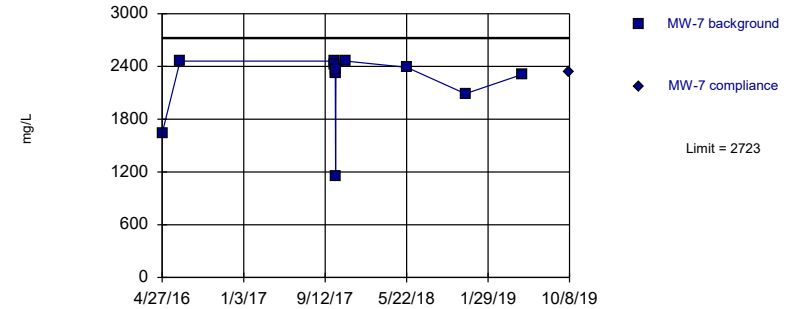


Background Data Summary (based on square transformation): Mean=1.6e7, Std. Dev.=2719774, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8799, critical = 0.858. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:39 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary (based on x^5 transformation): Mean=6.3e16, Std. Dev.=3.0e16, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8216, critical = 0.805. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:39 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

# Prediction Limit

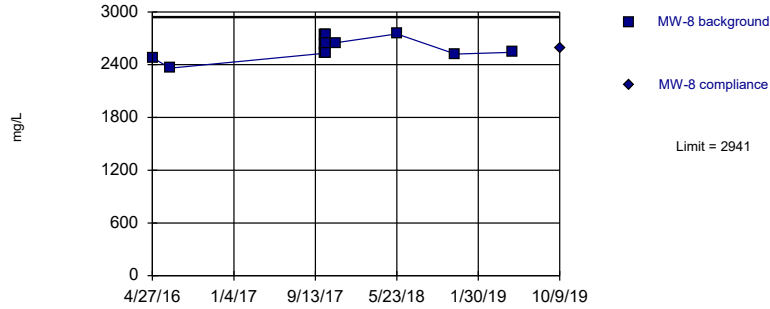
Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:40 AM View: IntraWell PL

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-2	MW-2	MW-3	MW-3	MW-4	MW-4	MW-7	MW-7
4/25/2016	1260 (D)		2720 (D)		3300 (D)			
4/27/2016							1640	
6/20/2016	1620 (D)				3870 (D)			
6/21/2016							2460	
6/22/2016			3250 (D)					
8/8/2016	1740 (D)							
8/9/2016			3050 (D)		4140 (D)			
8/24/2016	1720 (D)		3080 (D)		4190 (D)			
10/3/2016	1800 (D)				4190 (D)			
10/4/2016			2900 (D)					
10/26/2016	1800 (D)		2940 (D)		4400 (D)			
11/21/2016	1740 (D)		3090 (D)		4230 (D)			
1/17/2017	1960 (D)							
1/18/2017			4020 (D)		4120 (D)			
3/22/2017	1510 (D)		4180 (D)		3980 (D)			
4/18/2017	1580 (D)		4440 (D)		3880 (D)			
5/31/2017	1730 (D)		3970 (D)		4210 (D)			
8/23/2017	1550 (D)		4050 (D)		3990 (D)			
10/12/2017							2460	
10/13/2017							2420	
10/14/2017							2320	
10/15/2017							1150	
10/16/2017							2320	
10/17/2017							2360	
11/16/2017							2460	
5/22/2018	1500 (D)							
5/23/2018					3740 (D)		2390	
5/24/2018			3680 (D)					
6/12/2018	1550		3820		4080			
10/17/2018	1740		4730		4250			
11/19/2018	1990		4710		3920			
11/20/2018							2090	
4/10/2019	1250 (D)		3680		3280			
5/14/2019	1480		3580 (D)		3130 (D)			
5/15/2019							2310	
10/8/2019		1840		4720				2340
10/10/2019					4000			
10/16/2019		1830		4210		4060		

Within Limit

Prediction Limit  
Intrawell Parametric

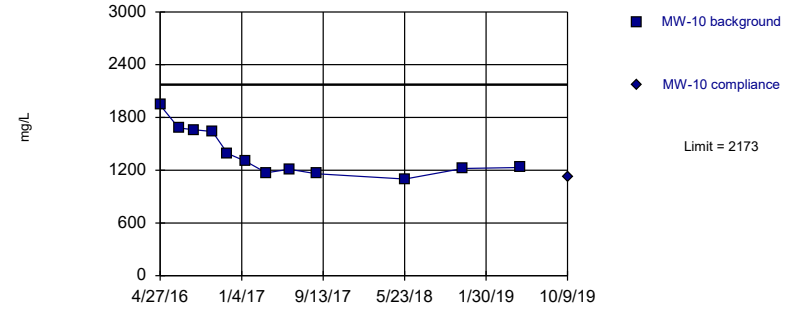


Background Data Summary: Mean=2593, Std. Dev.=120.2, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9303, critical = 0.805. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:39 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

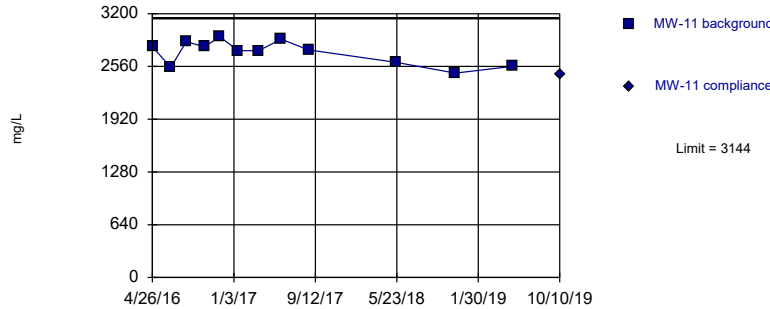


Background Data Summary: Mean=1392, Std. Dev.=270.1, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8665, critical = 0.805. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:39 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric

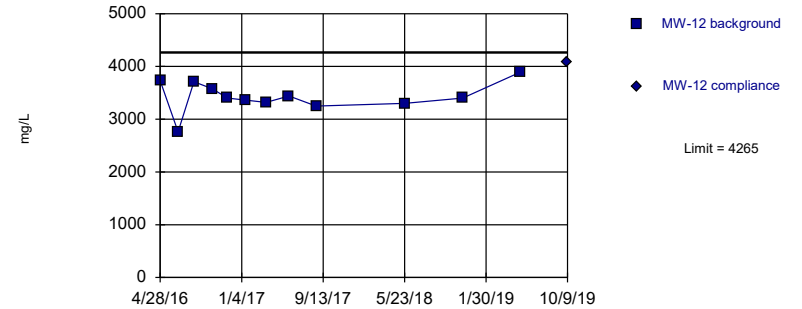


Background Data Summary: Mean=2728, Std. Dev.=144, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9248, critical = 0.805. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:39 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=3428, Std. Dev.=289.1, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9267, critical = 0.805. Kappa overridden to 2.894.

Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:39 AM View: Intrawell PL  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

# Prediction Limit

Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:40 AM View: Intrawell PL

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

	MW-8	MW-8	MW-10	MW-10	MW-11	MW-11	MW-12	MW-12
4/26/2016					2800			
4/27/2016	2480		1940					
4/28/2016							3730	
6/21/2016	2360							
6/22/2016					2550		2760	
6/23/2016			1680					
8/9/2016					2860			
8/10/2016			1660				3710	
10/4/2016					2800			
10/5/2016			1640				3580	
11/21/2016			1390		2920			
11/22/2016							3400	
1/17/2017			1300		2750			
1/18/2017							3360	
3/21/2017			1170		2750		3320	
5/30/2017					2890			
5/31/2017			1210				3440	
8/23/2017			1160		2760		3250	
10/12/2017	2530							
10/13/2017	2740							
10/14/2017	2630							
10/15/2017	2530							
10/16/2017	2740							
10/17/2017	2650							
11/16/2017	2650							
5/22/2018					2610			
5/23/2018	2750							
5/24/2018			1100				3300	
11/19/2018			1220				3400	
11/20/2018	2520				2480			
5/15/2019	2540		1230		2560		3890	
10/9/2019		2590		1120				4090
10/10/2019						2460		

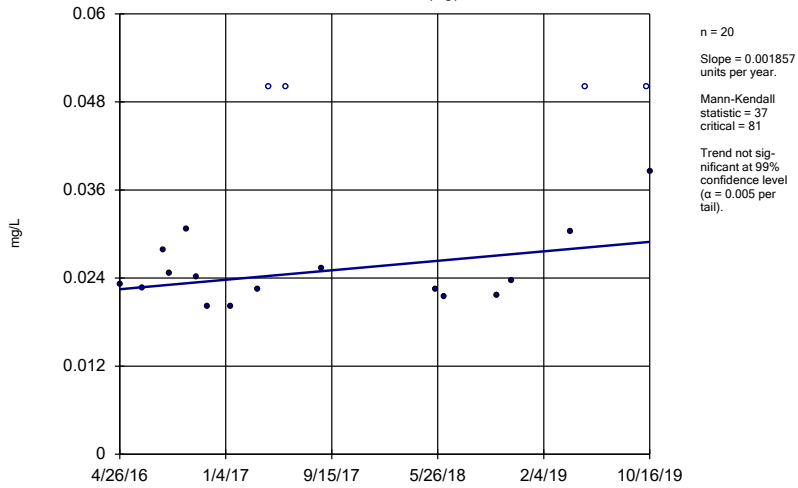
# Trend Test Summary Table

Plant William C Gorgas    Client: Southern Company    Data: Gorgas BALF CCR    Printed 1/21/2020, 9:00 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)	0.00152	46	81	No	20	5	n/a	n/a	0.01	NP
Boron (mg/L)	MW-10	-0.02045	-29	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	MW-11	0.003915	42	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	MW-12	0.02326	39	43	No	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)	-0.03301	-20	-81	No	20	5	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-7	4.425	9	43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-8	-38.72	-16	-43	No	13	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>MW-10</b>	<b>1.75</b>	<b>60</b>	<b>43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>MW-11</b>	<b>12.8</b>	<b>73</b>	<b>43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	MW-12	1.296	40	43	No	13	0	n/a	n/a	0.01	NP
pH (SU)	MW-1 (Bg)	-0.01606	-68	-81	No	20	0	n/a	n/a	0.01	NP
pH (SU)	MW-2 (Bg)	0.03902	65	81	No	20	0	n/a	n/a	0.01	NP
pH (SU)	MW-3 (Bg)	-0.2239	-64	-87	No	21	0	n/a	n/a	0.01	NP
pH (SU)	MW-4 (Bg)	0.0107	43	87	No	21	0	n/a	n/a	0.01	NP
pH (SU)	MW-7	-0.00...	-12	-48	No	14	0	n/a	n/a	0.01	NP
<b>pH (SU)</b>	<b>MW-8</b>	<b>0.04551</b>	<b>51</b>	<b>48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH (SU)	MW-10	0	2	48	No	14	0	n/a	n/a	0.01	NP
pH (SU)	MW-11	0.04698	38	48	No	14	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids...</b>	<b>MW-1 (Bg)</b>	<b>140.7</b>	<b>112</b>	<b>81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids...	MW-2 (Bg)	3.621	5	81	No	20	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids...</b>	<b>MW-3 (Bg)</b>	<b>409</b>	<b>93</b>	<b>81</b>	<b>Yes</b>	<b>20</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids...	MW-4 (Bg)	-56.05	-29	-81	No	20	0	n/a	n/a	0.01	NP

### Sen's Slope Estimator

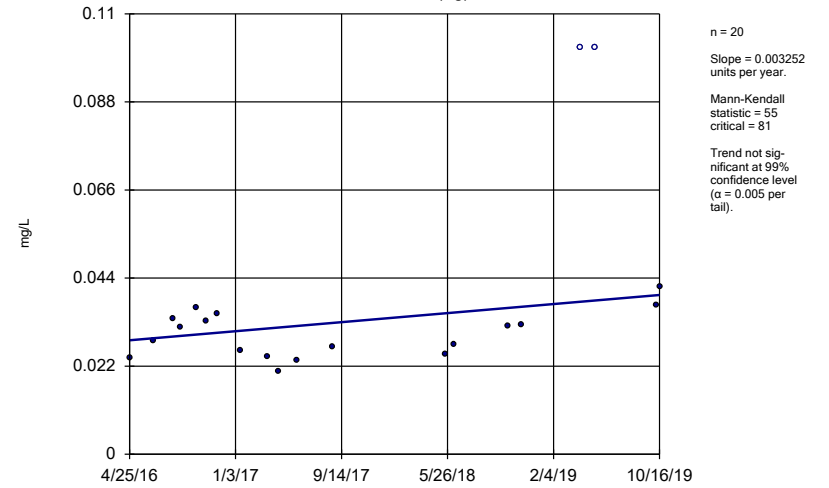
MW-1 (Bg)



Constituent: Boron Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

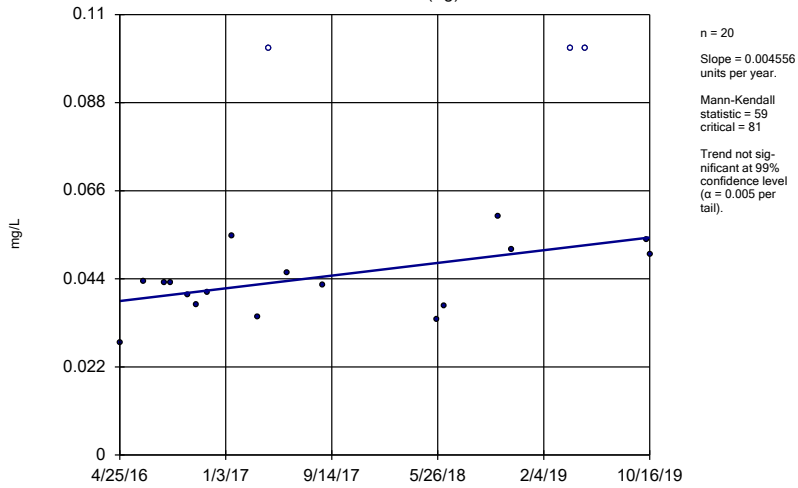
MW-2 (Bg)



