

# **2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT**

**ALABAMA POWER COMPANY  
PLANT GORGAS  
CCR LANDFILL**

**January 31, 2022**

Prepared for

Alabama Power Company  
Birmingham, Alabama

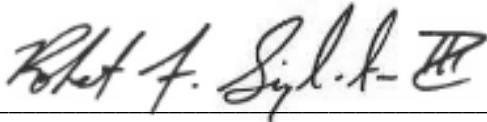
By

Southern Company Services  
Earth Science and Environmental Engineering



**CERTIFICATION STATEMENT**

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



1/31/2022

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1/31/2022

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

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

The CCR unit began the monitoring period in assessment monitoring pursuant to § 257.95 and ADEM Admin. Code r. 335-13-15-.06(6). Statistically significant increases (SSIs) of Appendix III constituents over background were identified in the results of the first detection monitoring event and assessment monitoring was initiated in January 2018. Statistically significant levels (SSLs) of the Appendix IV constituent lithium were identified in one well above groundwater protection standards (GWPS) while in assessment monitoring. Following completion of statistical analysis of Appendix IV data from subsequent assessment events, no SSLs have been observed. Consequently, an Alternate Source Demonstration (ASD) was submitted to ADEM for lithium SSLs above the GWPS in January of 2019.

APC completed an Assessment of Corrective Measures (ACM) report submitted to ADEM in June 2019 to address the occurrence of constituents in groundwater at SSLs at the Plant Gorgas Ash Pond and Gypsum Pond. In February 2020, Alabama Power revised the ACM to include the CCR Landfill. However, it should be noted that SSLs at the CCR Landfill have not been observed since 2018.

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

- Statistical evaluations of the February and July 2021 assessment monitoring data did not identify Statistically Significant Levels (SSLs) of Appendix IV constituents above the GWPS. In accordance with § 257.95(d) and ADEM Admin. Code r. 335-13-15-.06(6)(d), APC will continue assessment monitoring.
- Submitted the Semi-Annual Remedy Selection and Design Progress Report in June 2021, which included the CCR Landfill.
- Submitted *2021 Semi-Annual Groundwater Monitoring and Corrective Action Report* on July 31, 2021.
- Submitted the *Groundwater Remedy Selection Report* in December 2021, which included the CCR Landfill.

The CCR Landfill concluded the monitoring period in assessment monitoring. The following future actions will be taken or are recommended for the site:

- Develop the Corrective Action Groundwater Monitoring Program and submit the Groundwater Remedy Monitoring Plan in March 2022, which will include the CCR Landfill.
- Conduct the first semi-annual assessment monitoring event in 2022 and submit the semi-annual groundwater monitoring and corrective action report summarizing the findings to ADEM by July 31, 2022.

**Executive Summary Table.  
Monitoring Period Summary  
Plant Gorgas - CCR Landfill**

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

**Statistical Analysis Results \***

**Appendix III SSIs**

| Parameter | Wells                  |
|-----------|------------------------|
| Boron     | NA                     |
| Calcium   | NA                     |
| Chloride  | MW-5, MW-6, MW-7, MW-8 |
| Fluoride  | MW-7, MW-8             |
| pH        | MW-5, MW-7, MW-8       |
| Sulfate   | NA                     |
| TDS       | NA                     |

**Appendix IV SSLs**

No Significant Results

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

**Assessment of Corrective Measures & Groundwater Remedy**

**Assessment of Corrective Measures**

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

**Groundwater Remedy**

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

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## ABBREVIATIONS

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

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

## **1.0 INTRODUCTION**

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

On March 15, 2021, in an effort to streamline reporting cycles and provide a single set of comprehensive semi-annual reports to ADEM, APC requested approval to re-locate the discussion of delineation results routinely provided in Semi-Annual Progress Reports to Semi-Annual Groundwater Monitoring and Corrective Action Reports. The Semi-Annual Progress Reports have historically been provided to the Department in March and September and covers content described in Part E of AO No. 18-096-GW. ADEM approved this approach and revised timeline for submittals on March 16, 2021. Semi-Annual and Annual Groundwater Monitoring and Corrective Action Reports will now include an update on groundwater delineation activities completed since the submittal of the Facility Plan for Groundwater Investigation (November 13, 2018) and will continue until released in writing by ADEM.

## **2.0 MONITORING PROGRAM STATUS**

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 were identified at the Plant Gorgas CCR Landfill during the first and second semi-annual sampling events conducted in 2021, but no SSLs of Appendix IV constituents were observed over the GWPS.

Following completion of statistical analysis of Appendix IV data from the first assessment event in May 2018, an SSL above the groundwater protection standard was reported for lithium in the sample from well MW-6. Lithium concentrations in well MW-6 have been below the GWPS since the first assessment event in May 2018. An ASD for the SSL identified was submitted in January 2019 to ADEM as part of the 2018 Annual Groundwater Monitoring and Corrective Action Report and is pending ADEM review. The Plant Gorgas ACM prepared under § 257.96, ADEM Admin. Code r. 335-13-15-.06(7), and AO No. 18-096-GW was amended to include the CCR Landfill in February 2020. APC will continue semi-annual assessment monitoring at the CCR Landfill as required.

### **3.0 SITE LOCATION AND DESCRIPTION**

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

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

#### **3.1 PHYSICAL SETTING**

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

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

#### **3.2 SITE GEOLOGY AND HYDROGEOLOGY**

Plant Gorgas lies in the Warrior Basin physiographic region (Sapp and Emplainscourt, 1975), a late Paleozoic basin formed as a result of flexure and sediment loading associated with Appalachian and Ouachita orogenies. The bedrock geology is dominated by clastic sedimentary rocks of the Lower Pottsville

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

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

Strip mining was conducted over a large portion of the area down to the American Seam. As a result, the overburden around the CCR Landfill is dominated by backfilled mine overburden (mine spoils) and is characterized by weathered shale and sandstone boulders with lenses of fine sediments and small amounts of coal fragments and coarse sediments. Geologic logs generated during various on-site investigations indicate that the depth to rock varies significantly, ranging from as little as 5 feet (un-mined areas) to as much as 155 feet below ground surface (BGS). Beneath the CCR Landfill, 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 composed primarily of Pennsylvanian-aged sandstones, shales, conglomerates, and coal. Groundwater flow primarily occurs through coal seams or rock fabric discontinuities such as bedding planes and fractures. Groundwater in the Pottsville aquifer system is commonly regarded as confined due to large permeability contrasts within the aquifer (Stricklin, 1989). Recharge to the Pottsville aquifer system is largely through infiltration of precipitation and to a lesser extent, downward seepage of river water at hydraulically favored locations. Recharge is accommodated largely by fracture enhanced permeability. Major recharge zones to the Pottsville aquifer system are related to major geologic structures such as large fault zones or along systematic fold axes (Pashin, 2007). Although the Pottsville aquifer system is the primary aquifer in Walker County, groundwater use is relatively limited. According to O’Rear et al., 1972, groundwater use accounted for approximately 15% of total water use in Walker County in 1966. By 2005, groundwater use had declined to less than 1% of total water use in Walker County, or 1.14 million gallons per day (mgd) of groundwater out of a total water use of 969.5 mgd (USGS, 2005).

### **3.2.1 Pottsville Formation – Rock Chemistry**

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

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

- Boron – 6.3 to 83.6 ppm (average of 35 ppm).
- Cobalt – 1.6 to 19.8 ppm (average of 8 ppm).
- Molybdenum – 0.8 to 22.2 ppm (average of 5 ppm).
- Lithium – 1.4 to 128 ppm (average of 28 ppm).

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

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

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

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

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

### **3.2.2 Uppermost Aquifer**

The principal aquifer system from a local and regional perspective is the Pottsville aquifer. The Pottsville aquifer is also the uppermost aquifer beneath the Site. In the Pottsville, two types of secondary porosity



were observed to yield groundwater: (1) fractured intervals and (2) bedding plane weaknesses associated with fissile, siderite-banded, iron-claystone sequences. Fractured intervals are sporadic across the Site and tend to occur with greater density in the upper 100 feet of rock. The upper portions of the Pottsville aquifer system beneath the proposed disposal facilities indicate unconfined to confined, fractured, and extremely anisotropic conditions. The Pottsville aquifer system functions as a series of confined to semi-confined water producing zones (aquifers) because of the large permeability contrasts within the strata (Stricklin, 1989). Depth to groundwater varies significantly across the Site and is wholly dependent on encountering a fractured interval or zone of fissile, iron-claystone.

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

### **3.2.3 Flow Interpretation**

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

### 3.3 GROUNDWATER MONITORING SYSTEM

Pursuant to § 257.91 and ADEM Admin. Code r. 335-13-15-.06(2), Plant Gorgas has installed a groundwater monitoring system to monitor groundwater within the uppermost aquifer. The certified groundwater monitoring system for the Plant Gorgas CCR Landfill is designed to monitor groundwater passing the waste boundary of the CCR unit within the uppermost aquifer. Wells were located to serve as upgradient or downgradient monitoring locations based on groundwater flow direction as determined by the potentiometric surface elevation contour maps. All groundwater monitoring wells were designed and constructed using “Design and Installation of Groundwater Monitoring Wells in Aquifers,” ASTM Subcommittee D18.21, as a guideline.

#### 3.3.1 Monitoring Wells

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

Monitoring well locations for the Gorgas CCR Landfill are presented on **Figure 5, Monitoring Well Location Map. Table 1, Compliance Monitoring Well Network Details**, summarizes the monitoring well construction details and design purpose for the Plant Gorgas CCR Landfill.

##### 3.3.1.1 Upgradient Wells

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

Monitoring well locations MW-1 through MW-4 serve as upgradient locations for the CCR Landfill. 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. Upgradient wells are located north of the CCR Landfill as determined by water level monitoring and potentiometric surface maps constructed for the site.

### **3.3.1.2 Downgradient Wells**

Monitoring well locations MW-5 through MW-8 serve as downgradient locations for the Gorgas CCR Landfill. Downgradient locations are located lateral to and south of the CCR Landfill as determined by water level monitoring and potentiometric surface maps.

### **3.3.1.3 Piezometers**

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

### **3.3.1.4 Monitoring Well Replacement and Abandonment**

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

## **3.4 GROUNDWATER MONITORING HISTORY**

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

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

### **3.4.1 Available Monitoring Data**

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

### **3.4.2 Historical Groundwater Flow**

Historical groundwater elevations and potentiometric surface maps show that groundwater flow patterns are consistent across monitoring events and as described in **Section 3.2.3**. Tables summarizing groundwater

elevations from all groundwater monitoring events are included in **Appendix B, Historical Groundwater Elevations Summary**.

### **3.4.3 Monitoring Variance**

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

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

## **3.5 GROUNDWATER SAMPLING AND ANALYSIS**

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

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

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

### **3.5.1 Groundwater Sample Collection**

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

casing. Groundwater elevations were calculated by subtracting the depth to groundwater from surveyed top-of-casing (TOC) elevations.

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

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

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

### **3.5.2 Sample Preservation and Handling**

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

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

### **3.5.3 Chain of Custody**

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

### 3.5.4 Laboratory Analysis

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

### 3.5.5 Monitoring Period Sampling Events

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

The first semi-annual assessment monitoring event took place between February 22, 2021 and February 23, 2021. A groundwater monitoring report summarizing data and activities from the first semi-annual sampling event was submitted to the Department in July 2021. The second semi-annual assessment monitoring event took place between July 12, 2021 and July 21, 2021.

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

#### **4.0 GROUNDWATER ELEVATIONS AND FLOW**

During the first semi-annual sampling event, groundwater elevations ranged from 311.83 to 419.94 feet NAVD88 (feet above reference 1988 North American Vertical Datum) in CCR Landfill monitoring wells. **Figure 6a, Potentiometric Surface Contour Map (February 22, 2021)** depicts groundwater elevations and inferred groundwater flow direction.

During the second semi-annual sampling event, groundwater elevations ranging from 314.66 to 421.54 feet NAVD88 (feet above reference 1988 North American Vertical Datum). **Figure 6b, Potentiometric Surface Contour Map (July 12, 2021)** depicts groundwater elevations and inferred groundwater flow direction.

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

#### **4.1 GROUNDWATER FLOW VELOCITY CALCULATIONS**

Because the geology at the CCR Landfill 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/day. An estimated effective porosity of 0.15 is used in the flow rate calculations. The hydraulic gradient was calculated between well pairs shown in **Appendix D, Horizontal Groundwater Flow Velocity Calculations.**

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

Using this equation, horizontal groundwater flow velocity is calculated for the site. **Appendix D** presents the horizontal flow velocity calculated using groundwater elevation data from the sampling events in 2021.



## 5.0 EVALUATION OF GROUNDWATER QUALITY DATA

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

### 5.1 DATA VALIDATION – QUALITY ASSURANCE/QUALITY CONTROL

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

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

Where:

RPD = Relative Percent Difference (%)

Conc1 = Higher concentration of the sample or field duplicate

Conc2 = Lower concentration of the sample or field duplicate

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

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

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

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

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

## 5.2 STATISTICAL METHODOLOGY AND TESTS

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

### 5.2.1 Appendix III Evaluation

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

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

The following adjustments were made:

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

### **5.2.2 Appendix IV Evaluation**

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

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

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

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

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

### 5.3 STATISTICAL EXCEEDANCES

Analytical data from the first and second semi-annual monitoring events in 2021 were statistically analyzed in accordance with the Professional Engineer (PE)-certified Statistical Analysis Plan (October 2017) and revised in September 2019 data screening evaluation performed by Groundwater Stats Consulting. Appendix III statistical analysis was performed to determine if constituents had returned to background levels. Appendix IV assessment monitoring parameters were evaluated to determine if concentrations statistically exceeded the established groundwater protection standard.

#### 5.3.1 Appendix III Constituents

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

#### 5.3.2 Appendix IV Constituents

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

**Appendix E** did not identify any Appendix IV SSLs during the first or second semi-annual monitoring events for 2021.

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

## **6.0 ALTERNATE SOURCE DEMONSTRATION**

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

As discussed in the ASD report, the apparent SSL is the result of the presence of mine spoils and natural groundwater chemistry variability not accounted for by Site statistics. Analytical data from the first semi-annual monitoring event in January 2018 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. A lithium statistical limit of 0.419 mg/L was calculated using the pool of all available upgradient well data in the updated September 2019 data screening evaluation. Consequently, there are no historical exceedances of lithium associated with the CCR Landfill.

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

## **7.0 GROUNDWATER DELINEATION**

As required by Part E of the Order (AO No. 18-096 GW) and correspondence from ADEM (March 2021), this report provides an update on groundwater delineation activities completed since the submittal of the Facility Plan for Groundwater Investigation (November 13, 2018). The primary purpose of this plan was to identify the horizontal and vertical extent of groundwater impacts defined by EPA Appendix IV groundwater protection standards.

As described in the Facility Plan for Groundwater Investigation for the Plant Gorgas CCR Landfill, source characterization and groundwater delineation efforts are not required pursuant to applicable rules because GWPS are not exceeded at the CCR Landfill. SSLs of the Appendix IV constituent lithium were identified in one well while in assessment monitoring. Consequently, an ASD was submitted to ADEM for lithium SSLs above the GWPS in January 2019. However, since that submittal, SSLs have not been observed at the Site. Pending ADEM review and approval of the ASD, APC will continue assessment monitoring at the CCR landfill.

APC completed an ACM report submitted to ADEM in June 2019 to address the occurrence of constituents in groundwater at SSLs at the Plant Gorgas Ash Pond and Gypsum Pond. In February 2020, Alabama Power revised the ACM to include the CCR Landfill. As described above, there have not been any SSLs at the Site since 2018, and therefore, there is no driver to implement or apply groundwater corrective action remedies.

## 8.0 SUMMARY AND CONCLUSIONS

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

The certified compliance monitoring well network is sampled on a semi-annual basis and groundwater samples analyzed for all Appendix III and IV parameters. Statistical evaluations of the February and July 2021 semi-annual assessment monitoring data identified no SSLs of Appendix IV constituents above the GWPS

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:

- Develop the Corrective Action Groundwater Monitoring Program and submit the Groundwater Remedy Monitoring Plan in March 2022, which will include the CCR Landfill.
- Conduct the first semi-annual assessment monitoring event in the spring of 2022 and submit the semi-annual groundwater monitoring and corrective action report summarizing the findings to ADEM by July 31, 2022.

Historically, an ASD was prepared to address the lithium GWPS exceedances at compliance well MW-6 and submitted to ADEM in January 2019. In addition, since the submittal of this ASD, no SSL has been observed at the Site. However, ADEM has not yet approved the ASD, so APC has amended the current Plant Gorgas ACM to include the CCR Landfill.

The pending ASD review decision by the Department has direct implications on future actions for the site. If approved, the site will return to assessment monitoring and corrective actions will not need to be further evaluated.



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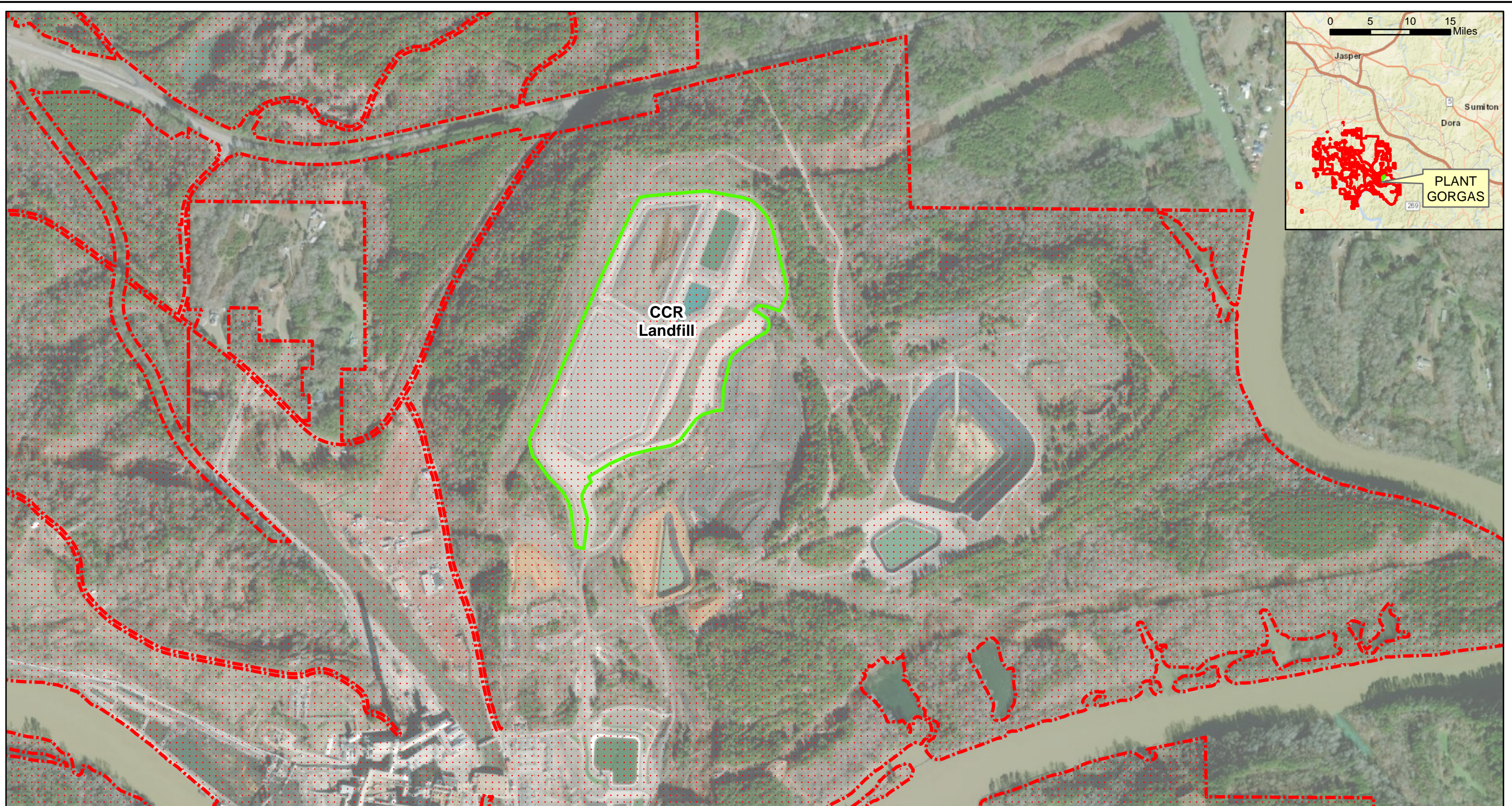
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# Figures

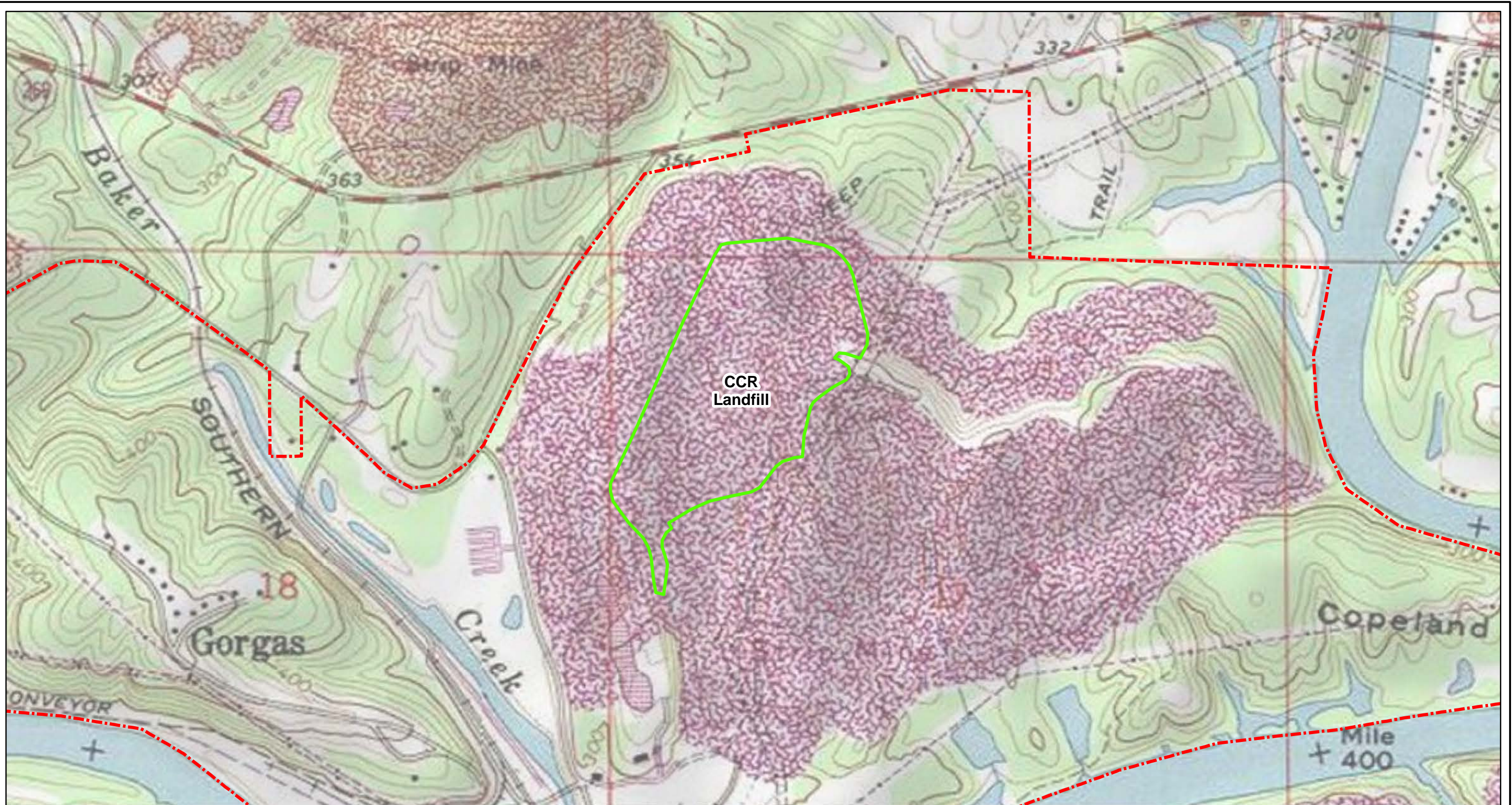


- Legend**
-  CCR Landfill Boundary (Approximate)
  -  Property Boundary (Approximate)