Constituent: Boron Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

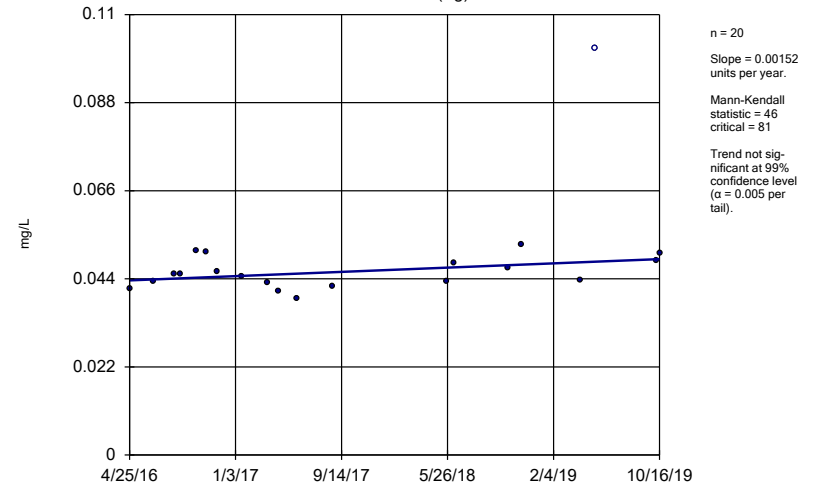
MW-3 (Bg)



Constituent: Boron Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

MW-4 (Bg)

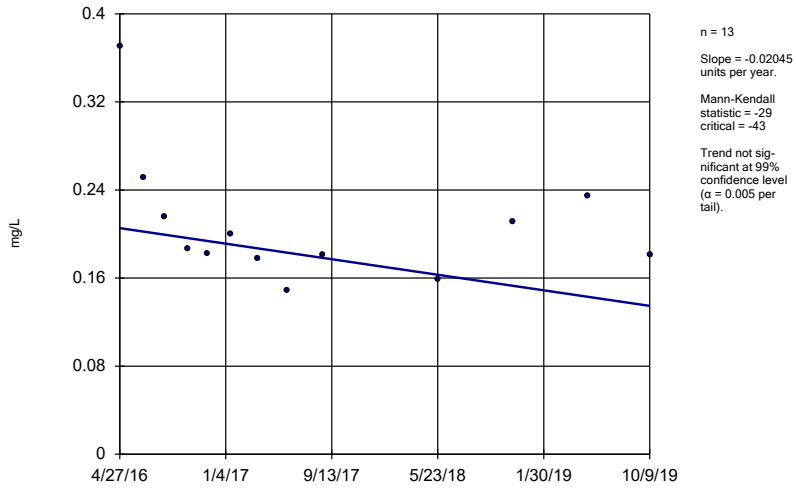


Constituent: Boron Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



### Sen's Slope Estimator

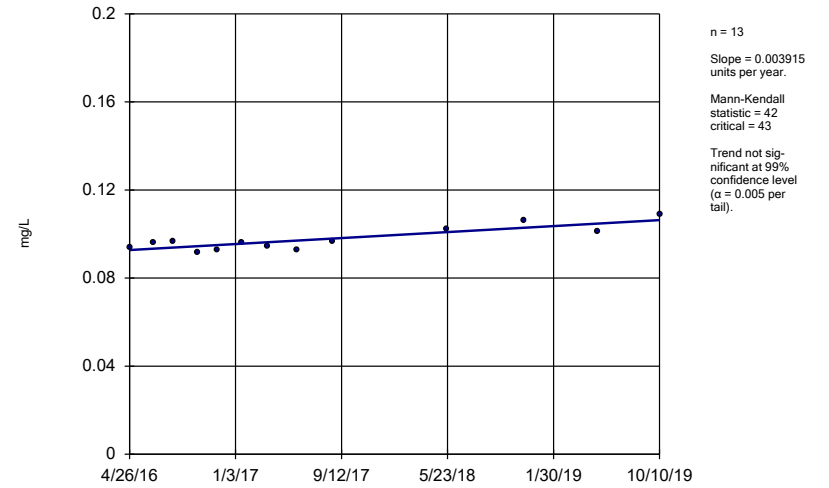
MW-10



Constituent: Boron Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

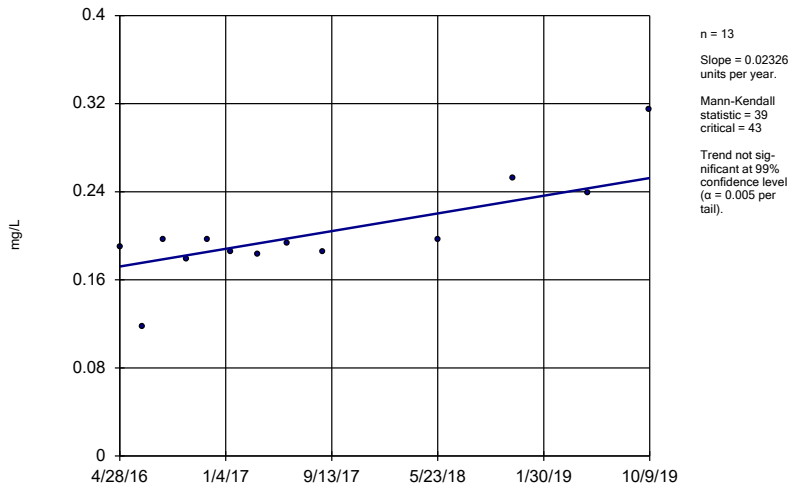
MW-11



Constituent: Boron Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

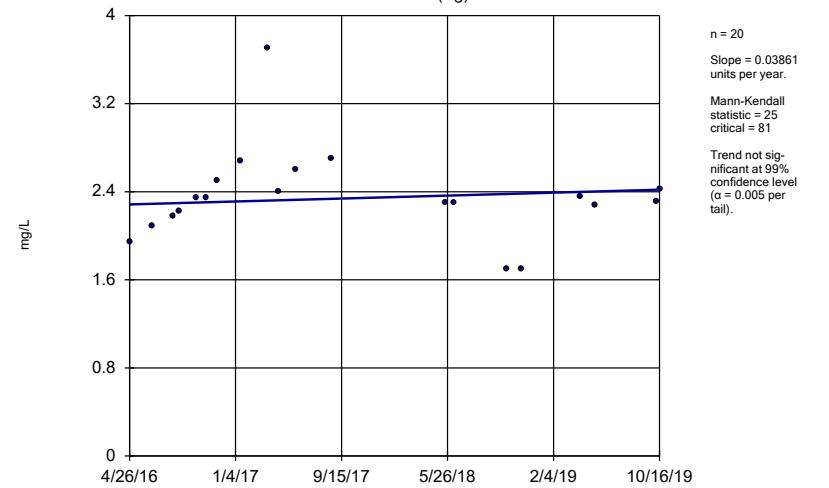
MW-12



Constituent: Boron Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

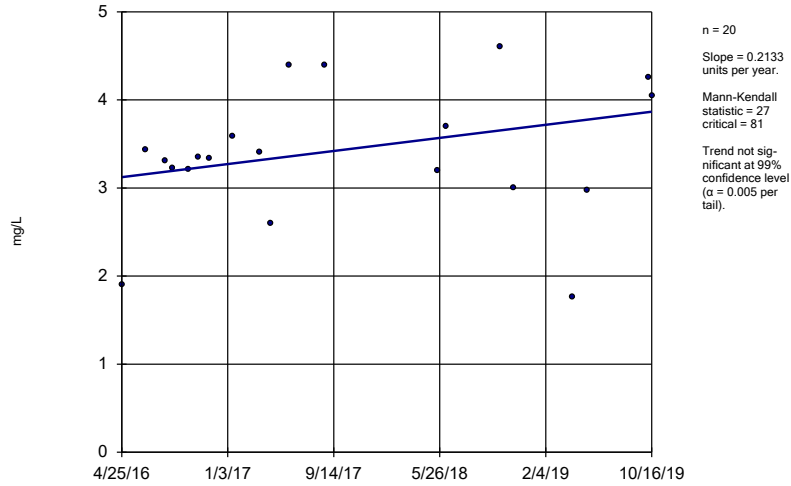
MW-1 (Bg)



Constituent: Chloride Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

MW-2 (Bg)

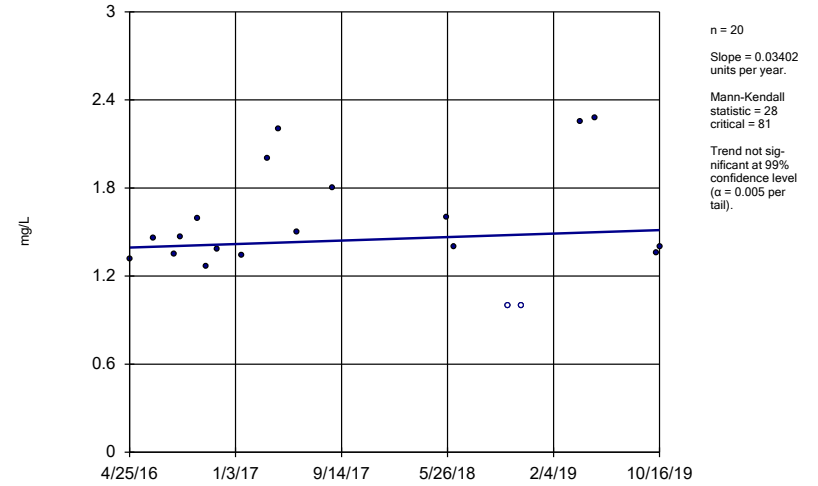


Constituent: Chloride Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Hollow symbols indicate censored values.

### Sen's Slope Estimator

MW-3 (Bg)

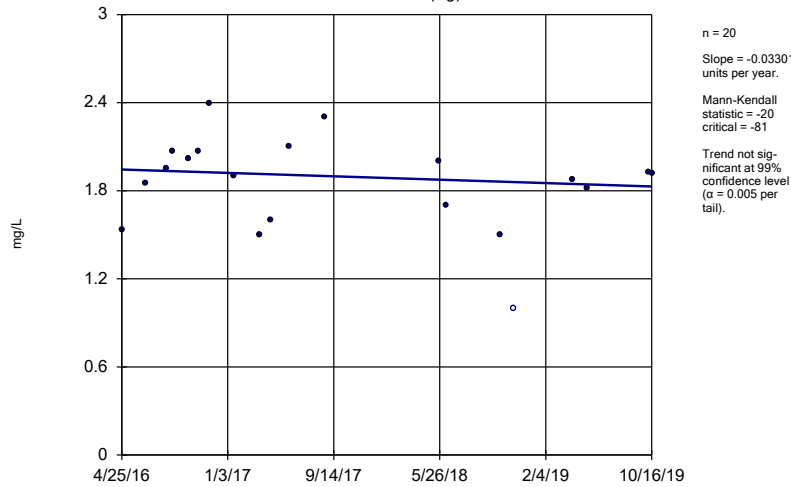


Constituent: Chloride Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Hollow symbols indicate censored values.

### Sen's Slope Estimator

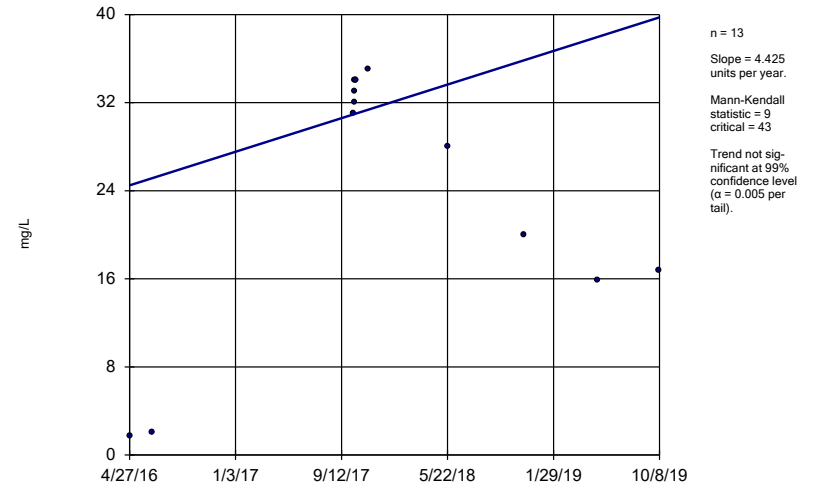
MW-4 (Bg)



Constituent: Chloride Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

MW-7

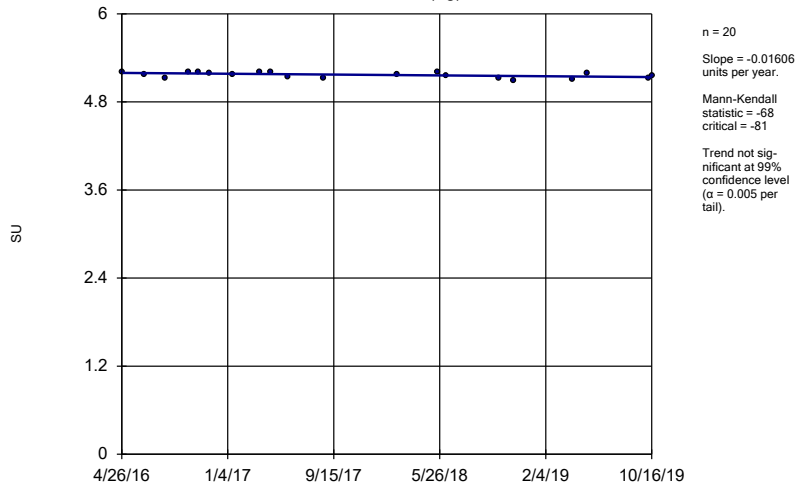


Constituent: Chloride Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



### Sen's Slope Estimator

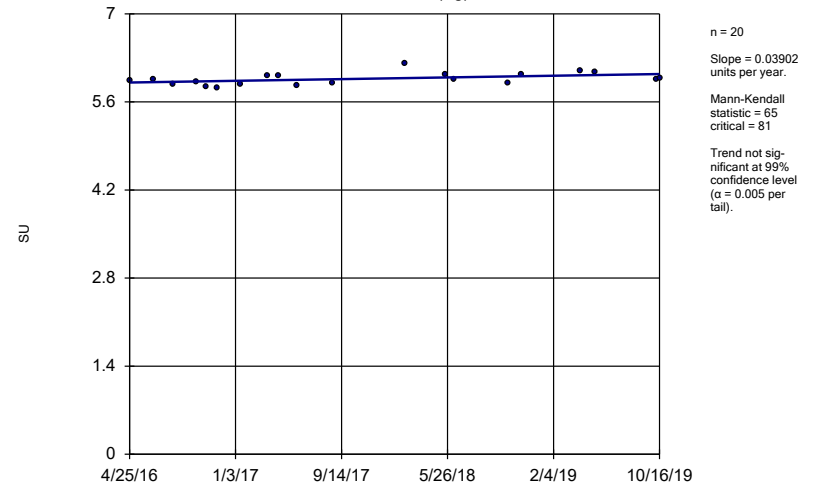
MW-1 (Bg)



Constituent: pH Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

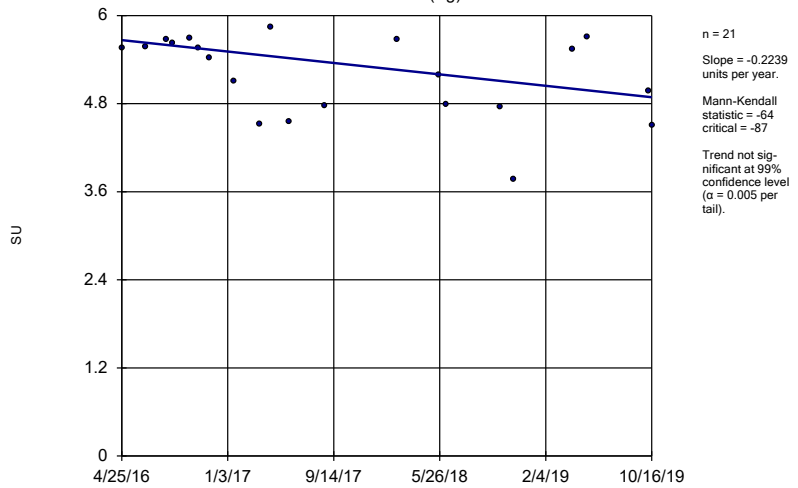
MW-2 (Bg)



Constituent: pH Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

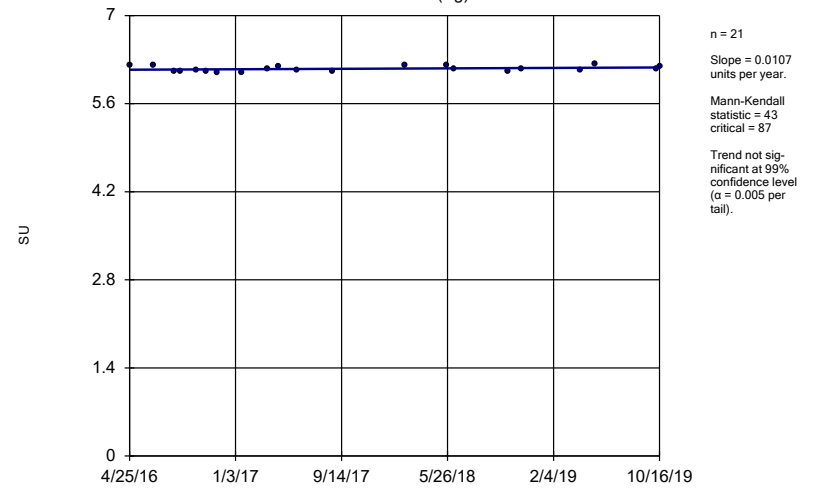
MW-3 (Bg)



Constituent: pH Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

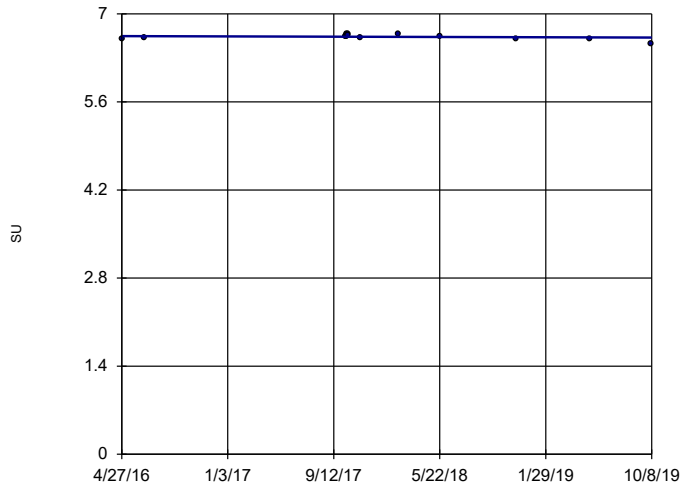
MW-4 (Bg)



Constituent: pH Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

MW-7

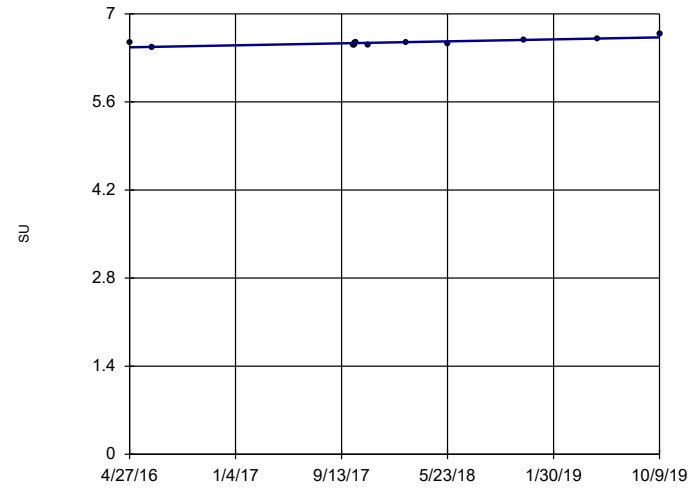


n = 14  
 Slope = -0.006697  
 units per year.  
 Mann-Kendall  
 statistic = -12  
 critical = -48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH Analysis Run 1/21/2020 8:52 AM View: Trend Test  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

MW-8

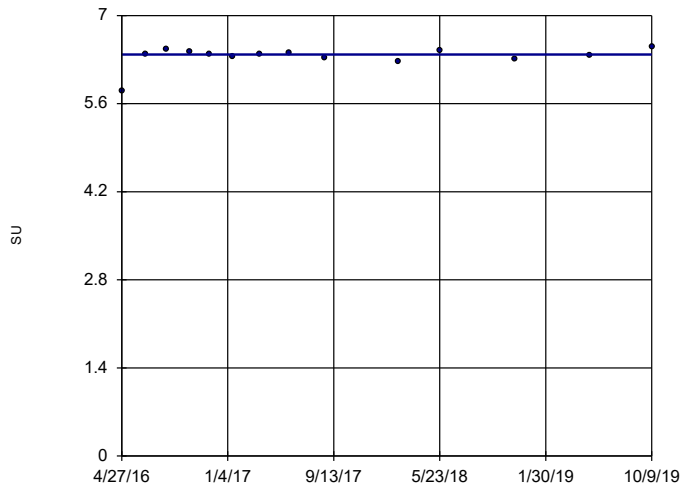


n = 14  
 Slope = 0.04551  
 units per year.  
 Mann-Kendall  
 statistic = 51  
 critical = 48  
 Increasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH Analysis Run 1/21/2020 8:52 AM View: Trend Test  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

MW-10

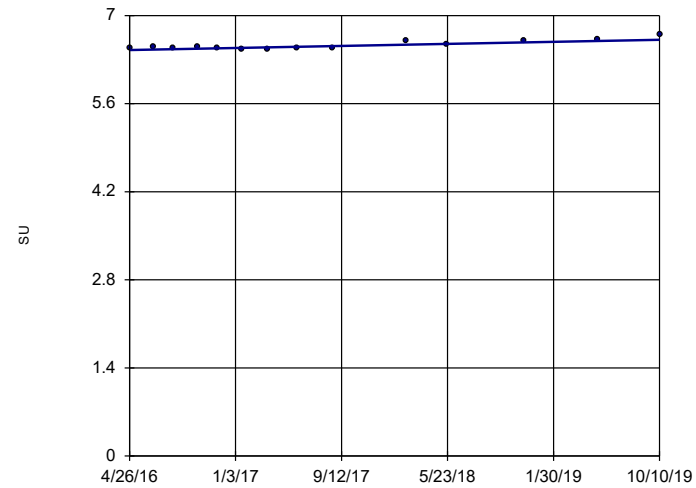


n = 14  
 Slope = 0  
 units per year.  
 Mann-Kendall  
 statistic = 2  
 critical = 48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH Analysis Run 1/21/2020 8:52 AM View: Trend Test  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

MW-11

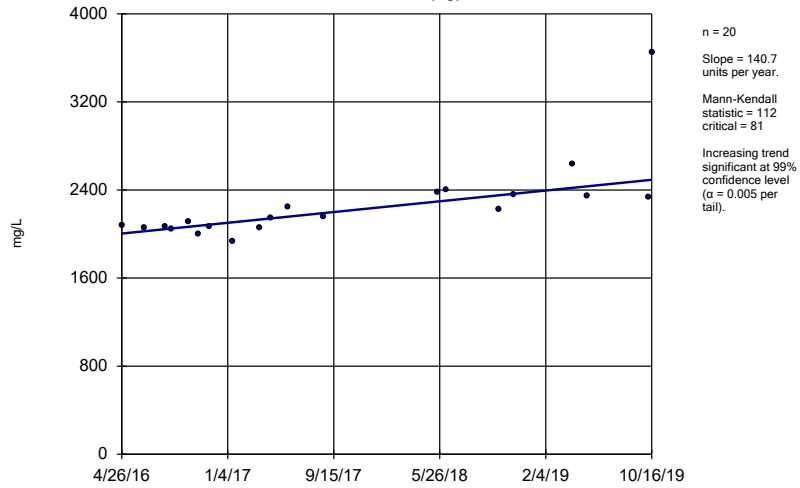


n = 14  
 Slope = 0.04698  
 units per year.  
 Mann-Kendall  
 statistic = 38  
 critical = 48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH Analysis Run 1/21/2020 8:52 AM View: Trend Test  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

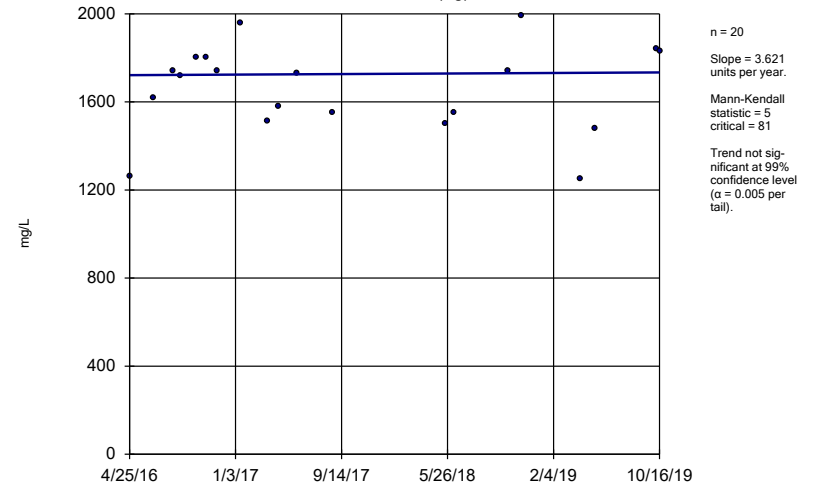
MW-1 (Bg)



Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

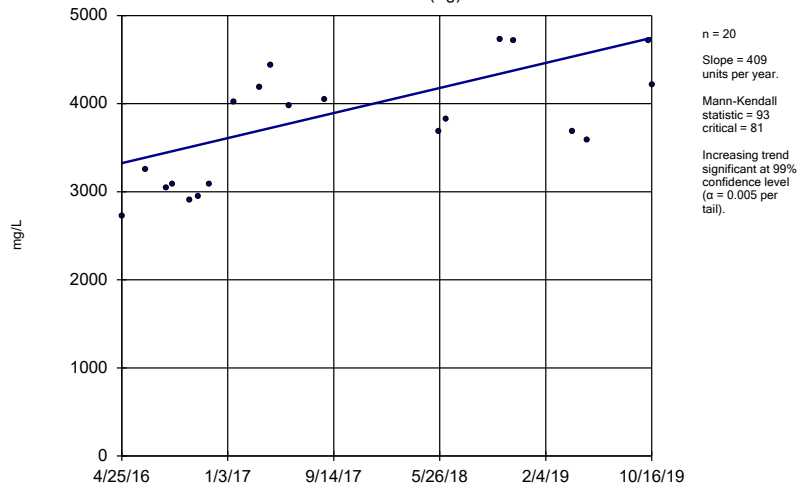
MW-2 (Bg)



Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Sen's Slope Estimator

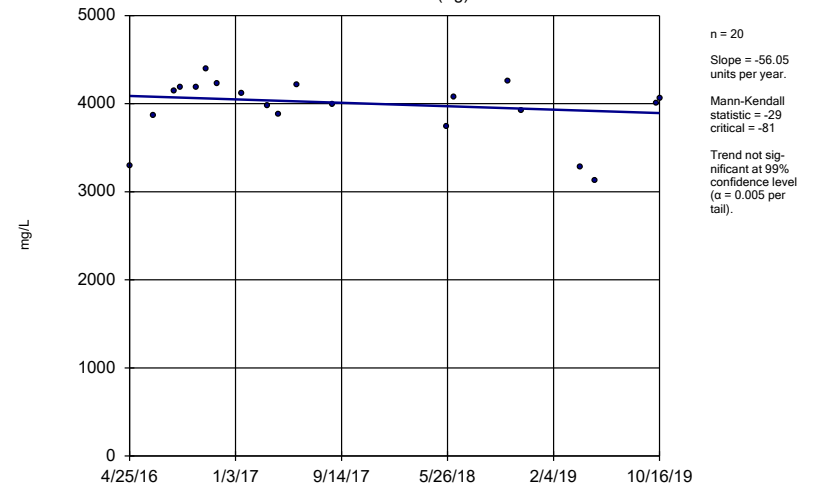
MW-3 (Bg)



Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:52 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

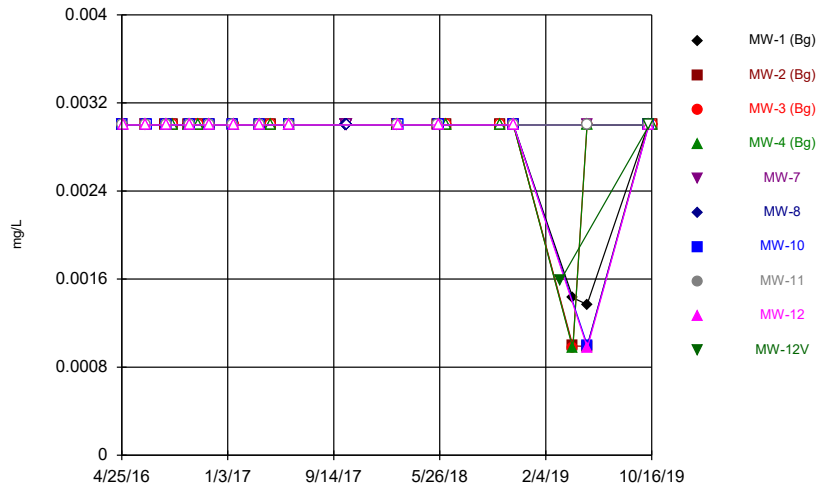
### Sen's Slope Estimator

MW-4 (Bg)



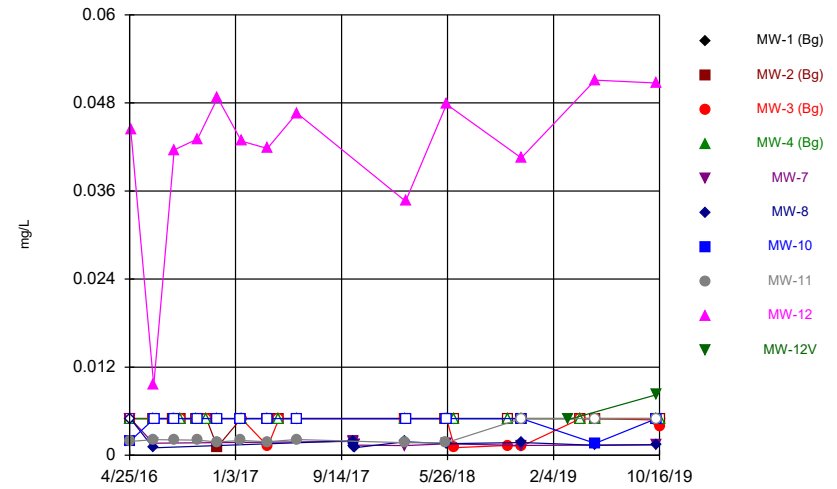
Constituent: Total Dissolved Solids Analysis Run 1/21/2020 8:53 AM View: Trend Test  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



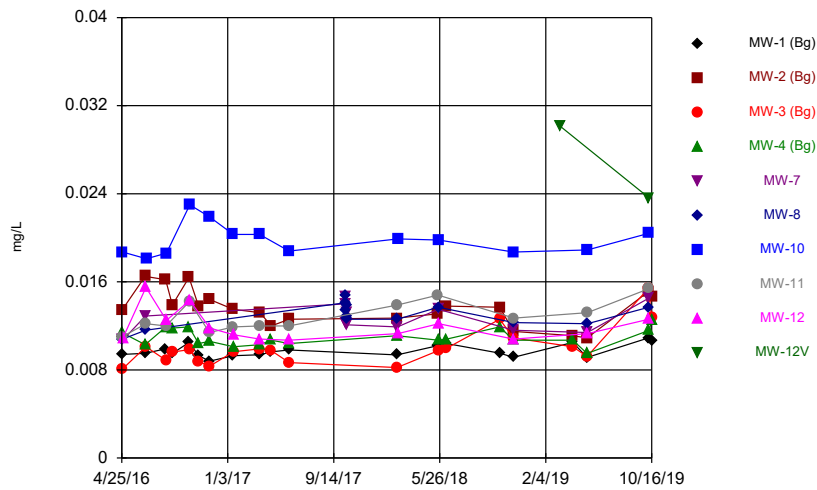
Constituent: Antimony Analysis Run 1/21/2020 9:01 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



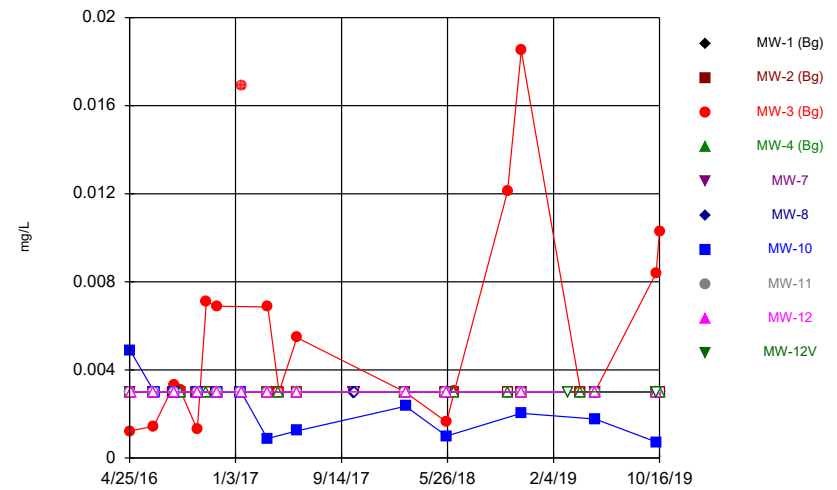
Constituent: Arsenic Analysis Run 1/21/2020 9:01 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



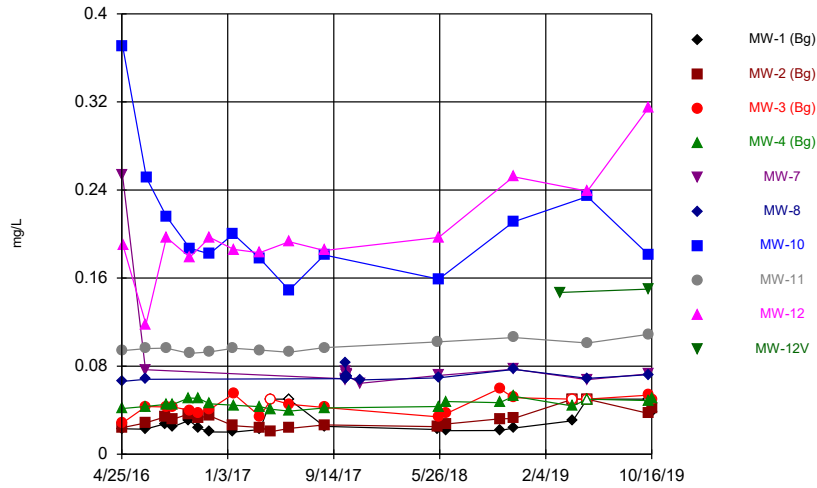
Constituent: Barium Analysis Run 1/21/2020 9:01 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



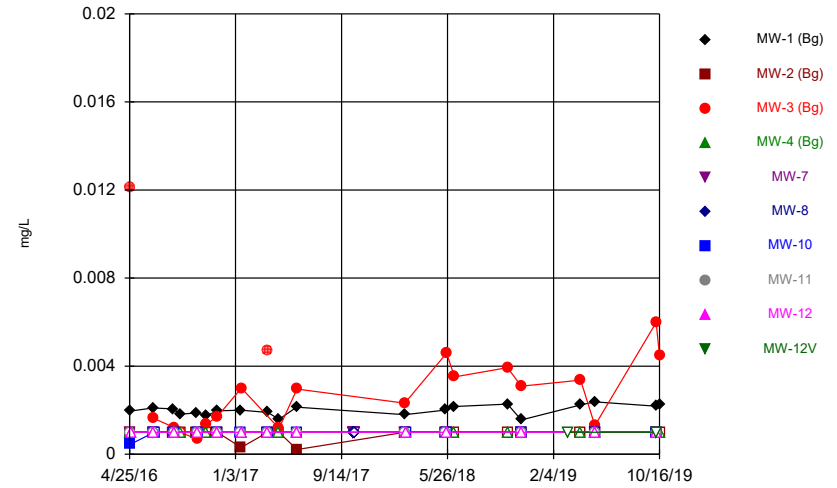
Constituent: Beryllium Analysis Run 1/21/2020 9:01 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



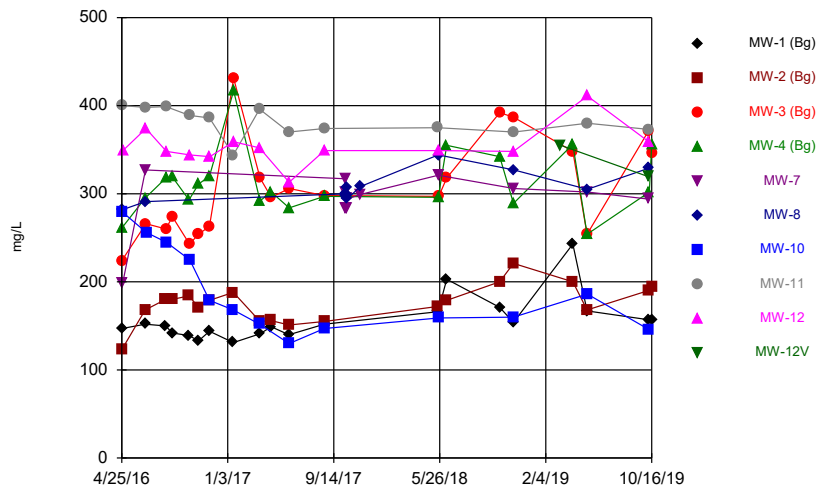
Constituent: Boron Analysis Run 1/21/2020 9:01 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



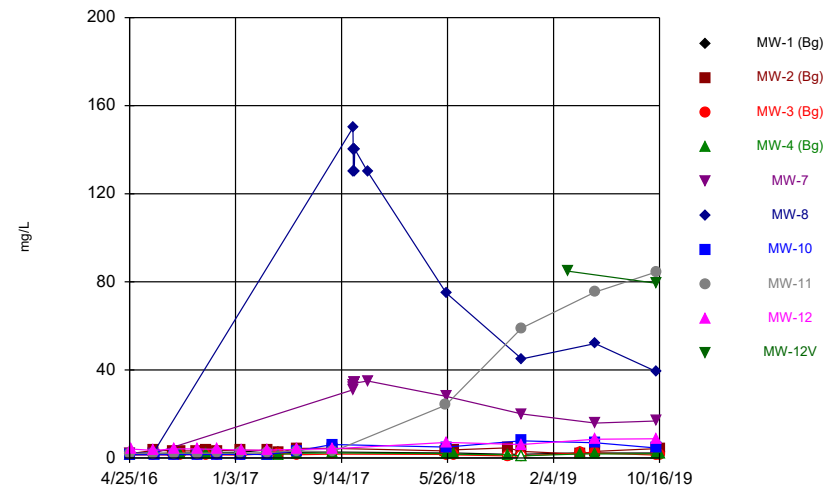
Constituent: Cadmium Analysis Run 1/21/2020 9:01 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



Constituent: Calcium Analysis Run 1/21/2020 9:01 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

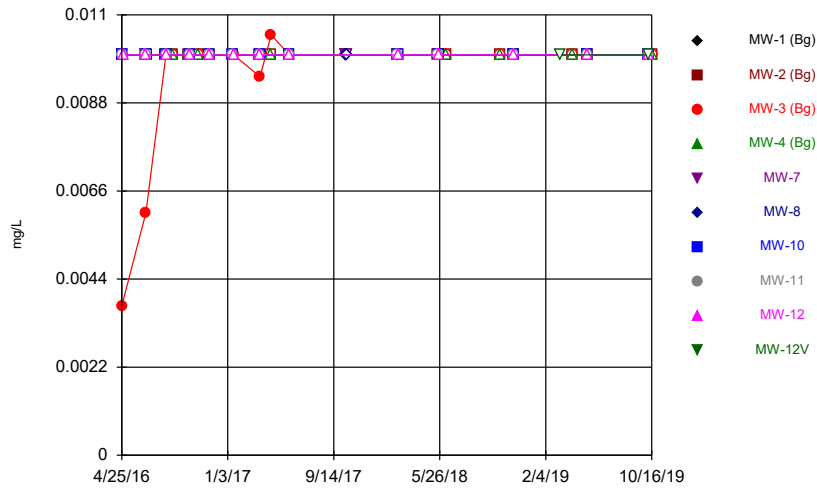
Time Series



Constituent: Chloride Analysis Run 1/21/2020 9:01 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