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| DRAWN BY   | KWR       |
| CHECKED BY | GBD       |

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|---|-----------------|
| DRAWING TITLE   |                 |
| SITE LOCATION MAP<br>PLANT GORGAS CCR LANDFILL  |                 |
| FIGURE NO   | <b>FIGURE 1</b> |
|  |                 |



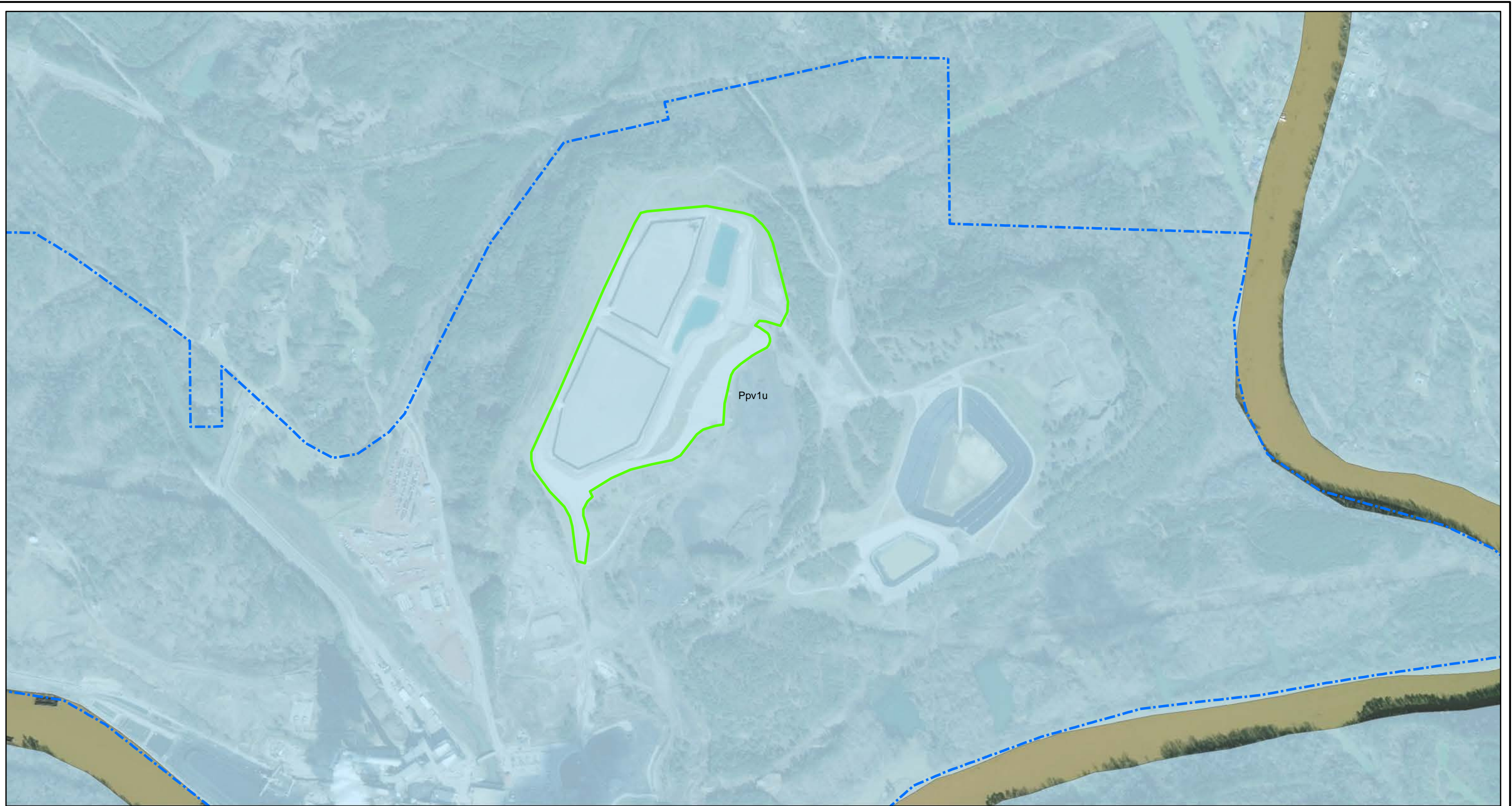
**Legend**




- Property Boundary (Approximate)
- CCR Landfill Boundary (Approximate)



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| DRAWN BY   | KAR        |
| CHECKED BY | GBD        |

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| DRAWING TITLE   |                 |
| <b>SITE TOPOGRAPHIC MAP<br/>PLANT GORGAS CCR LANDFILL</b> |                 |
| FIGURE NO   | <b>FIGURE 2</b> |
| Southern Company  |                 |



- Legend**
-  Property Boundary (Approximate)
  -  CCR Landfill Boundary (Approximate)
- Geologic Units**
-  Pottsville Formation (upper part), Appalachian Plateaus (Ppv1u)

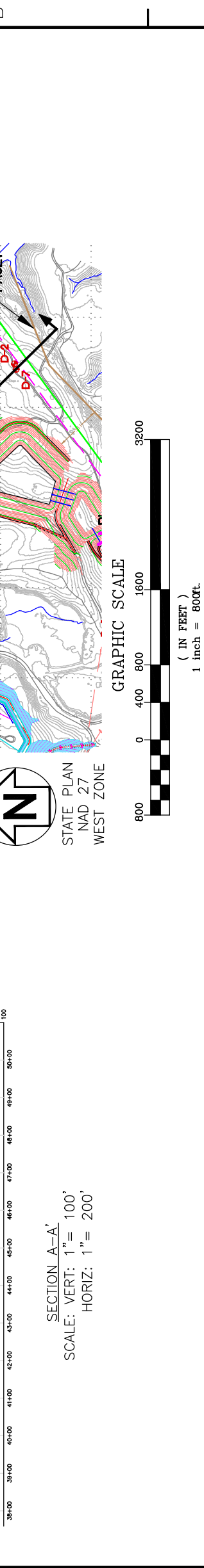
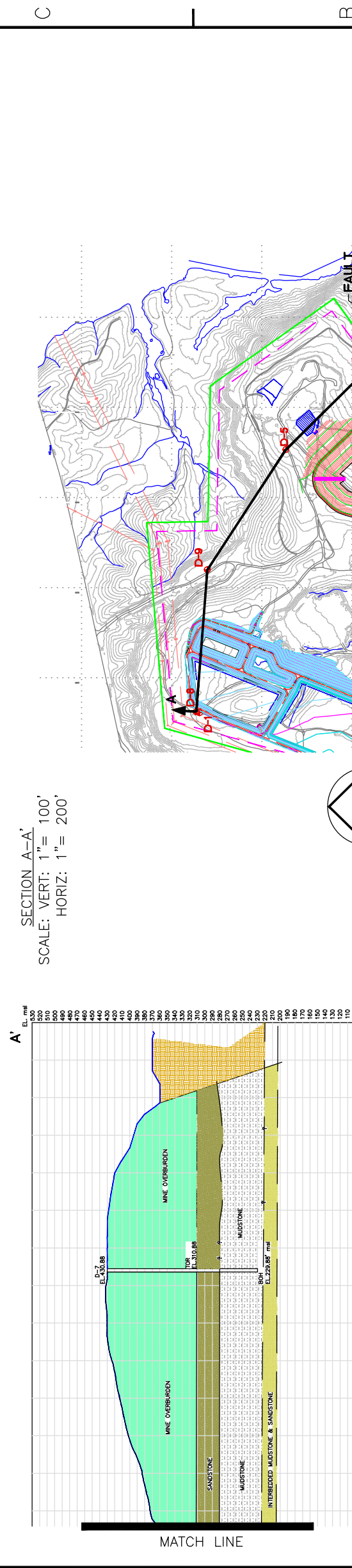
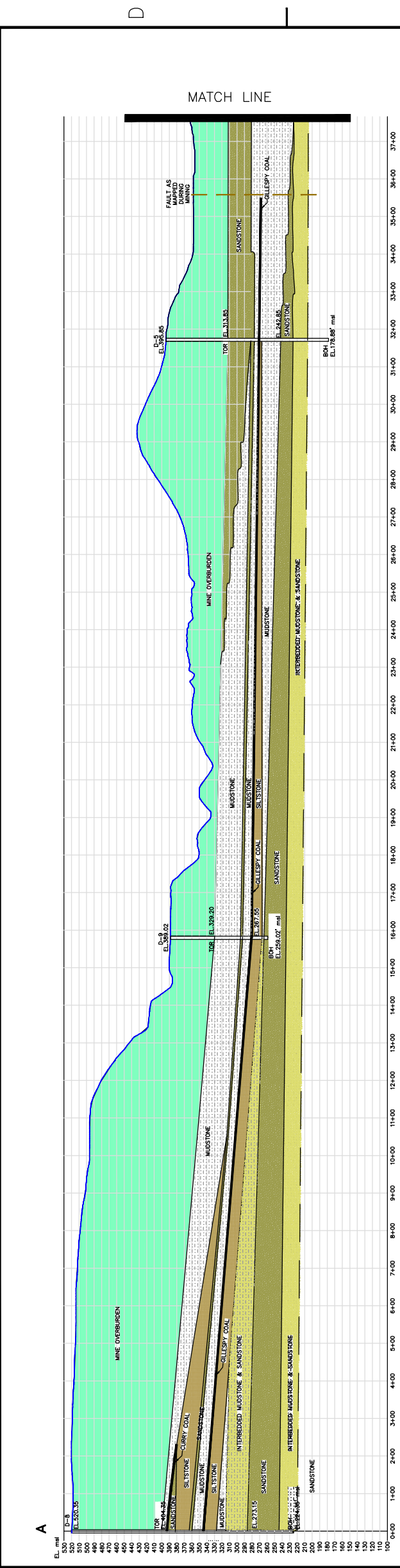


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| FIGURE NO                                      | <b>FIGURE 3</b> |