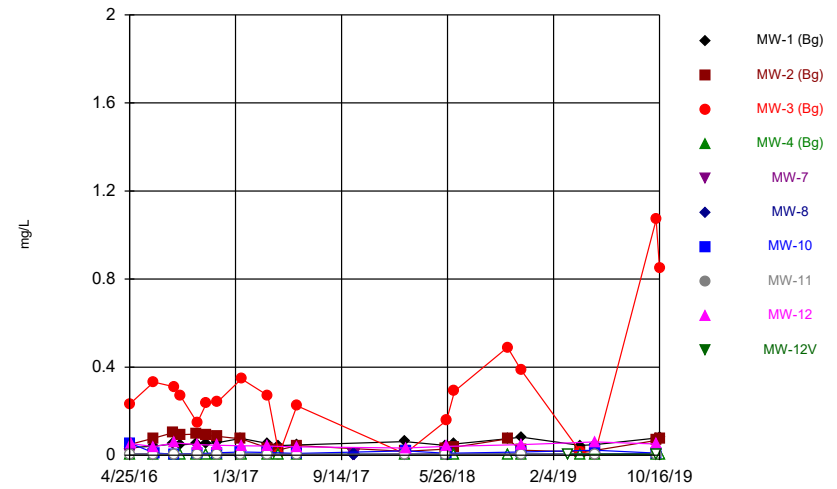


### Time Series



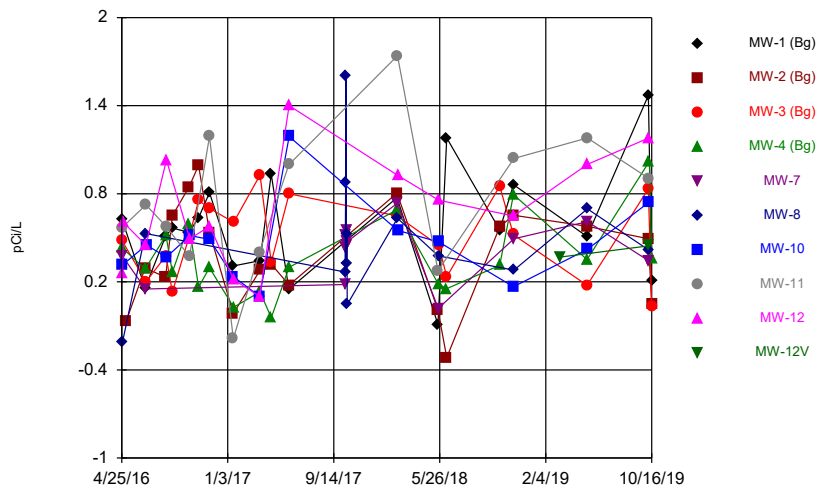
Constituent: Chromium Analysis Run 1/21/2020 9:01 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



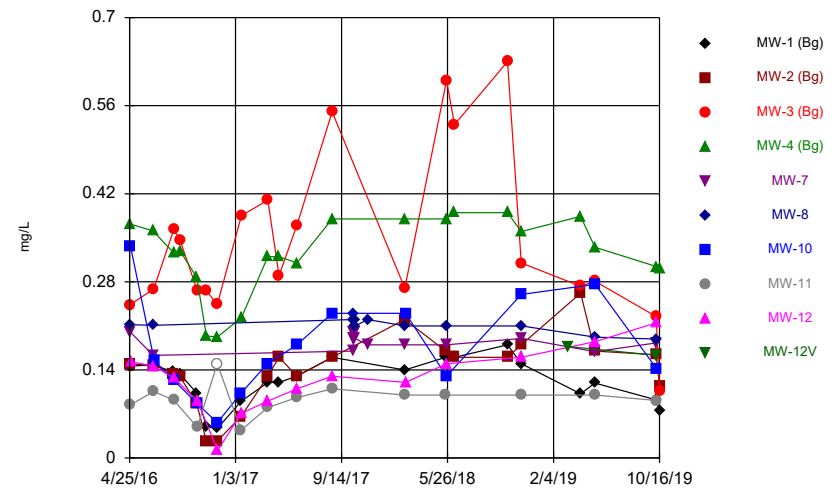
Constituent: Cobalt Analysis Run 1/21/2020 9:02 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



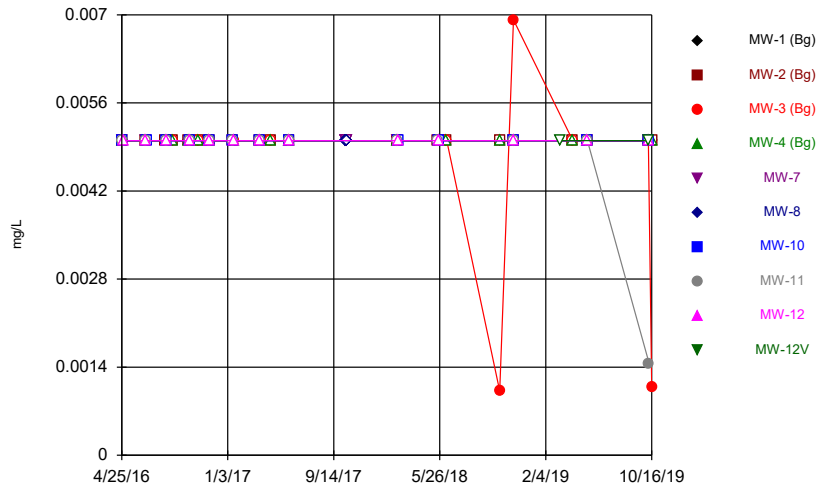
Constituent: Combined Radium 226 + 228 Analysis Run 1/21/2020 9:02 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



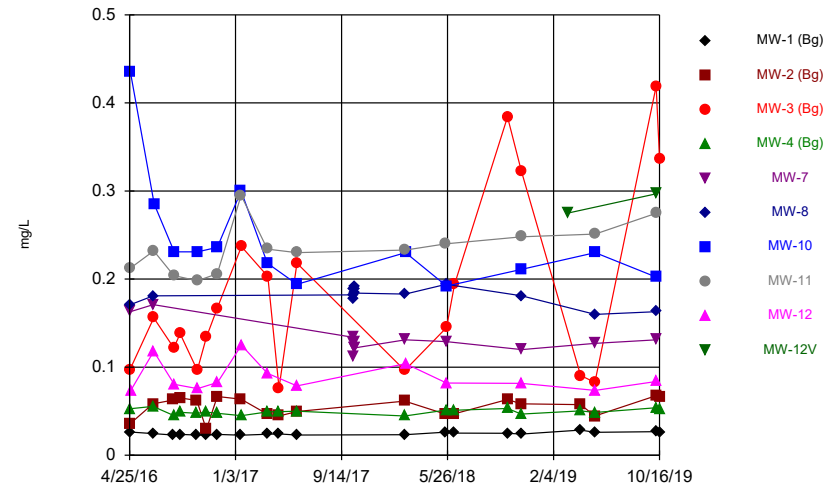
Constituent: Fluoride Analysis Run 1/21/2020 9:02 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



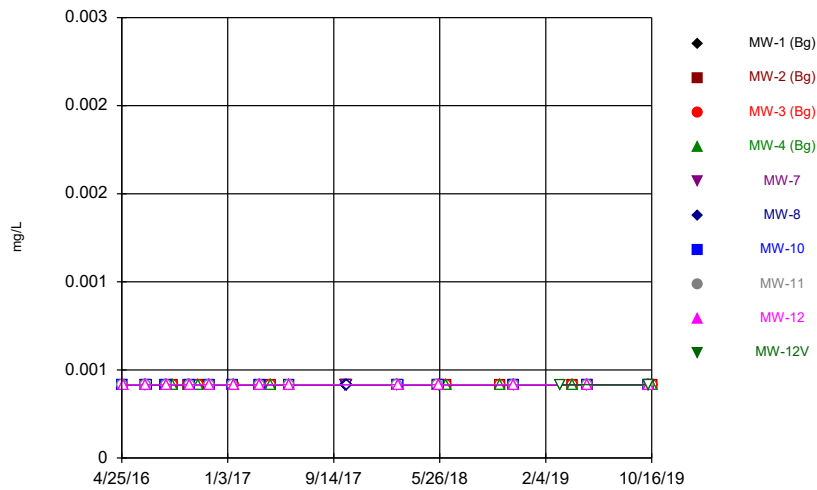
Constituent: Lead Analysis Run 1/21/2020 9:02 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



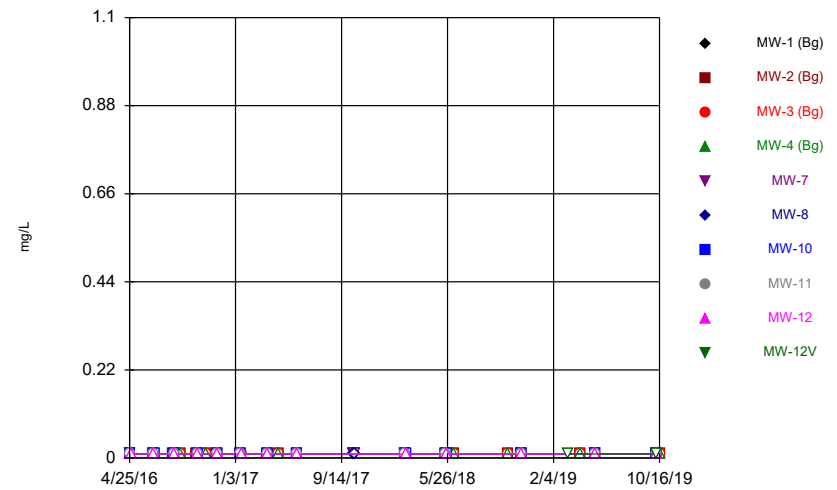
Constituent: Lithium Analysis Run 1/21/2020 9:02 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



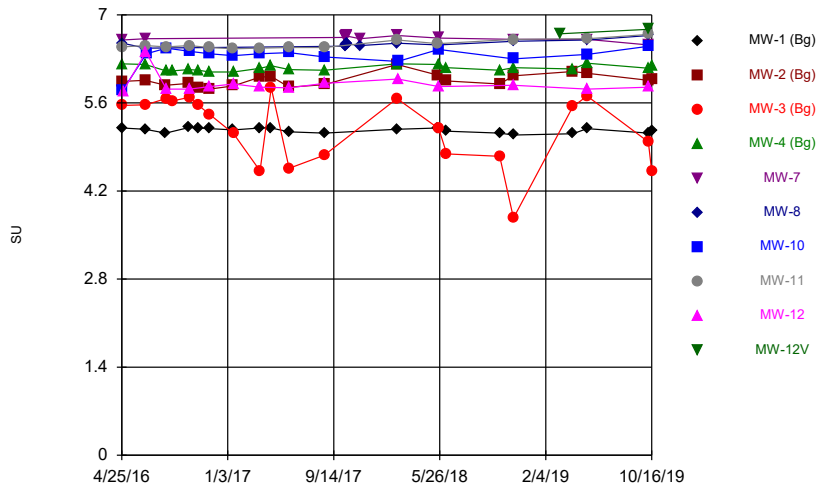
Constituent: Mercury Analysis Run 1/21/2020 9:02 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Time Series



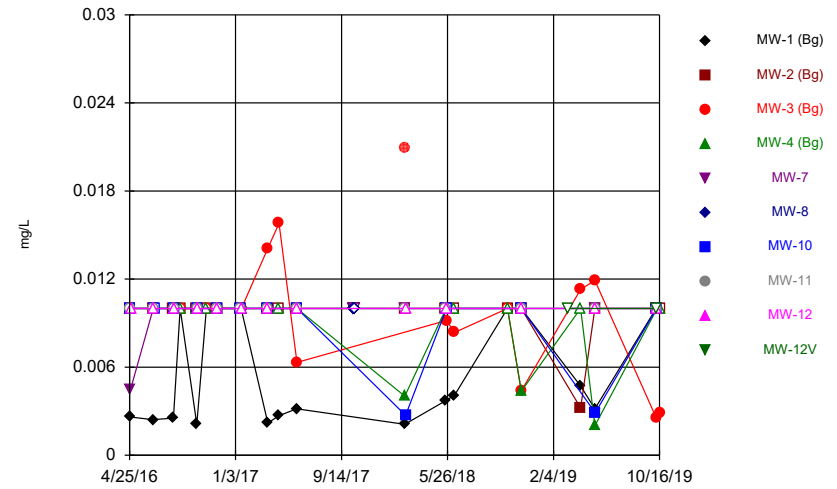
Constituent: Molybdenum Analysis Run 1/21/2020 9:02 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



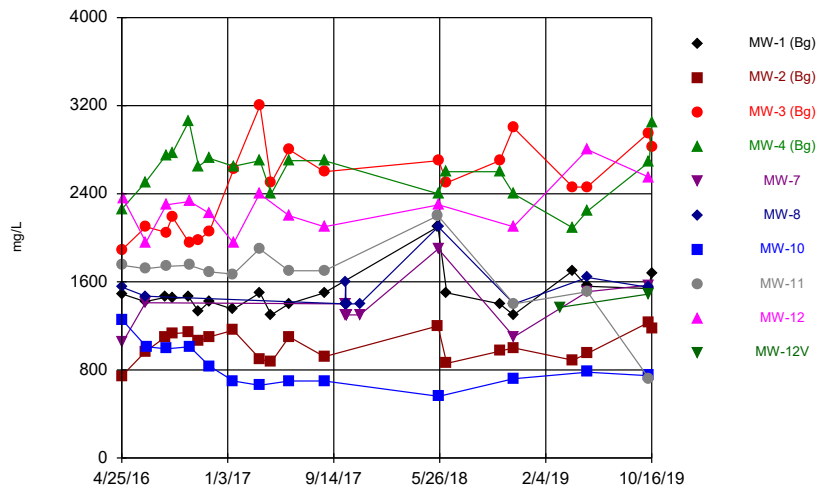
Constituent: pH Analysis Run 1/21/2020 9:02 AM View: Time Series  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