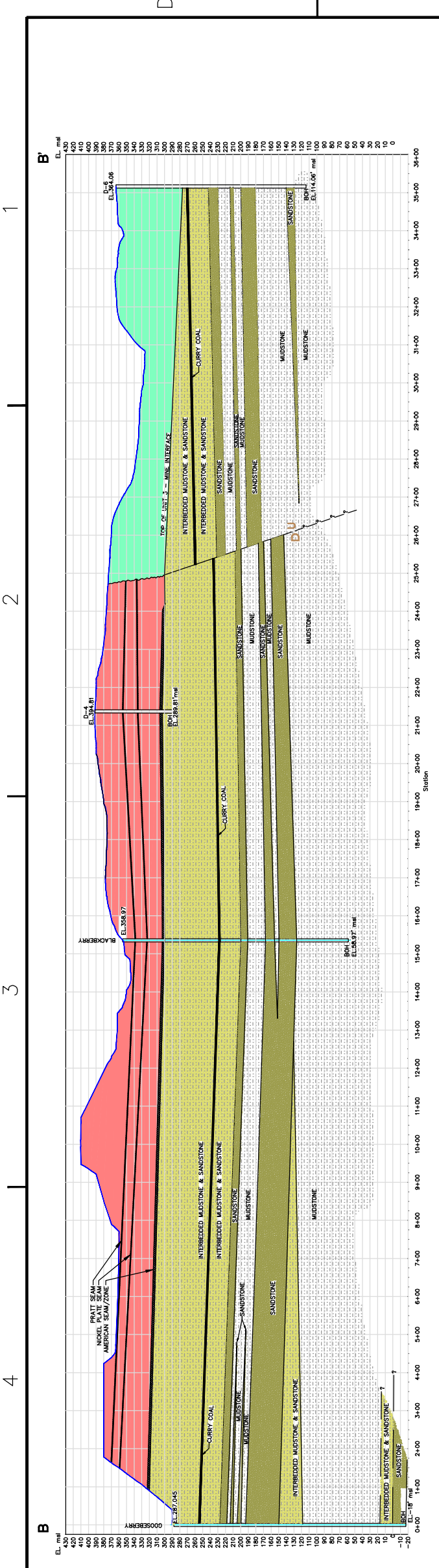
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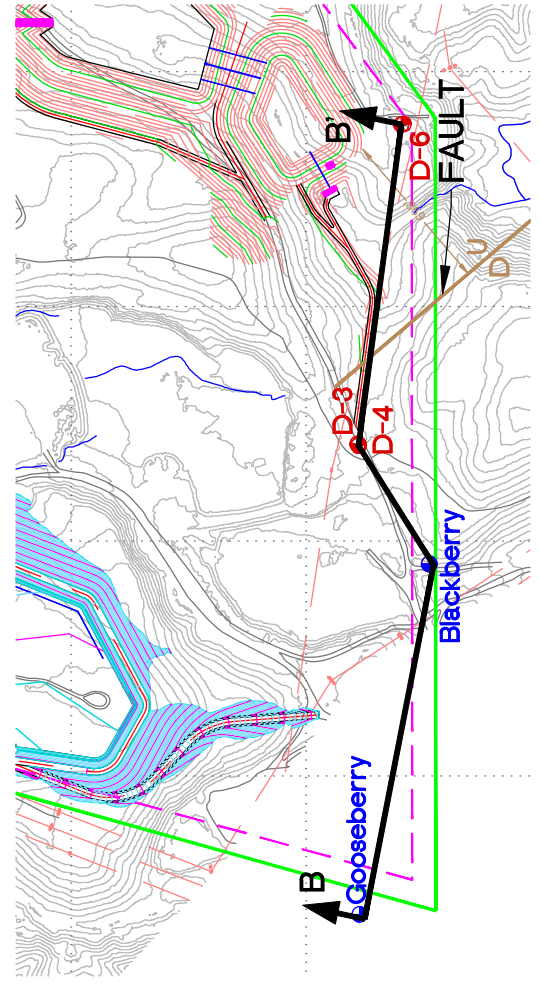
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|--|--|------------|-------------------|------|----|-------|------------|------------|----------|-----------|----------|----------|-------|------------|------------|----------|-----------|----------|--|
| REVISION   |  | DATE       | REVISION          | DATE | 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 |  |
| 0  |  | 07/07/2017 | ISSUED FOR REPORT |      |    |       |            |            |          |           |          |          |       |            |            |          |           |          |  |
| Southern Company Services<br>Engineering and Construction Services<br>FOR<br>Alabama Power Company<br><b>PLANT GORGAS</b><br>UNIT 8, UNIT 9 AND UNIT 10<br>CCB STORAGE FACILITY<br>GEOLOGIC CROSS<br>SECTION A-A |  |            |                   |      |    |       |            |            |          |           |          |          |       |            |            |          |           |          |  |
| DRAWING NUMBER   |  |            |                   |      |    |       |            |            |          |           |          | SCALE    |       | SHEET      |            | REV      |           |          |  |
| AS SHOWN   |  |            |                   |      |    |       |            |            |          |           |          | XXX      |       | XXX        |            | XXX      |           |          |  |
| <b>FIGURE 4A</b>   |  |            |                   |      |    |       |            |            |          |           |          | 1        |       | FINAL      |            |          |           |          |  |
| ANSI C: 22x17  |  |            |                   |      |    |       |            |            |          |           |          | Acad2013 |       |            |            |          |           |          |  |

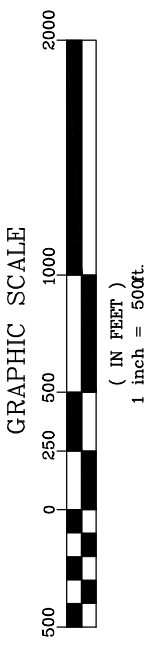




SECTION B-B'  
 SCALE: VERT: 1" = 100'  
 HORIZ: 1" = 200'



N  
 STATE PLAN  
 NAD 27  
 WEST ZONE






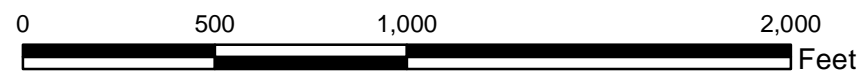
|   |       |   |            |                       |           |          |       |       |     |
|---|-------|---|------------|-----------------------|-----------|----------|-------|-------|-----|
| Southern Company Services, Inc. All Rights Reserved<br>This document contains proprietary, confidential, and/or trade secret information of Southern Company Services, Inc. and its subsidiaries. It is intended for use only by employees of, or authorized contractors of, the subsidiaries of the Southern Company. Unauthorized possession, use, distribution, copying, dissemination, or disclosure of any portion hereof is prohibited. |       | Southern Company Services<br>Engineering and Construction Services<br>FOR |            | Alabama Power Company |           |          |       |       |     |
| ISSUED FOR REPORT   |       | DATE 07/07/2017   |            | DRAWING NUMBER        |           |          |       |       |     |
| REVISION 0  |       | DATE 07/07/2017   |            | FIGURE 4B             |           |          |       |       |     |
| UNIT 8, UNIT 9 AND UNIT 10<br>CCB STORAGE FACILITY<br>GEOLOGIC CROSS<br>SECTION B-B'  |       | SCALE   |            | AS SHOWN              |           |          |       |       |     |
| BY  | CHK'D | CIVIL APPR  | ELECT APPR | I/C APPR              | MECH APPR | DISC MGR | SHEET | CONTD | REV |
| GBD   | GBD   | SCB   | XXX        | XXX                   | XXX       | XXX      | 1     | FINAL | O   |





**Legend**

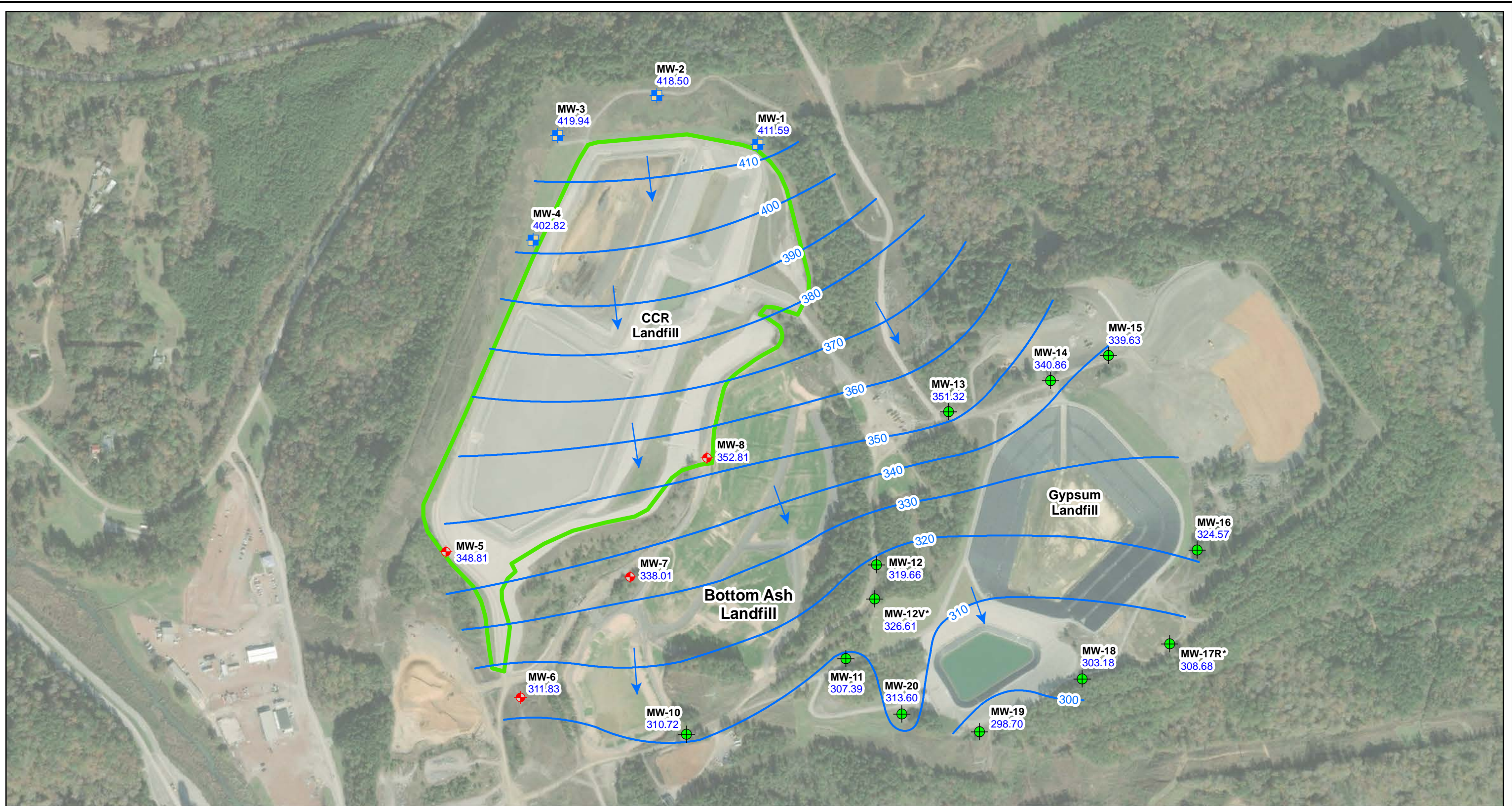
-  Downgradient Monitoring Well
-  Upgradient Monitoring Well
-  Gorgas CCR Landfill Boundary (Approximate)



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

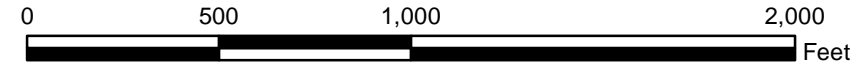
|   |                 |
|---|-----------------|
| DRAWING TITLE   |                 |
| MONITORING WELL LOCATION MAP<br>PLANT GORGAS CCR LANDFILL |                 |
| FIGURE NO   | <b>FIGURE 5</b> |





**Legend**

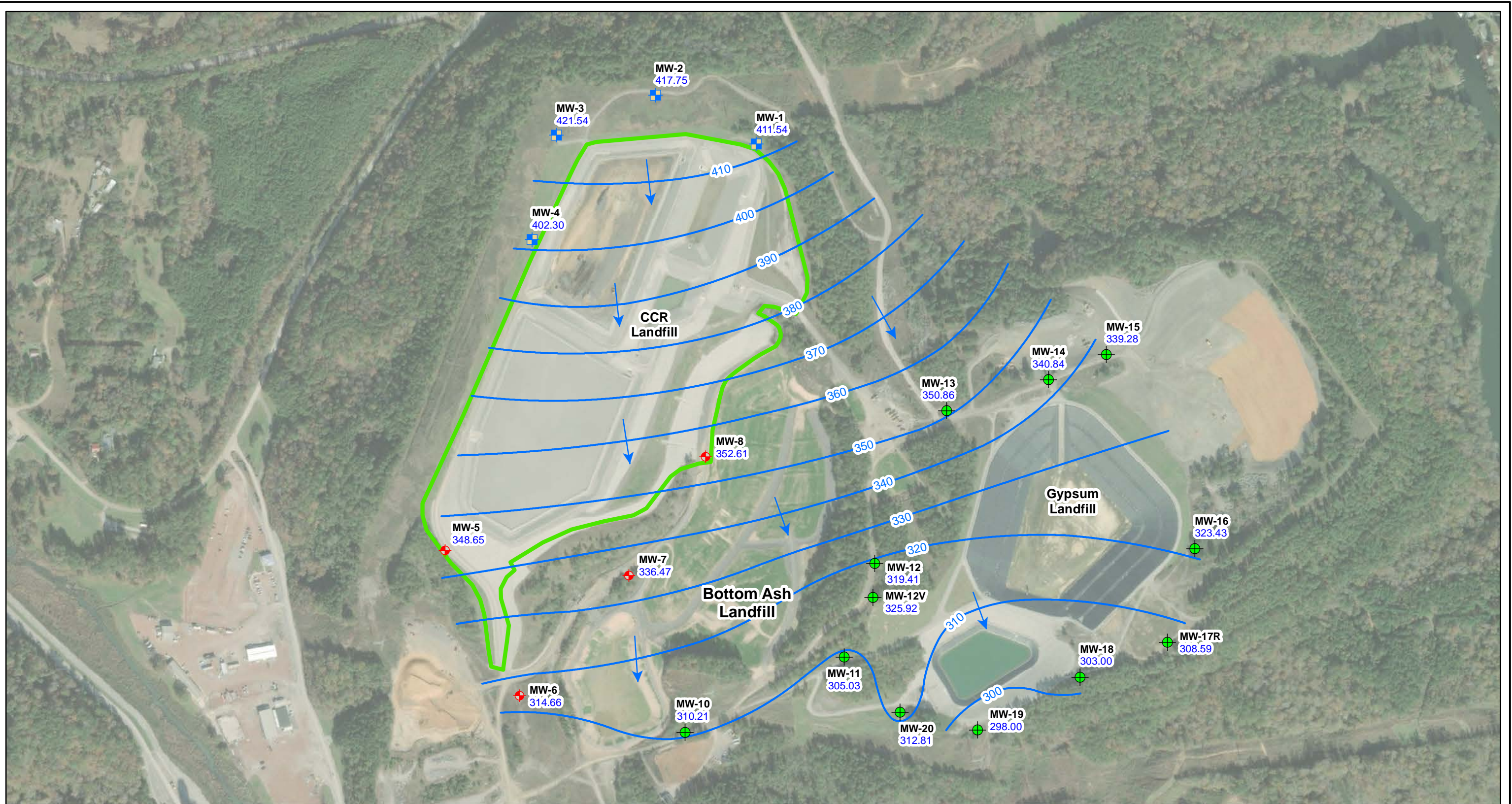
- ◆ Downgradient Monitoring Well
  - ◆ Upgradient Monitoring Well
  - ◆ Monitoring Well
  - Potentiometric Surface Contour (ft NAVD88)
  - Approximate Groundwater Flow Direction
  - CCR Landfill Boundary (Approximate)
- MW-1** Well ID  
411.59 Groundwater Elevation