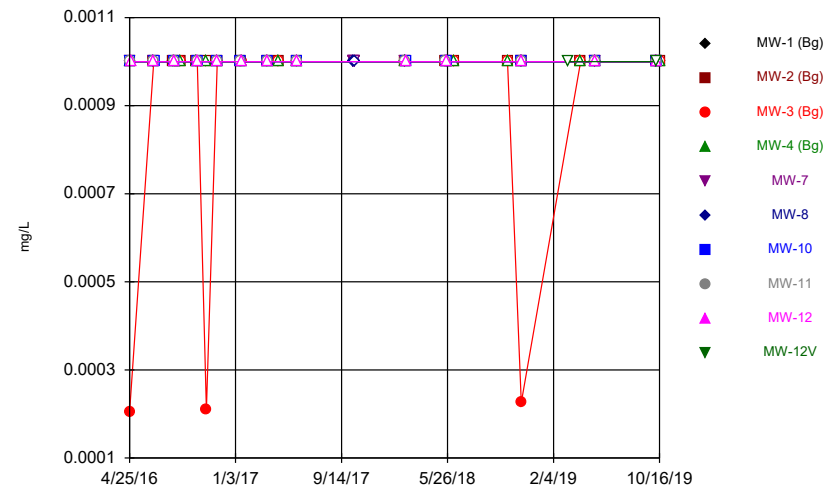
Constituent: Selenium Analysis Run 1/21/2020 9:02 AM View: Time Series  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



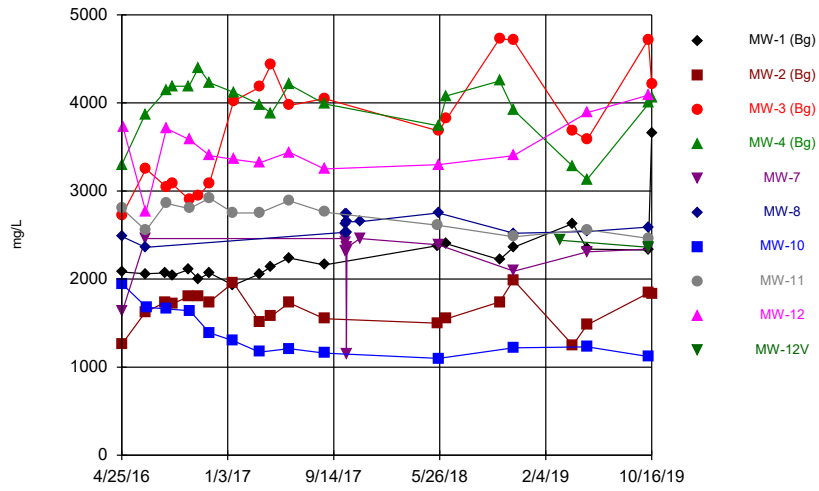
Constituent: Sulfate Analysis Run 1/21/2020 9:02 AM View: Time Series  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



Constituent: Thallium Analysis Run 1/21/2020 9:02 AM View: Time Series  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Time Series



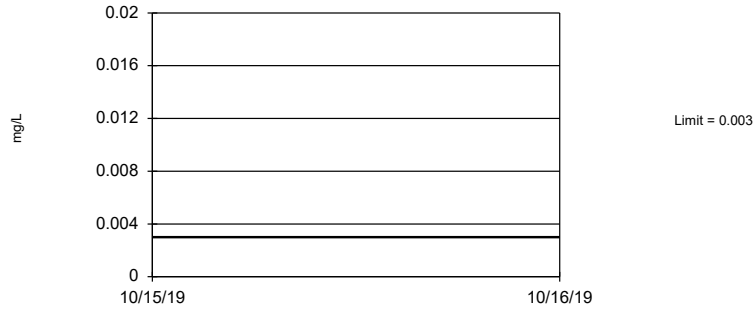
Constituent: Total Dissolved Solids Analysis Run 1/21/2020 9:02 AM View: Time Series  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

# Upper Tolerance Limits - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 1/21/2020, 9:04 AM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.003	n/a	80	n/a	n/a	92.5	n/a	n/a	0.01652	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	80	n/a	n/a	91.25	n/a	n/a	0.01652	NP Inter(NDs)
Barium (mg/L)	0.01527	n/a	80	-4.517	0.1705	0	None	ln(x)	0.05	Inter
Beryllium (mg/L)	0.0185	n/a	79	n/a	n/a	81.01	n/a	n/a	0.01738	NP Inter(NDs)
Cadmium (mg/L)	0.00598	n/a	78	n/a	n/a	50	n/a	n/a	0.0183	NP Inter(normal...)
Chromium (mg/L)	0.0105	n/a	80	n/a	n/a	95	n/a	n/a	0.01652	NP Inter(NDs)
Cobalt (mg/L)	1.07	n/a	80	n/a	n/a	25	n/a	n/a	0.01652	NP Inter(normal...)
Combined Radium 226 + 228 (pCi/L)	1.098	n/a	76	0.4542	0.3266	0	None	No	0.05	Inter
Fluoride (mg/L)	0.5302	n/a	84	0.4636	0.1353	0	None	sqrt(x)	0.05	Inter
Lead (mg/L)	0.00692	n/a	80	n/a	n/a	96.25	n/a	n/a	0.01652	NP Inter(NDs)
Lithium (mg/L)	0.419	n/a	80	n/a	n/a	0	n/a	n/a	0.01652	NP Inter(normal...)
Mercury (mg/L)	0.0005	n/a	80	n/a	n/a	100	n/a	n/a	0.01652	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	80	n/a	n/a	100	n/a	n/a	0.01652	NP Inter(NDs)
Selenium (mg/L)	0.0158	n/a	79	n/a	n/a	67.09	n/a	n/a	0.01738	NP Inter(normal...)
Thallium (mg/L)	0.001	n/a	80	n/a	n/a	96.25	n/a	n/a	0.01652	NP Inter(NDs)

### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 80 background values. 92.5% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Antimony Analysis Run 1/21/2020 9:03 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

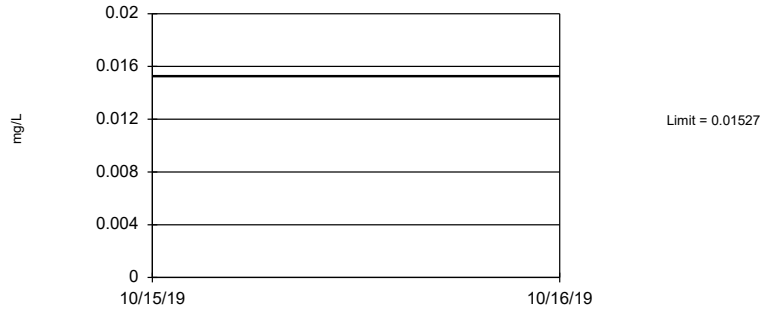
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 80 background values. 91.25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Arsenic Analysis Run 1/21/2020 9:03 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

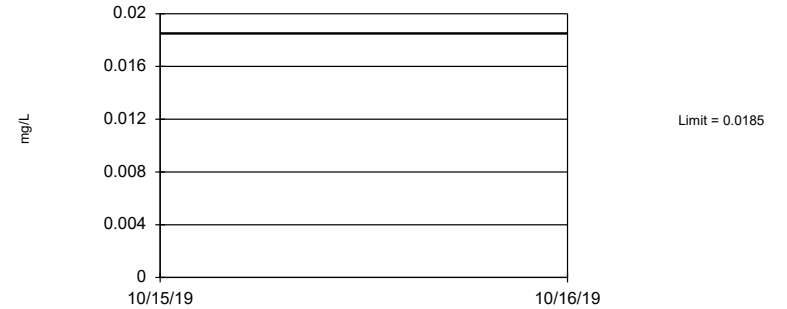
### Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary (based on natural log transformation): Mean=-4.517, Std. Dev.=0.1705, n=80. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9594, critical = 0.957. Report alpha = 0.05.

Constituent: Barium Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

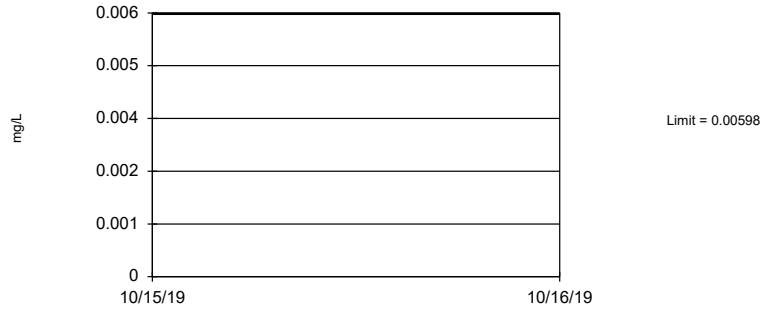
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 79 background values. 81.01% 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: Beryllium Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 78 background values. 50% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0183.

Constituent: Cadmium Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

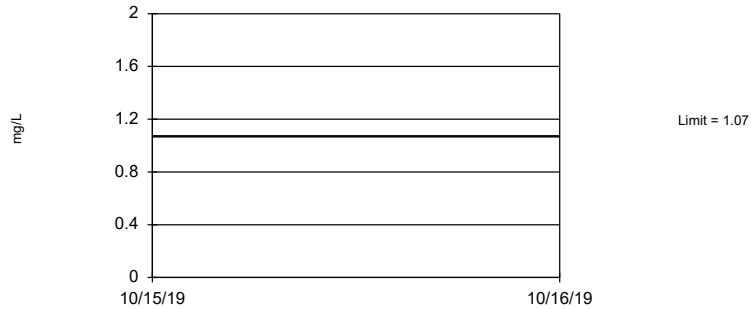
Tolerance Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 80 background values. 95% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Chromium Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

Tolerance Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. 25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Cobalt Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

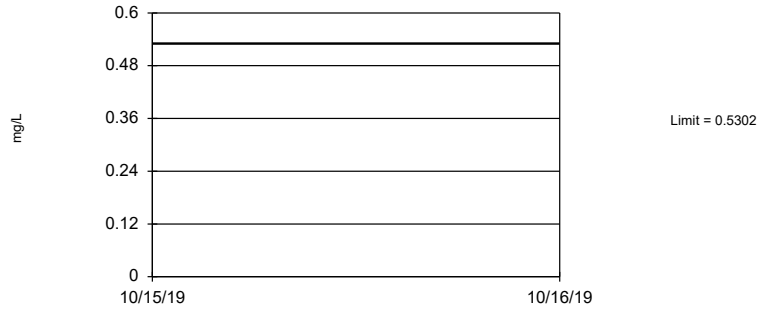
Tolerance Limit  
Interwell Parametric



95% coverage. Background Data Summary: Mean=0.4542, Std. Dev.=0.3266, n=76. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9823, critical = 0.957. Report alpha = 0.05.

Constituent: Combined Radium 226 + 228 Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

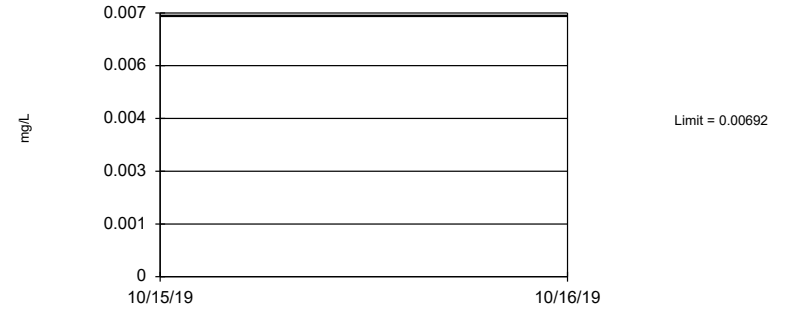
### Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary (based on square root transformation): Mean=0.4636, Std. Dev.=0.1353, n=84. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9797, critical = 0.96. Report alpha = 0.05.

Constituent: Fluoride Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

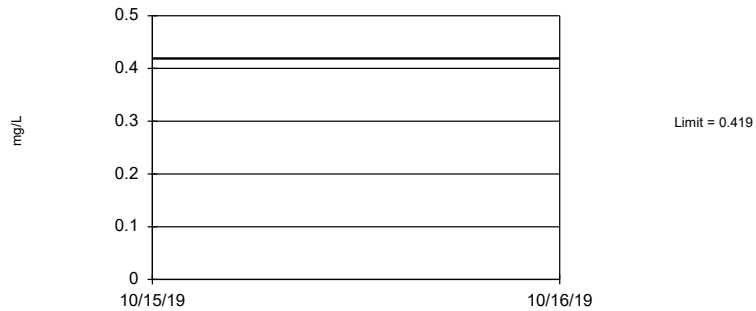
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 80 background values. 96.25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Lead Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

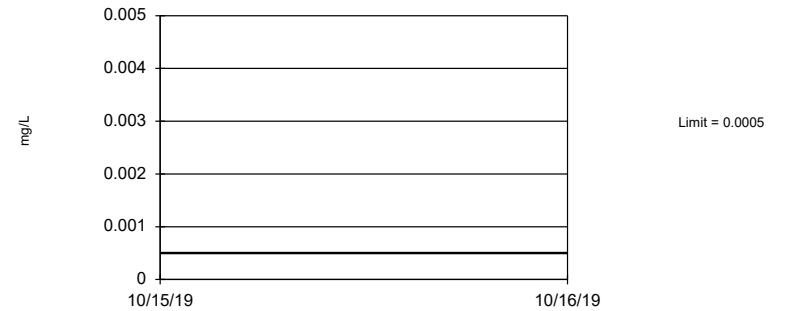
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Lithium Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Tolerance Limit Interwell Non-parametric

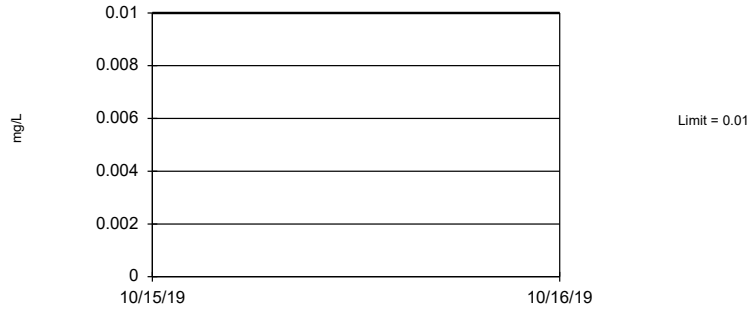


Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Mercury Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Molybdenum Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 79 background values. 67.09% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01738.