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

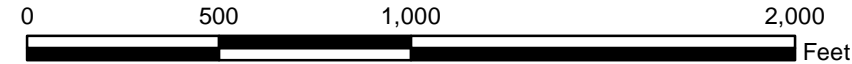
|            |           |
|------------|-----------|
| SCALE      | 1:6000    |
| DATE       | 12/1/2021 |
| DRAWN BY   | KAR       |
| CHECKED BY | GBD       |

|   |                  |
|---|------------------|
| DRAWING TITLE   |                  |
| <b>POTENTIOMETRIC SURFACE CONTOUR MAP</b><br><b>FEBRUARY 22, 2021</b><br><b>PLANT GORGAS CCR LANDFILL</b> |                  |
| FIGURE NO   | <b>FIGURE 6a</b> |
| Southern Company  |                  |



**Legend**

- ◆ Downgradient Monitoring Well
  - ◆ Upgradient Monitoring Well
  - ◆ Monitoring Well
  - Potentiometric Surface Contour (ft NAVD88)
  - Approximate Groundwater Flow Direction
  - CCR Landfill Boundary (Approximate)
- MW-1** Well ID  
411.54 Groundwater Elevation



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

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

|  |                  |
|--|------------------|
| DRAWING TITLE  |                  |
| <b>POTENTIOMETRIC SURFACE CONTOUR MAP</b><br>JULY 12, 2021<br><b>PLANT GORGAS CCR LANDFILL</b> |                  |
| FIGURE NO  | <b>FIGURE 6b</b> |
| Southern Company   |                  |

# Tables



**Table 1. - Compliance Monitoring Well Network Details  
Plant Gorgas CCR Landfill**

| Well ID             | Hydraulic Location | Geologic Unit                        | Latitude | Longitude | Ground Surface Elevation (ft NAVD) | Top Of Casing Elevation (ft NAVD) | Well Depth (ft BTOC) | Top Of Screen Elevation (ft NAVD) | Bottom Of Screen Elevation (ft NAVD) | Screen Length (ft) | Date Of Installation |
|---------------------|--------------------|--------------------------------------|----------|-----------|------------------------------------|-----------------------------------|----------------------|-----------------------------------|--------------------------------------|--------------------|----------------------|
| <b>WELL NETWORK</b> |                    |                                      |          |           |                                    |                                   |                      |                                   |                                      |                    |                      |
| MW-1                | Upgradient         | Mine Spoil - Pottsville Fm Interface | 33.65827 | -87.19083 | 499.19                             | 502.38                            | 104.5                | 405.10                            | 395.10                               | 10                 | 1/15/2014            |
| MW-2                | Upgradient         | Mine Spoil - Pottsville Fm Interface | 33.65899 | -87.19258 | 498.54                             | 502.17                            | 91.0                 | 417.90                            | 407.90                               | 10                 | 10/23/2014           |
| MW-3                | Upgradient         | Mine Spoil - Pottsville Fm Interface | 33.65841 | -87.1943  | 522.23                             | 525.90                            | 115.5                | 417.10                            | 407.10                               | 10                 | 10/23/2014           |
| MW-4                | Upgradient         | Mine Spoil - Pottsville Fm Interface | 33.65689 | -87.19473 | 516.67                             | 517.89                            | 126.7                | 400.40                            | 390.40                               | 10                 | 2/19/2012            |
| MW-5                | Downgradient       | Mine Spoil - Pottsville Fm Interface | 33.65824 | -87.19429 | 471.55                             | 474.55                            | 137.0                | 351.95                            | 341.95                               | 10                 | 10/28/2014           |
| MW-6                | Downgradient       | Mine Spoil - Pottsville Fm Interface | 33.65672 | -87.19472 | 409.99                             | 412.99                            | 129.0                | 294.39                            | 284.39                               | 10                 | 10/29/2014           |
| MW-7                | Downgradient       | Mine Spoil - Pottsville Fm Interface | 33.65221 | -87.19625 | 391.59                             | 394.59                            | 74.0                 | 330.99                            | 320.99                               | 10                 | 10/29/2014           |
| MW-8                | Downgradient       | Mine Spoil - Pottsville Fm Interface | 33.65009 | -87.19496 | 413.15                             | 416.10                            | 72.3                 | 354.25                            | 344.25                               | 10                 | 1/16/2014            |

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

## Table 2. Parameters And Reporting Limits

Plant Gorgas CCR Landfill  
02/22/2021 - 07/21/2021

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

Notes:

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



**Table 3. - Recent Groundwater Elevations Summary**

**Plant Gorgas CCR Landfill**

| Well Name   | Top of Casing Elevation | Groundwater Elevation<br>(ft. AMSL) |          |           |            |            |           |           |           |          |           |           |           |
|-------------|-------------------------|-------------------------------------|----------|-----------|------------|------------|-----------|-----------|-----------|----------|-----------|-----------|-----------|
|             |                         | 2/12/2018                           | 4/9/2018 | 5/21/2018 | 10/29/2018 | 11/19/2018 | 3/13/2019 | 5/13/2019 | 10/7/2019 | 4/6/2020 | 7/13/2020 | 2/22/2021 | 7/12/2021 |
| <b>MW-1</b> | 502.25                  | 410.89                              | 411.35   | 411.47    | 410.62     | 410.80     | 412.11    | 411.77    | 410.79    | 412.16   | 411.22    | 411.59    | 411.54    |
| <b>MW-2</b> | 502.12                  | 419.29                              | 417.32   | 417.33    | 416.30     | 417.67     | 417.70    | 417.64    | 416.63    | 417.81   | 416.93    | 418.50    | 417.75    |
| <b>MW-3</b> | 525.90                  | 418.49                              | 416.25   | 416.28    | 414.85     | 416.31     | 418.31    | 416.40    | 415.17    | 417.64   | 415.34    | 419.94    | 421.54    |
| <b>MW-4</b> | 518.63                  | 402.67                              | 402.22   | 402.24    | 400.18     | 402.08     | 402.68    | 402.43    | 400.33    | 402.59   | 401.42    | 402.82    | 402.30    |
| <b>MW-5</b> | 474.55                  | 348.61                              | 348.50   | 348.49    | 348.42     | 348.55     | 348.74    | 348.66    | 348.46    | 348.74   | 348.59    | 348.81    | 348.65    |
| <b>MW-6</b> | 412.99                  | 306.47                              | 311.90   | 314.14    | 304.84     | 306.89     | 323.91    | 316.49    | 304.21    | 319.32   | 309.56    | 311.83    | 314.66    |
| <b>MW-7</b> | 394.59                  | 336.82                              | 335.68   | 336.60    | 334.01     | 337.61     | 339.54    | 338.44    | 334.13    | 338.34   | 335.86    | 338.01    | 336.47    |
| <b>MW-8</b> | 416.10                  | 353.44                              | 353.50   | 353.55    | 353.08     | 353.37     | 353.47    | 353.32    | 352.22    | 353.52   | 353.04    | 352.81    | 352.61    |

Notes:

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



## Table 4a. Relative Percent Difference (RPD) Calculations

Plant Gorgas CCR Landfill

02/23/2021 - 07/20/2021

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





## Table 4a. Relative Percent Difference (RPD) Calculations

Plant Gorgas CCR Landfill

02/23/2021 - 07/20/2021

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

Notes:

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



## Table 4b. - Field QC: Blank Detections

Plant Gorgas CCR Landfill

02/22/2021 - 07/21/2021

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

Notes:

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



## Table 5. Summary of Background Levels and Groundwater Protection Standards

### Plant Gorgas CCR Landfill

| Appendix IV Analytes      |       |            |        |
|---------------------------|-------|------------|--------|
| Analyte                   | Units | Background | GWPS   |
| Antimony                  | mg/L  | 0.003      | 0.006  |
| Arsenic                   | mg/L  | 0.005      | 0.01   |
| Barium                    | mg/L  | 0.0165     | 2      |
| Beryllium                 | mg/L  | 0.0185     | 0.0185 |
| Cadmium                   | mg/L  | 0.0121     | 0.005  |
| Chromium                  | mg/L  | 0.01       | 0.1    |
| Cobalt                    | mg/L  | 0.386      | 1.07   |
| Fluoride                  | mg/L  | 0.6        | 4      |
| Lead                      | mg/L  | 0.00692    | 0.015  |
| Lithium                   | mg/L  | 0.323      | 0.419  |
| Mercury                   | mg/L  | 0.0005     | 0.002  |
| Molybdenum                | mg/L  | 0.01       | 0.1    |
| Selenium                  | mg/L  | 0.0209     | 0.05   |
| Thallium                  | mg/L  | 0.001      | 0.002  |
| Combined Radium 226 + 228 | pCi/L | 0.804      | 5      |

Notes:

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



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

Plant Gorgas CCR Landfill

02/22/2021 - 02/23/2021

| Analyte                      | Units | GROUNDWATER MONITORING WELLS |             |            |             |            |            |            |            |
|------------------------------|-------|------------------------------|-------------|------------|-------------|------------|------------|------------|------------|
|                              |       | MW-1                         | MW-2        | MW-3       | MW-4        | MW-5       | MW-6       | MW-7       | MW-8       |
|                              |       | 02/22/2021                   | 02/22/2021  | 02/22/2021 | 02/22/2021  | 02/23/2021 | 02/23/2021 | 02/23/2021 | 02/23/2021 |
| <b>Appendix III</b>          |       |                              |             |            |             |            |            |            |            |
| Boron                        | mg/L  | 0.0307 J                     | <0.03       | <0.03      | 0.0397 J    | 0.0369 J   | 0.0866 J   | 0.0803 J   | 0.0731 J   |
| Calcium                      | mg/L  | 151                          | 178         | 312        | 271         | 394        | 428        | 292        | 306        |
| Chloride                     | mg/L  | 2.16                         | 1.72        | 2.22       | 1.52        | 6.19       | 3.47       | 7.85       | 17.9       |
| Fluoride                     | mg/L  | 0.082 J                      | 0.209       | 0.246      | 0.357       | 0.287      | 0.139      | 0.2        | 0.208      |
| pH_Field                     | SU    | 5.06                         | 6.1         | 5.59       | 6.19        | 6.47       | 6.13       | 6.7        | 6.73       |
| Sulfate                      | mg/L  | 1400                         | 864         | 3040       | 2040        | 2210       | 2010       | 1320       | 1420       |
| TDS                          | mg/L  | 2230                         | 1620        | 4670       | 3190        | 3740       | 3230       | 2320       | 2550       |
| <b>Appendix IV</b>           |       |                              |             |            |             |            |            |            |            |
| Antimony                     | mg/L  | <0.000507                    | <0.000507   | <0.000507  | <0.000507   | <0.000507  | <0.000507  | <0.000507  | <0.000507  |
| Arsenic                      | mg/L  | 0.000403                     | 0.000295    | 0.000789   | 0.000125 J  | 0.000309   | 0.00494    | 0.00141    | 0.00117    |
| Barium                       | mg/L  | 0.0107                       | 0.0132      | 0.00981    | 0.0111      | 0.0116     | 0.0143     | 0.014      | 0.014      |
| Beryllium                    | mg/L  | <0.000406                    | <0.000406   | <0.000406  | <0.000406   | <0.000406  | <0.000406  | <0.000406  | <0.000406  |
| Cadmium                      | mg/L  | 0.00184                      | 8.96e-005 J | 0.00536    | 8.96e-005 J | <6.8e-005  | <6.8e-005  | <6.8e-005  | <6.8e-005  |
| Chromium                     | mg/L  | 0.000382 J                   | <0.000203   | 0.00035 J  | <0.000203   | <0.000203  | <0.000203  | <0.000203  | <0.000203  |
| Cobalt                       | mg/L  | 0.0657                       | 0.0161      | 0.0515     | <6.8e-005   | 0.00102    | 0.0771     | 0.00294    | 0.00796    |
| Combined Radium<br>226 + 228 | pCi/L | 0.677 U                      | 0.434 U     | 0.472 U    | 0 U         | 0.71 U     | 1.15 U     | 0.696 U    | 0.685 U    |
| Lead                         | mg/L  | <6.8e-005                    | <6.8e-005   | 8.8e-005 J | <6.8e-005   | <6.8e-005  | <6.8e-005  | <6.8e-005  | <6.8e-005  |
| Lithium                      | mg/L  | 0.0301                       | 0.0625      | 0.126      | 0.0558      | 0.133      | 0.253      | 0.131      | 0.166      |
| Mercury                      | mg/L  | <0.0003                      | <0.0003     | <0.0003    | <0.0003     | <0.0003    | <0.0003    | <0.0003    | <0.0003    |
| Molybdenum                   | mg/L  | <6.8e-005                    | <6.8e-005   | <6.8e-005  | 0.000131 J  | 0.0014     | 0.000285   | 0.00107    | 0.0129     |
| Selenium                     | mg/L  | 0.00241                      | <0.000507   | 0.0181     | 0.00222     | 0.00233    | <0.000507  | <0.000507  | <0.000507  |
| Thallium                     | mg/L  | <6.8e-005                    | <6.8e-005   | <6.8e-005  | <6.8e-005   | <6.8e-005  | <6.8e-005  | <6.8e-005  | <6.8e-005  |

**Notes:**

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



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

Plant Gorgas CCR Landfill

07/12/2021 - 07/21/2021

| Analyte                      | Units | GROUNDWATER MONITORING WELLS |             |             |             |            |             |            |             |
|------------------------------|-------|------------------------------|-------------|-------------|-------------|------------|-------------|------------|-------------|
|                              |       | MW-1                         | MW-2        | MW-3        | MW-4        | MW-5       | MW-6        | MW-7       | MW-8        |
|                              |       | 07/12/2021                   | 07/12/2021  | 07/12/2021  | 07/12/2021  | 07/21/2021 | 07/20/2021  | 07/20/2021 | 07/20/2021  |
| <b>Appendix III</b>          |       |                              |             |             |             |            |             |            |             |
| Boron                        | mg/L  | <0.03                        | <0.03       | <0.03       | 0.0411 J    | 0.0319 J   | 0.0608 J    | 0.0721 J   | 0.0656 J    |
| Calcium                      | mg/L  | 152                          | 159         | 252         | 242         | 384        | 351         | 254        | 281         |
| Chloride                     | mg/L  | 2.19                         | 2.36        | 2.13        | 1.56        | 6.73       | 4.04        | 6.35       | 14.3        |
| Fluoride                     | mg/L  | 0.112                        | 0.196       | 0.287       | 0.35        | 0.331      | 0.138       | 0.286      | 0.262       |
| pH_Field                     | SU    | 5.13                         | 6.16        | 5.86        | 6.06        | 6.4        | 5.99        | 6.58       | 6.64        |
| Sulfate                      | mg/L  | 1500                         | 763         | 2380        | 1930        | 2240       | 2000        | 1170       | 1500        |
| TDS                          | mg/L  | 2210                         | 1390        | 3510        | 3000        | 3570       | 2980        | 2110       | 2420        |
| <b>Appendix IV</b>           |       |                              |             |             |             |            |             |            |             |
| Antimony                     | mg/L  | <0.000508                    | <0.000508   | <0.000508   | <0.000508   | <0.000508  | <0.000508   | <0.000508  | <0.000508   |
| Arsenic                      | mg/L  | 0.000363                     | 0.000364    | 0.000376    | 0.000116 J  | 0.000461   | 0.00475     | 0.00164    | 0.00111     |
| Barium                       | mg/L  | 0.00984                      | 0.013       | 0.00857     | 0.0108      | 0.0116     | 0.0137      | 0.0142     | 0.0141      |
| Beryllium                    | mg/L  | <0.000406                    | <0.000406   | <0.000406   | <0.000406   | <0.000406  | 0.00048 J   | <0.000406  | <0.000406   |
| Cadmium                      | mg/L  | 0.00193                      | 8.27e-005 J | 0.000937    | 8.19e-005 J | <6.8e-005  | 0.000626    | <6.8e-005  | <6.8e-005   |
| Chromium                     | mg/L  | 0.000389 J                   | 0.000251 J  | 0.000307 J  | 0.000302 J  | <0.000203  | <0.000203   | <0.000203  | <0.000203   |
| Cobalt                       | mg/L  | 0.0556                       | 0.0155      | 0.00567     | <6.8e-005   | 0.00127    | 0.216       | 0.00561    | 0.00714     |
| Combined Radium<br>226 + 228 | pCi/L | 0.476 U                      | 0.155 U     | 0.114 U     | 0.301 U     | 0.79 U     | 1.32        | 0.356 U    | 0.42 U      |
| Lead                         | mg/L  | <6.8e-005                    | <6.8e-005   | 8.42e-005 J | <6.8e-005   | <6.8e-005  | <6.8e-005   | <6.8e-005  | 9.44e-005 J |
| Lithium                      | mg/L  | 0.0266                       | 0.0495      | 0.0808      | 0.0533      | 0.113      | 0.18        | 0.096      | 0.151       |
| Mercury                      | mg/L  | <0.0003                      | <0.0003     | <0.0003     | <0.0003     | <0.0003    | <0.0003     | <0.0003    | <0.0003     |
| Molybdenum                   | mg/L  | <6.8e-005                    | <6.8e-005   | <6.8e-005   | 0.000138 J  | 0.00126    | 8.27e-005 J | 0.00086    | 0.000329    |
| Selenium                     | mg/L  | 0.0028                       | <0.000508   | 0.0133      | 0.00155     | 0.00178    | <0.000508   | <0.000508  | <0.000508   |
| Thallium                     | mg/L  | <6.8e-005                    | <6.8e-005   | <6.8e-005   | <6.8e-005   | <6.8e-005  | <6.8e-005   | <6.8e-005  | <6.8e-005   |

**Notes:**

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

# Appendix A



# Appendix A. Historical Groundwater Analytical Data Gorgas CCR Landfill 2016-Present

| Analytes                  | Wells | MW-1       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|---------------------------|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                           | Date  | 04/26/2016 | 06/20/2016 | 08/08/2016 | 08/24/2016 | 10/03/2016 | 10/26/2016 | 11/21/2016 | 01/17/2017 | 03/22/2017 | 04/18/2017 | 05/30/2017 | 08/23/2017 | 02/13/2018 | 05/22/2018 | 06/12/2018 | 10/17/2018 | 11/19/2018 | 05/14/2019 | 10/08/2019 | 10/16/2019 | 02/03/2020 | 04/06/2020 | 07/13/2020 | 08/03/2020 | 02/22/2021 | 07/12/2021 |
| <b>Appendix III</b>       |       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Boron                     | mg/L  | 0.0231 J   | 0.0227 J   | 0.0278 J   | 0.0247 J   | 0.0307 J   | 0.0241 J   | 0.0202 J   | 0.0201 J   | 0.0224 J   | <0.02      | <0.02      | 0.0253 J   | --         | 0.0224 J   | 0.0214 J   | 0.0216 J   | 0.0237 J   | <0.0609    | <0.03      | 0.0385 J   | <0.03      | <0.03      | <0.03      | <0.03      | 0.0307 J   | <0.03      |
| Calcium                   | mg/L  | 147        | 152        | 150        | 142        | 139        | 133        | 144        | 131        | 141        | 149        | 140        | 152        | --         | 166        | 203        | 171        | 154        | 167        | 157        | 157        | 172        | 149        | 147        | 148        | 151        | 149        |
| Chloride                  | mg/L  | 1.94       | 2.09       | 2.18       | 2.22       | 2.34       | 2.34       | 2.5        | 2.68       | 2.4        | 2.4        | 2.6        | 2.7        | --         | 2.3        | 2.3        | --         | 1.7 J      | 2.28       | 2.31       | 2.42       | 2.07       | 2.01       | 2.1        | 2.05       | 2.16       | 2.25       |
| Fluoride                  | mg/L  | 0.146 J    | 0.148 J    | 0.137 J    | 0.133 J    | 0.103 J    | 0.05 J     | 0.047 J    | 0.09 J     | 0.12       | 0.12       | 0.13       | 0.16       | 0.14       | 0.16       | 0.16       | --         | 0.15       | 0.119      | 0.0924 J   | 0.0756 J   | 0.0982 J   | 0.101      | 0.0678 J   | <0.06      | 0.082 J    | 0.125      |
| pH_Field                  | pH    | 5.2        | 5.18       | 5.12       | --         | 5.21       | 5.2        | 5.19       | 5.17       | 5.2        | 5.2        | 5.14       | 5.12       | 5.18       | 5.2        | 5.15       | 5.12       | 5.09       | 5.19       | 5.12       | 5.16       | 5          | 5.21       | 5.14       | 5.08       | 5.06       | 5.13       |
| Sulfate                   | mg/L  | 1490       | 1420       | 1460       | 1450       | 1460       | 1330       | 1420       | 1350       | 1500       | 1300       | 1400       | 1500       | --         | 2100       | 1500       | --         | 1300       | 1560       | 1540       | 1680       | 1510       | 1530       | 1450       | 1370       | 1400       | 1500       |
| TDS                       | mg/L  | 2080       | 2060       | 2070       | 2040       | 2110       | 2000       | 2070       | 1930       | 2060       | 2140       | 2240       | 2160       | --         | 2380       | 2400       | 2220       | 2360       | 2340       | 2330       | 3650       | 2380       | 2240       | 2240       | 2200       | 2230       | 2210       |
| <b>Appendix IV</b>        |       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Antimony                  | mg/L  | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | --         | <0.0006    | <0.0006    | <0.0006    | <0.0008    | <0.0008    | 0.00137 J  | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.000507  | <0.000508  |
| Arsenic                   | mg/L  | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | --         | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | 0.000403   | 0.000363   |
| Barium                    | mg/L  | 0.00941 J  | 0.00951 J  | 0.00991 J  | 0.00949 J  | 0.0105     | 0.00931 J  | 0.00879 J  | 0.00929 J  | 0.00938 J  | 0.00964 J  | 0.00982 J  | --         | 0.00937 J  | 0.0102     | 0.0104     | 0.00952 J  | 0.00915 J  | 0.00913 J  | 0.0109     | 0.0106     | 0.00995 J  | 0.00971 J  | 0.0101     | 0.0107     | 0.0107     | 0.00984    |
| Beryllium                 | mg/L  | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | --         | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.000406  | <0.000406  |
| Cadmium                   | mg/L  | 0.00196    | 0.0021     | 0.00206    | 0.00182    | 0.00188    | 0.00175    | 0.00197    | 0.002      | 0.0019     | 0.00159    | 0.00214    | --         | 0.0018     | 0.00201    | 0.00217    | 0.00228    | 0.00156    | 0.00238    | 0.00218    | 0.00225    | 0.00182    | 0.00184    | 0.0019     | 0.00237    | 0.00184    | 0.00185    |
| Chromium                  | mg/L  | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | 0.000382 J | 0.000487 J |
| Cobalt                    | mg/L  | 0.0343     | 0.0413     | 0.0513     | 0.0471     | 0.0525     | 0.0527     | 0.0569     | 0.0768     | 0.0535     | 0.0442     | 0.0465     | --         | 0.062      | 0.0443     | 0.0512     | 0.0751     | 0.0825     | 0.0485     | 0.0778     | 0.08       | 0.0495     | 0.0417     | 0.0532     | 0.0722     | 0.0657     | 0.0556     |
| Combined Radium 226 + 228 | pCi/L | 0.622      | 0.159 U    | 0.511 U    | 0.566 U    | 0.537 U    | 0.636      | 0.807      | 0.308 U    | 0.344 U    | 0.934      | 0.149 U    | --         | 0.774      | -0.091 U   | 1.18       | --         | 0.862      | 0.509      | 1.47       | 0.204 U    | 0.521 U    | 0.309 U    | 0.219 U    | -0.127 U   | 0.677 U    | 0.476 U    |
| Lead                      | mg/L  | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | --         | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <6.8e-005  | <6.8e-005  |
| Lithium                   | mg/L  | 0.0264 J   | 0.0246 J   | 0.0229 J   | 0.0236 J   | 0.0229 J   | 0.0227 J   | 0.0236 J   | 0.0228 J   | 0.0238 J   | 0.0242 J   | 0.0229 J   | --         | 0.0233 J   | 0.0263 J   | 0.0251 J   | 0.025 J    | 0.0241     | 0.026 J    | 0.0268     | 0.0263     | 0.0292     | 0.0278     | 0.028      | 0.0259     | 0.0301     | 0.0266     |
| Mercury                   | mg/L  | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | --         | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    |
| Molybdenum                | mg/L  | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <6.8e-005  | <6.8e-005  |
| Selenium                  | mg/L  | 0.00261 J  | 0.00242 J  | 0.00253 J  | <0.002     | 0.00211 J  | <0.002     | <0.002     | <0.002     | 0.0022 J   | 0.0027 J   | 0.00316 J  | --         | 0.00211 J  | 0.00372 J  | 0.00409 J  | <0.002     | <0.002     | 0.00316 J  | <0.002     | <0.002     | 0.00272 J  | 0.00275 J  | 0.0025 J   | 0.00278 J  | 0.00241    | 0.0028     |
| Thallium                  | mg/L  | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | --         | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <6.8e-005  | <6.8e-005  |