Constituent: Selenium Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 80 background values. 96.25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Thallium Analysis Run 1/21/2020 9:04 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

# Confidence Intervals - Significant Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 1/21/2020, 9:24 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>
Arsenic (mg/L)	MW-12	0.04804	0.03843	0.01	Yes	13	0	x^3	0.01	Param.

# Confidence Intervals - All Results

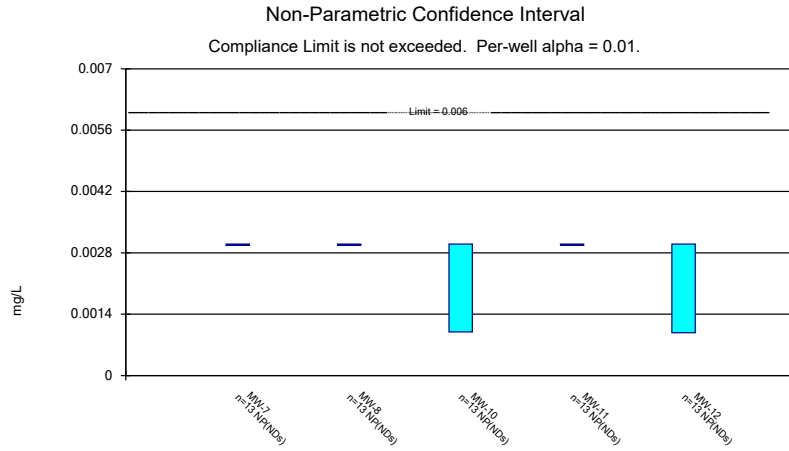
Plant William C Gorgas    Client: Southern Company    Data: Gorgas BALF CCR    Printed 1/21/2020, 9:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	MW-7	0.003	0.003	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	MW-8	0.003	0.003	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	MW-10	0.003	0.000996	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	MW-11	0.003	0.003	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	MW-12	0.003	0.000977	0.006	No	13	92.31	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-7	0.00188	0.00131	0.01	No	13	7.692	No	0.01	NP (normality)
Arsenic (mg/L)	MW-8	0.00197	0.00103	0.01	No	13	7.692	No	0.01	NP (normality)
Arsenic (mg/L)	MW-10	0.005	0.00196	0.01	No	13	84.62	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-11	0.005	0.00171	0.01	No	13	23.08	No	0.01	NP (normality)
<b>Arsenic (mg/L)</b>	<b>MW-12</b>	<b>0.04804</b>	<b>0.03843</b>	<b>0.01</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>x^3</b>	<b>0.01</b>	<b>Param.</b>
Barium (mg/L)	MW-7	0.01361	0.01178	2	No	13	0	No	0.01	Param.
Barium (mg/L)	MW-8	0.01379	0.01215	2	No	13	0	No	0.01	Param.
Barium (mg/L)	MW-10	0.02085	0.01875	2	No	13	0	No	0.01	Param.
Barium (mg/L)	MW-11	0.01384	0.01181	2	No	13	0	No	0.01	Param.
Barium (mg/L)	MW-12	0.0143	0.0108	2	No	13	0	No	0.01	NP (normality)
Beryllium (mg/L)	MW-7	0.003	0.003	0.004	No	13	100	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-8	0.003	0.003	0.004	No	13	100	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-10	0.00405	0.001527	0.004	No	13	38.46	No	0.01	Param.
Beryllium (mg/L)	MW-11	0.003	0.003	0.004	No	13	100	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-12	0.003	0.003	0.004	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-7	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-8	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-10	0.001	0.000452	0.005	No	13	92.31	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-11	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-12	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	MW-7	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	MW-8	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	MW-10	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	MW-11	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	MW-12	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	MW-7	0.005079	0.003226	1.07	No	13	30.77	No	0.01	Param.
Cobalt (mg/L)	MW-8	0.00643	0.00441	1.07	No	13	0	No	0.01	NP (normality)
Cobalt (mg/L)	MW-10	0.0211	0.007639	1.07	No	13	0	x^(1/3)	0.01	Param.
Cobalt (mg/L)	MW-11	0.005	0.005	1.07	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	MW-12	0.05181	0.04007	1.07	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-7	0.557	0.2634	5	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-8	0.8125	0.1662	5	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-10	0.6688	0.257	5	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-11	1.122	0.3838	5	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-12	0.959	0.4189	5	No	14	0	No	0.01	Param.
Fluoride (mg/L)	MW-7	0.1942	0.1765	4	No	14	0	No	0.01	Param.
Fluoride (mg/L)	MW-8	0.2202	0.2049	4	No	14	0	x^2	0.01	Param.
Fluoride (mg/L)	MW-10	0.2325	0.1187	4	No	14	0	No	0.01	Param.
Fluoride (mg/L)	MW-11	0.1112	0.07492	4	No	14	7.143	No	0.01	Param.
Fluoride (mg/L)	MW-12	0.1614	0.08986	4	No	14	0	No	0.01	Param.
Lead (mg/L)	MW-7	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lead (mg/L)	MW-8	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lead (mg/L)	MW-10	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lead (mg/L)	MW-11	0.005	0.00145	0.015	No	13	92.31	No	0.01	NP (NDs)
Lead (mg/L)	MW-12	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lithium (mg/L)	MW-7	0.163	0.12	0.419	No	13	0	No	0.01	NP (normality)
Lithium (mg/L)	MW-8	0.1881	0.1727	0.419	No	13	0	No	0.01	Param.
Lithium (mg/L)	MW-10	0.3	0.194	0.419	No	13	0	No	0.01	NP (normality)
Lithium (mg/L)	MW-11	0.256	0.2144	0.419	No	13	0	No	0.01	Param.
Lithium (mg/L)	MW-12	0.118	0.0736	0.419	No	13	0	No	0.01	NP (normality)
Mercury (mg/L)	MW-7	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	MW-8	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	MW-10	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	MW-11	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	MW-12	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-7	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-8	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-10	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-11	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MW-12	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	MW-7	0.01	0.00445	0.05	No	13	92.31	No	0.01	NP (NDs)
Selenium (mg/L)	MW-8	0.01	0.01	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	MW-10	0.01	0.00289	0.05	No	13	84.62	No	0.01	NP (NDs)

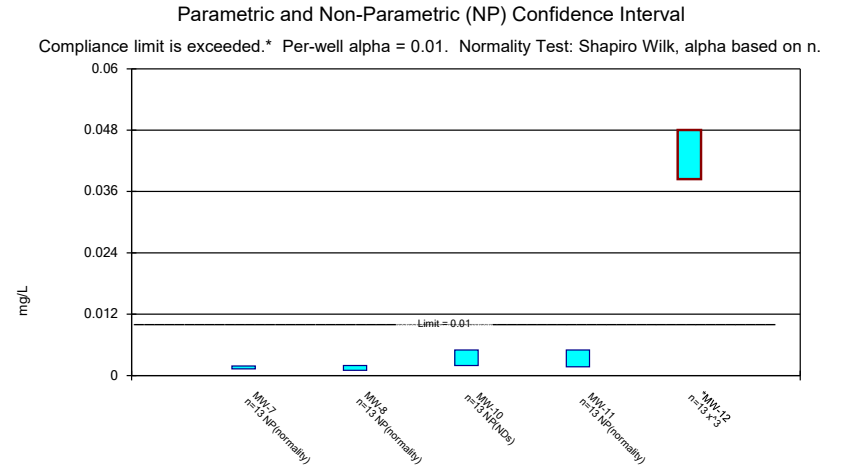
# Confidence Intervals - All Results

Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR Printed 1/21/2020, 9:24 AM

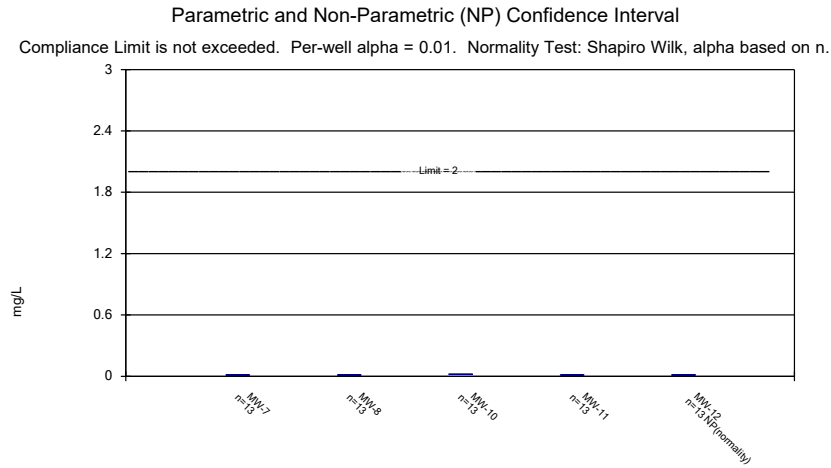
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Selenium (mg/L)	MW-11	0.01	0.01	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	MW-12	0.01	0.01	0.05	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-7	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-8	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-10	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-11	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	MW-12	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)



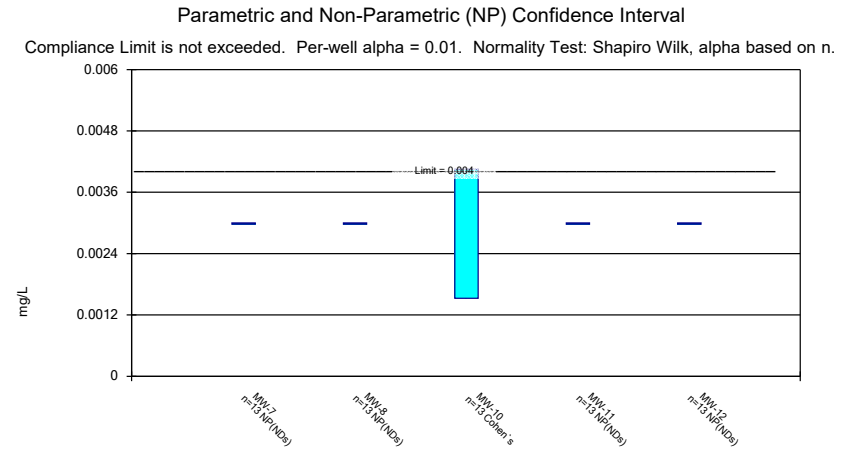
Constituent: Antimony Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



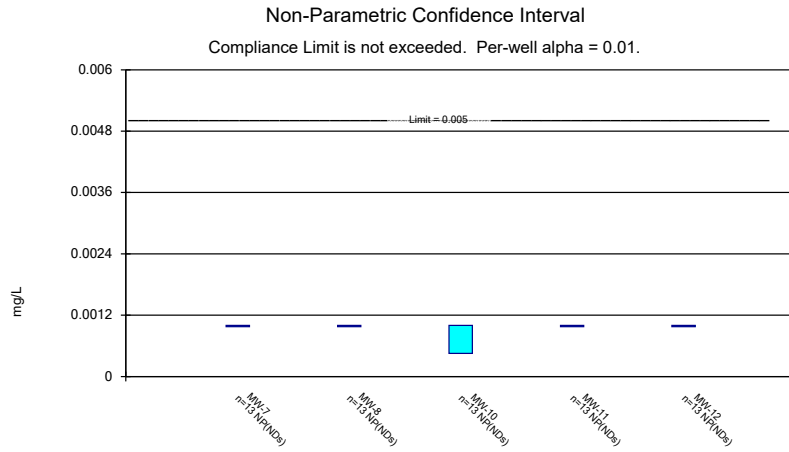
Constituent: Arsenic Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



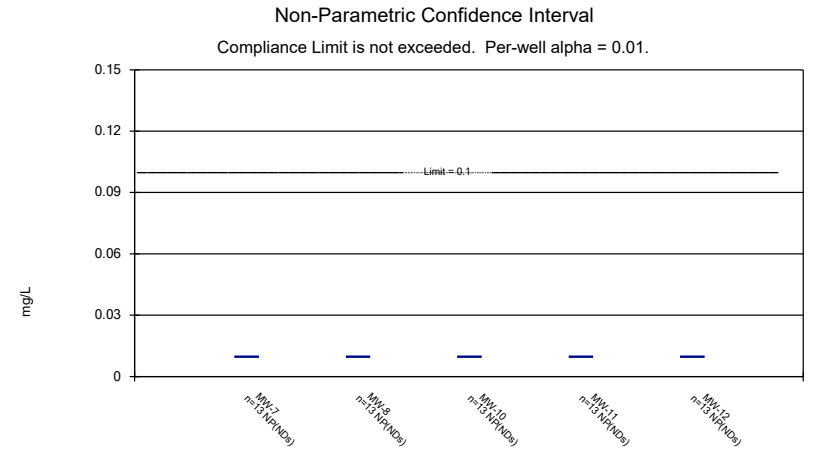
Constituent: Barium Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



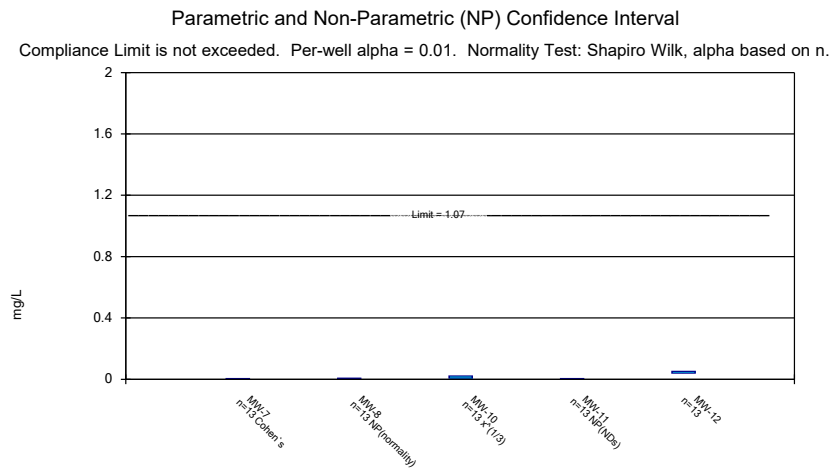
Constituent: Beryllium Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



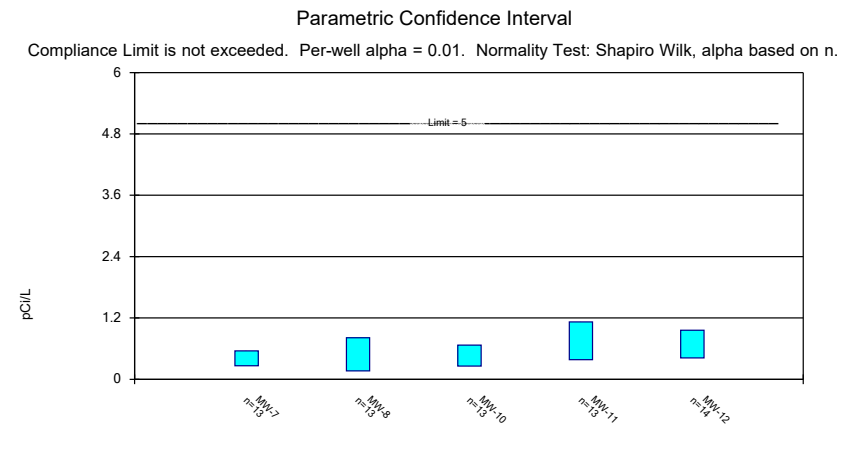
Constituent: Cadmium Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Chromium Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



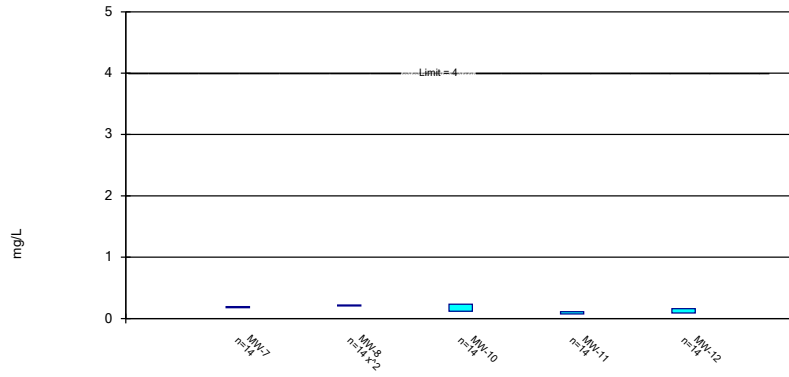
Constituent: Cobalt Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Combined Radium 226 + 228 Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Parametric Confidence Interval

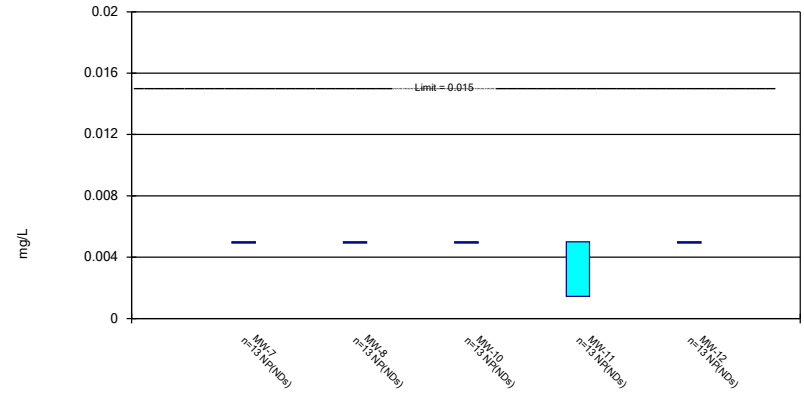
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Non-Parametric Confidence Interval

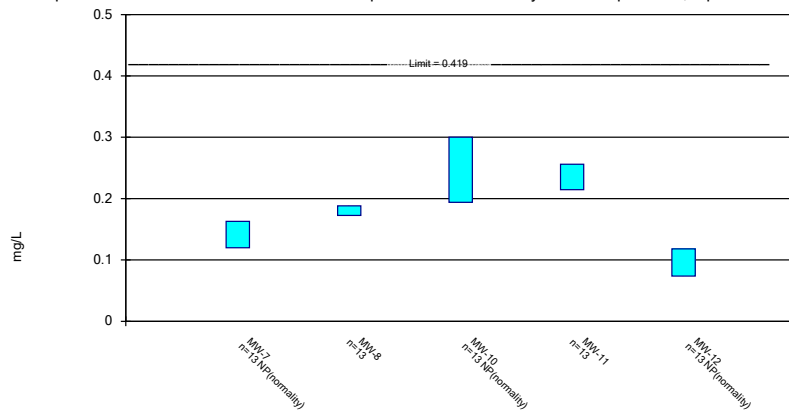
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Parametric and Non-Parametric (NP) Confidence Interval

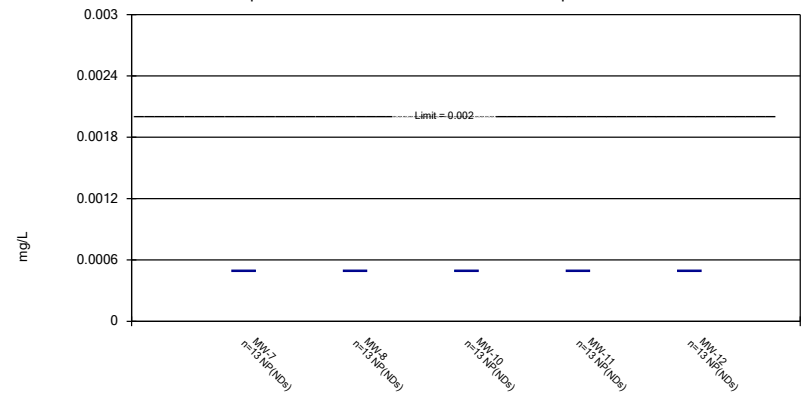
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



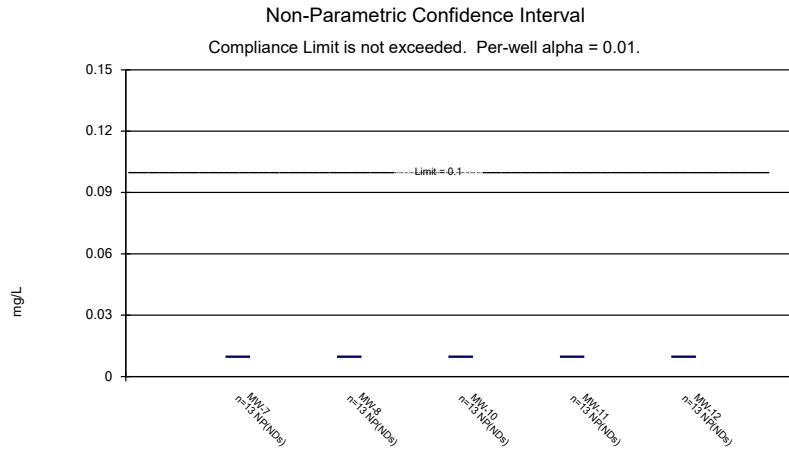
Constituent: Lithium Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Non-Parametric Confidence Interval

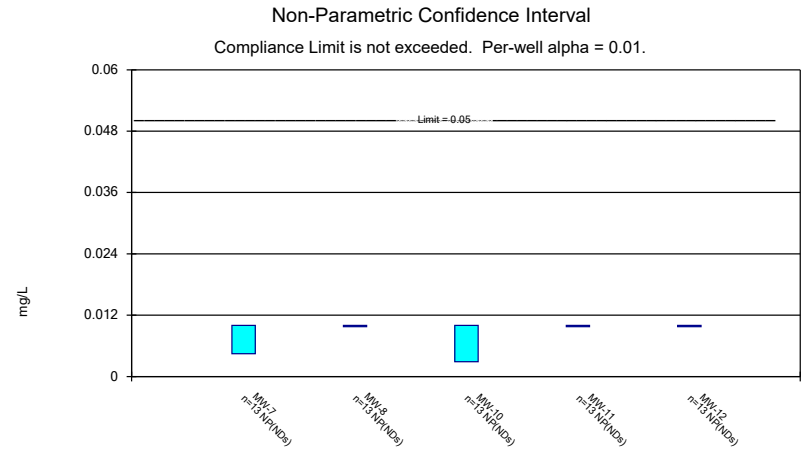
Compliance Limit is not exceeded. Per-well alpha = 0.01.



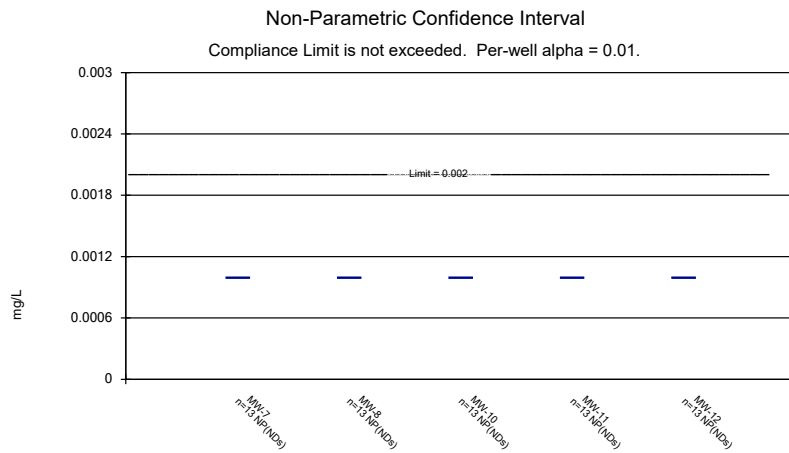
Constituent: Mercury Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
 Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Molybdenum Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



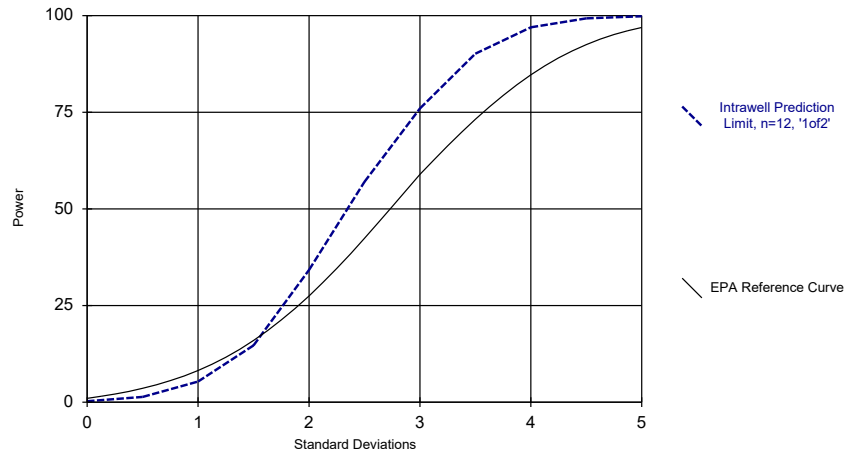
Constituent: Selenium Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



Constituent: Thallium Analysis Run 1/21/2020 9:08 AM View: Confidence Intervals  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR



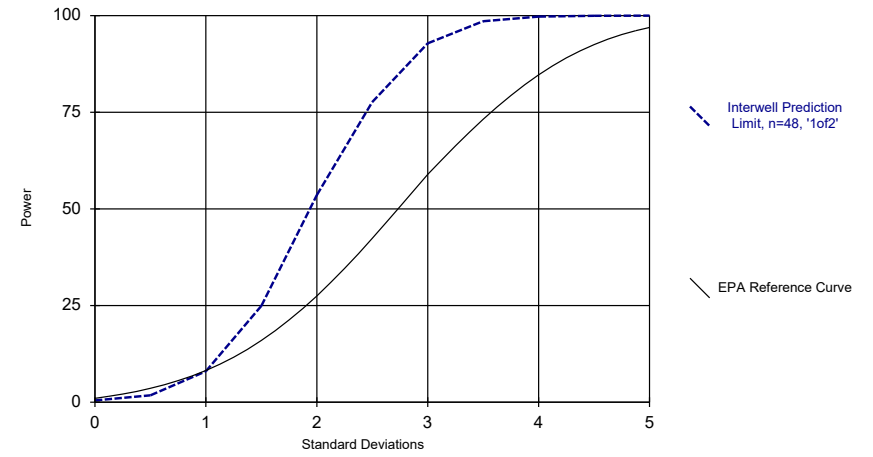
### Power Curve



Kappa = 2.322, based on 5 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/30/2020 10:34 AM View: Power Curves  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR

### Power Curve



Kappa = 1.868, based on 5 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/30/2020 10:35 AM View: Power Curves  
Plant William C Gorgas Client: Southern Company Data: Gorgas BALF CCR