**Notes:**

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



# Appendix A. Historical Groundwater Analytical Data Gorgas CCR Landfill 2016-Present

| Analytes                  | Wells | MW-2       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |             |             |
|---------------------------|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
|                           | Date  | 04/25/2016 | 05/05/2016 | 06/20/2016 | 08/08/2016 | 08/24/2016 | 10/03/2016 | 10/26/2016 | 11/21/2016 | 01/17/2017 | 03/22/2017 | 04/18/2017 | 05/31/2017 | 08/23/2017 | 02/13/2018 | 05/22/2018 | 06/12/2018 | 10/17/2018 | 11/19/2018 | 05/14/2019 | 10/08/2019 | 10/16/2019 | 02/03/2020 | 04/06/2020 | 07/13/2020 | 08/03/2020 | 02/22/2021 | 07/12/2021  |             |
| <b>Appendix III</b>       |       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |             |             |
| Boron                     | mg/L  | 0.0241 J   | --         | 0.0284 J   | 0.034 J    | 0.0316 J   | 0.0367 J   | 0.0331 J   | 0.035 J    | 0.0259 J   | 0.0243 J   | 0.0206 J   | 0.0234 J   | 0.0267 J   | --         | 0.0251 J   | 0.0275 J   | 0.0321 J   | 0.0324 J   | <0.0609    | 0.0371 J   | 0.0419 J   | <0.03      | <0.03      | <0.03      | 0.0317 J   | <0.03      | <0.03       |             |
| Calcium                   | mg/L  | 123        | --         | 168        | 180        | 180        | 184        | 171        | 179        | 188        | 155        | 156        | 151        | 155        | --         | 172        | 179        | 200        | 221        | 168        | 190        | 194        | 172        | 152        | 163        | 172        | 178        | 159         |             |
| Chloride                  | mg/L  | 1.9        | --         | 3.43       | 3.31       | 3.23       | 3.21       | 3.35       | 3.34       | 3.58       | 3          | 2.6        | 4.4 J      | 4.4        | --         | 3.2        | 3.7        | --         | 3          | 2.98       | 4.26       | 4.04       | 2.48       | 2.43       | 4.05       | 4.03       | 1.72       | 2.36        |             |
| Fluoride                  | mg/L  | 0.149 J    | --         | 0.148 J    | 0.134 J    | 0.129 J    | 0.086 J    | 0.027 J    | 0.027 J    | 0.066 J    | 0.13       | 0.16       | 0.13       | 0.16       | 0.22       | 0.17       | 0.16       | --         | 0.18       | 0.17       | 0.164      | 0.114      | 0.182      | 0.207      | 0.132      | 0.122      | 0.209      | 0.196       |             |
| pH_Field                  | pH    | 5.94       | --         | 5.96       | 5.88       | --         | 5.91       | 5.84       | 5.82       | 5.87       | 6.01       | 6.02       | 5.85       | 5.89       | 6.21       | 6.04       | 5.95       | 5.9        | 6.03       | 6.07       | 5.96       | 5.98       | 5.95       | 6.21       | 5.84       | 5.95       | 6.1        | 6.16        |             |
| Sulfate                   | mg/L  | 745        | --         | 964        | 1100       | 1130       | 1140       | 1060       | 1100       | 1160       | 900        | 870        | 1100       | 920        | --         | 1200       | 860        | --         | 1000       | 948        | 1230       | 1170       | 803        | 786        | 843        | 907        | 864        | 763         |             |
| TDS                       | mg/L  | 1260       | --         | 1620       | 1740       | 1720       | 1800       | 1800       | 1740       | 1960       | 1510       | 1580       | 1730       | 1550       | --         | 1500       | 1550       | 1740       | 1990       | 1480       | 1840       | 1830       | 1440       | 1440       | 1540       | 1650       | 1620       | 1390        |             |
| <b>Appendix IV</b>        |       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |             |             |
| Antimony                  | mg/L  | <0.0006    | --         | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | --         | <0.0006    | <0.0006    | <0.0006    | <0.0008    | <0.0008    | 0.000989 J | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.0008     |             |
| Arsenic                   | mg/L  | <0.001     | --         | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | 0.001111 J | <0.001     | <0.001     | <0.001     | <0.001     | --         | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | 0.000295   | 0.000364    |             |
| Barium                    | mg/L  | 0.0134     | --         | 0.0165     | 0.0162     | 0.0139     | 0.0164     | 0.0138     | 0.0144     | 0.0135     | 0.0132     | 0.012      | 0.0126     | --         | 0.0127     | 0.0131     | 0.0138     | 0.0137     | 0.0115     | 0.0109     | 0.0151     | 0.0146     | 0.0122     | 0.0125     | 0.0145     | 0.0147     | 0.0132     | 0.013       |             |
| Beryllium                 | mg/L  | <0.0006    | --         | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | --         | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006     |             |
| Cadmium                   | mg/L  | <0.0002    | --         | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | 0.000311 J | <0.0002    | <0.0002    | 0.000212 J | --         | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | 8.96e-005 J | 8.27e-005 J |
| Chromium                  | mg/L  | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002      |             |
| Cobalt                    | mg/L  | 0.0487     | --         | 0.0767     | 0.103      | 0.093      | 0.0964     | 0.0904     | 0.0857     | 0.0745     | 0.0328     | 0.0242     | 0.0441     | --         | 0.0179     | 0.028      | 0.0366     | 0.0745     | 0.0225     | 0.0222     | 0.0674     | 0.073      | 0.0193     | 0.0116     | 0.0405     | 0.0589     | 0.0161     | 0.0155      |             |
| Combined Radium 226 + 228 | pCi/L | --         | -0.0718 U  | 0.295 U    | 0.231 U    | 0.65       | 0.845      | 0.994      | 0.537 U    | -0.0159 U  | 0.279 U    | 0.32 U     | 0.178 U    | --         | 0.804      | 0.0077 U   | -0.315 U   | --         | 0.654      | 0.579      | 0.493 U    | 0.046 U    | -0.0245 U  | 0.212 U    | 0.0814 U   | 0.888 U    | 0.434 U    | 0.155 U     |             |
| Lead                      | mg/L  | <0.001     | --         | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | --         | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001      |             |
| Lithium                   | mg/L  | 0.0353 J   | --         | 0.0583     | 0.0627     | 0.0651     | 0.0622     | 0.0293 J   | 0.0667     | 0.0636     | 0.0464 J   | 0.0446 J   | 0.0496 J   | --         | 0.0615     | 0.0465 J   | 0.0472 J   | 0.0633     | 0.0584     | 0.0445     | 0.0677     | 0.0661     | 0.0534     | 0.0496     | 0.0615     | 0.0611     | 0.0625     | 0.0495      |             |
| Mercury                   | mg/L  | <0.00025   | --         | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | --         | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003     |             |
| Molybdenum                | mg/L  | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002      |             |
| Selenium                  | mg/L  | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002      |             |
| Thallium                  | mg/L  | <0.0002    | --         | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | --         | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002     |             |

**Notes:**

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





# Appendix A. Historical Groundwater Analytical Data Gorgas CCR Landfill 2016-Present

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

**Notes:**

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



# Appendix A. Historical Groundwater Analytical Data Gorgas CCR Landfill 2016-Present

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

**Notes:**

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



# Appendix A. Historical Groundwater Analytical Data Gorgas CCR Landfill 2016-Present

| Analytes                  | Wells | MW-5       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
|---------------------------|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                           | Date  | 04/25/2016 | 06/21/2016 | 10/12/2017 | 10/13/2017 | 10/14/2017 | 10/15/2017 | 10/16/2017 | 10/17/2017 | 11/16/2017 | 02/14/2018 | 05/23/2018 | 11/20/2018 | 05/14/2019 | 10/10/2019 | 04/07/2020 | 07/14/2020 | 02/23/2021 | 07/21/2021 |
| <b>Appendix III</b>       |       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Boron                     | mg/L  | 0.0301 J   | 0.0304 J   | 0.0285 J   | 0.0287 J   | 0.0305 J   | 0.0319 J   | 0.0304 J   | 0.036 J    | 0.0377 J   | --         | 0.0301 J   | 0.0357 J   | <0.0609    | 0.0323 J   | 0.0399 J   | 0.033 J    | 0.0369 J   | 0.0319 J   |
| Calcium                   | mg/L  | 399        | 295        | 394        | 389        | 391        | 332        | 380        | 377        | 368        | --         | 405        | 414        | 441        | 386        | 432        | 395        | 394        | 384        |
| Chloride                  | mg/L  | 5.44       | 6.32       | 7.9        | 8          | 7.4        | 7.2        | 8.1        | 7.9        | 8.1        | --         | 7          | 7.4        | 6.24       | 7.88       | 4.83       | 6.84       | 6.19       | 6.73       |
| Fluoride                  | mg/L  | 0.307      | 0.337      | 0.35       | 0.36       | 0.37       | 0.37       | 0.36       | 0.35       | 0.37       | 0.33       | 0.29       | 0.32       | 0.22       | 0.338      | 0.225      | 0.263      | 0.287      | 0.331      |
| pH_Field                  | pH    | --         | --         | --         | --         | --         | --         | --         | --         | --         | 6.39       | --         | --         | 6.34       | 6.43       | 6.43       | 6.48       | 6.47       | 6.4        |
| Sulfate                   | mg/L  | 2390       | 2500       | 2300       | 2300       | 2300       | 2300       | 2300       | 2200       | 2200       | --         | 2400       | 2500       | 2380       | 2460       | 2050       | 2080       | 2210       | 2240       |
| TDS                       | mg/L  | 3660       | 3920       | 4000       | 3960       | 3910       | 3890       | 3980       | 3940       | 3930       | --         | 3660       | 3780       | 3520       | 3830       | 3270       | 3710       | 3740       | 3570       |
| <b>Appendix IV</b>        |       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Antimony                  | mg/L  | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | --         | <0.0006    | <0.0006    | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.000507  | <0.000508  |
| Arsenic                   | mg/L  | 0.00138 J  | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | --         | <0.001     | <0.001     | <0.001     | 0.00153 J  | <0.001     | 0.00163 J  | <0.001     | 0.000309   | 0.000461   |
| Barium                    | mg/L  | 0.016      | 0.0112     | 0.0122     | 0.0115     | 0.0099 J   | 0.0103     | 0.0101     | 0.00968 J  | --         | 0.0114     | 0.0138     | 0.0105     | 0.0111     | 0.0105     | 0.0137     | 0.0124     | 0.0116     | 0.0116     |
| Beryllium                 | mg/L  | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | --         | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.000406  | <0.000406  |
| Cadmium                   | mg/L  | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | --         | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <6.8e-005  | <6.8e-005  |
| Chromium                  | mg/L  | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.000203  | <0.000203  |
| Cobalt                    | mg/L  | 0.00287 J  | 0.00228 J  | <0.002     | <0.002     | <0.002     | 0.00203 J  | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | 0.00102    | 0.00127    |
| Combined Radium 226 + 228 | pCi/L | 0.611      | 0.304 U    | 0.627 U    | 0.391 U    | 1.2 U      | 0.806 U    | 0.564 U    | 0.178 U    | --         | 0.955      | 0.543      | 0.687      | 0.663      | 0.811 U    | 0.48 U     | 0.521      | 0.71 U     | 0.79 U     |
| Lead                      | mg/L  | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | --         | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <6.8e-005  | <6.8e-005  |
| Lithium                   | mg/L  | 0.0977     | 0.0972     | 0.093      | 0.0935     | 0.0931     | 0.0968     | 0.0963     | 0.0949     | --         | 0.0989     | 0.103      | 0.102      | 0.116      | 0.0981     | 0.133      | 0.11       | 0.133      | 0.113      |
| Mercury                   | mg/L  | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | --         | <0.00025   | <0.00025   | <0.00025   | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    |
| Molybdenum                | mg/L  | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | 0.0014     | 0.00126    |
| Selenium                  | mg/L  | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | 0.00254 J  | <0.002     | 0.00288 J  | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | 0.00233    | 0.00178    |
| Thallium                  | mg/L  | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | 0.000375 J | <0.0002    | <0.0002    | --         | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <6.8e-005  | <6.8e-005  |

*Notes:*

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



## Appendix A. Historical Groundwater Analytical Data Gorgas CCR Landfill 2016-Present

| Analytes                  | Wells | MW-6       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |             |
|---------------------------|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
|                           | Date  | 04/27/2016 | 06/21/2016 | 10/12/2017 | 10/13/2017 | 10/14/2017 | 10/15/2017 | 10/16/2017 | 10/17/2017 | 11/16/2017 | 02/14/2018 | 05/23/2018 | 11/20/2018 | 05/15/2019 | 10/10/2019 | 04/08/2020 | 07/14/2020 | 02/23/2021 | 07/20/2021  |
| <b>Appendix III</b>       |       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |             |
| Boron                     | mg/L  | 0.075 J    | 0.0729 J   | 0.0806 J   | 0.0803 J   | 0.0828 J   | 0.0852 J   | 0.0858 J   | 0.0846 J   | 0.0772 J   | --         | 0.0757 J   | 0.0915 J   | 0.0616 J   | 0.0919 J   | 0.0499 J   | 0.0838 J   | 0.0866 J   | 0.0608 J    |
| Calcium                   | mg/L  | 411        | 318        | 421        | 396        | 400        | 378        | 402        | 373        | 367        | --         | 425        | 449        | 345        | 461        | 242        | 406        | 428        | 351         |
| Chloride                  | mg/L  | 2.19       | 2.56       | 3.4        | 3          | 2.8        | 1.9 J      | 1.8 J      | 3.1        | 3.5        | --         | 2.6        | 2.7        | 4.45       | 3.61       | 4.63       | 3.25       | 3.47       | 4.04        |
| Fluoride                  | mg/L  | 0.131 J    | 0.153 J    | 0.15       | 0.15       | 0.14       | 0.14       | 0.14       | 0.14       | 0.14       | 0.13       | 0.13       | 0.14       | 0.133      | 0.124      | <0.06      | 0.115      | 0.139      | 0.138       |
| pH_Field                  | pH    | --         | --         | --         | --         | --         | --         | --         | --         | --         | 6.17       | --         | --         | 5.72       | 6.16       | 4.98       | 6.12       | 6.13       | 5.99        |
| Sulfate                   | mg/L  | 2090       | 2000       | 2000       | 2000       | 1900       | 1900       | 1900       | 1900       | 1800       | --         | 2000       | 2200       | 2110       | 2330       | 1900       | 1970       | 2010       | 1930        |
| TDS                       | mg/L  | 3290       | 3250       | 3220       | 3250       | 3260       | 3260       | 3360       | 3420       | 3280       | --         | 3340       | 3330       | 3130       | 3260       | 2940       | 3270       | 3230       | 2980        |
| <b>Appendix IV</b>        |       |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |             |
| Antimony                  | mg/L  | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | --         | <0.0006    | <0.0006    | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.0008    | <0.000507  | <0.000508   |
| Arsenic                   | mg/L  | 0.005      | 0.00473 J  | 0.0051     | 0.00487 J  | 0.00476 J  | 0.00475 J  | 0.00482 J  | 0.0048 J   | --         | 0.00493 J  | 0.0058     | 0.00542    | 0.00383 J  | 0.00473 J  | 0.00232 J  | 0.0048 J   | 0.00494    | 0.00451     |
| Barium                    | mg/L  | 0.012      | 0.0133     | 0.0134     | 0.0124     | 0.0129     | 0.0136     | 0.0131     | 0.0126     | --         | 0.0142     | 0.0145     | 0.0127     | 0.0121     | 0.0152     | 0.0128     | 0.0154     | 0.0143     | 0.0143      |
| Beryllium                 | mg/L  | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | <0.0006    | --         | <0.0006    | <0.0006    | <0.0006    | 0.000677 J | <0.0006    | 0.000788 J | <0.0006    | <0.000406  | 0.000453 J  |
| Cadmium                   | mg/L  | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | --         | <0.0003    | <0.0003    | <0.0003    | 0.000858 J | <0.0003    | 0.00204    | <0.0003    | <6.8e-005  | 0.000576    |
| Chromium                  | mg/L  | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.000203  | <0.000203   |
| Cobalt                    | mg/L  | 0.0287     | 0.0269     | 0.0279     | 0.0271     | 0.0296     | 0.0303     | 0.0274     | 0.0274     | --         | 0.0305     | 0.0409     | 0.0327     | 0.265      | 0.0425     | 0.479      | 0.0916     | 0.0771     | 0.216       |
| Combined Radium 226 + 228 | pCi/L | 0.956      | 0.748      | 0.564 U    | 1.36 U     | 1.59 U     | 1.22 U     | 1.57 U     | 0.631 U    | --         | 0.969      | 0.918      | 1.15       | 1.56       | 1.71       | 0.179 U    | 0.578      | 1.15 U     | 1.32        |
| Lead                      | mg/L  | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | --         | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <0.001     | <6.8e-005  | <6.8e-005   |
| Lithium                   | mg/L  | 0.253      | 0.253      | 0.249      | 0.249      | 0.244      | 0.259      | 0.259      | 0.249      | --         | 0.242      | 0.266      | 0.245      | 0.152      | 0.251      | 0.0489     | 0.223      | 0.253      | 0.18        |
| Mercury                   | mg/L  | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | <0.00025   | --         | <0.00025   | <0.00025   | <0.00025   | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003    | <0.0003     |
| Molybdenum                | mg/L  | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | 0.000285   | 7.15e-005 J |
| Selenium                  | mg/L  | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | --         | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.002     | <0.000507  | <0.000508   |
| Thallium                  | mg/L  | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | --         | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <0.0002    | <6.8e-005  | <6.8e-005   |

*Notes:*

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



## Appendix A. Historical Groundwater Analytical Data Gorgas CCR Landfill 2016-Present

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

*Notes:*

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



## Appendix A. Historical Groundwater Analytical Data Gorgas CCR Landfill 2016-Present

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

*Notes:*

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

# Appendix B

**Appendix B.  
Historical Groundwater Elevation Summary**

| Well Name   | Top of Casing Elevation | Groundwater Elevation<br>(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 |
| <b>MW-1</b> | 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     |
| <b>MW-2</b> | 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     |
| <b>MW-3</b> | 525.90                  | 416.41                              | 415.45    | 415.00   | 414.82    | 414.43     | 415.27    | 416.07    | 418.23    | 415.53    | 415.73    | 415.10     | 415.14     | 415.15     | 415.17     | 415.13     |
| <b>MW-4</b> | 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     |
| <b>MW-5</b> | 474.55                  | 348.47                              | 348.37    | 348.43   | 348.39    | 348.38     | 348.34    | 348.40    | 348.53    | 348.42    | 348.42    | 348.38     | 348.40     | 348.36     | 348.37     | 348.34     |
| <b>MW-6</b> | 412.99                  | 312.84                              | 308.08    | 305.87   | 304.61    | 304.24     | 304.60    | 306.45    | 307.79    | 306.65    | 310.02    | 306.04     | 306.03     | 305.99     | 305.98     | 305.95     |
| <b>MW-7</b> | 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     |
| <b>MW-8</b> | 416.10                  | 351.49                              | 351.75    | 351.95   | 352.15    | 352.16     | 353.56    | 352.92    | 353.12    | 353.12    | 353.29    | 353.39     | 353.32     | 353.31     | 353.40     | 353.34     |

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



**Appendix B.  
Historical Groundwater Elevation Summary**

| Well Name | Top of Casing Elevation | Groundwater Elevation<br>(ft. AMSL) |            |           |          |           |            |            |           |           |           |          |           |           |           |
|-----------|-------------------------|-------------------------------------|------------|-----------|----------|-----------|------------|------------|-----------|-----------|-----------|----------|-----------|-----------|-----------|
|           |                         | 10/17/2017                          | 11/15/2017 | 2/12/2018 | 4/9/2018 | 5/21/2018 | 10/29/2018 | 11/19/2018 | 3/13/2019 | 5/13/2019 | 10/7/2019 | 4/6/2020 | 7/13/2020 | 2/22/2021 | 7/12/2021 |
| MW-1      | 502.25                  | 410.65                              | 410.66     | 410.89    | 411.35   | 411.47    | 410.62     | 410.80     | 412.11    | 411.77    | 410.79    | 412.16   | 411.22    | 411.59    | 411.54    |
| MW-2      | 502.12                  | 416.51                              | 416.74     | 419.29    | 417.32   | 417.33    | 416.30     | 417.67     | 417.70    | 417.64    | 416.63    | 417.81   | 416.93    | 418.50    | 417.75    |
| MW-3      | 525.90                  | 415.12                              | 415.41     | 418.49    | 416.25   | 416.28    | 414.85     | 416.31     | 418.31    | 416.40    | 415.17    | 417.64   | 415.34    | 419.94    | 421.54    |
| MW-4      | 518.63                  | 400.62                              | 400.60     | 402.67    | 402.22   | 402.24    | 400.18     | 402.08     | 402.68    | 402.43    | 400.33    | 402.59   | 401.42    | 402.82    | 402.30    |
| MW-5      | 474.55                  | 348.37                              | 348.43     | 348.61    | 348.50   | 348.49    | 348.42     | 348.55     | 348.74    | 348.66    | 348.46    | 348.74   | 348.59    | 348.81    | 348.65    |
| MW-6      | 412.99                  | 305.91                              | 305.75     | 306.47    | 311.90   | 314.14    | 304.84     | 306.89     | 323.91    | 316.49    | 304.21    | 319.32   | 309.56    | 311.83    | 314.66    |
| MW-7      | 394.59                  | 334.41                              | 334.14     | 336.82    | 335.68   | 336.60    | 334.01     | 337.61     | 339.54    | 338.44    | 334.13    | 338.34   | 335.86    | 338.01    | 336.47    |
| MW-8      | 416.10                  | 353.31                              | 353.30     | 353.44    | 353.50   | 353.55    | 353.08     | 353.37     | 353.47    | 353.32    | 352.22    | 353.52   | 353.04    | 352.81    | 352.61    |

Notes:

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

# Appendix C

**1st**  
**Semi-Annual**  
**Monitoring Event**

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

## ***Field Case Narrative***



# **Plant Gorgas Pooled Upgradient Wells**

## **2021 Compliance Event 1**

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

Field quality control procedures were performed as follows:

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

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

# *Analytical Report*



**Sample Group :** WMWGORPU\_1308

**Project/Site :** Gorgas Pooled Upgradient  
Parrish, AL 35580

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

**Attention :** Dustin Brooks & Greg Dyer

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

March 24, 2021

Dear Dustin Brooks,

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

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

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

Sincerely,

Quality Control:

Laura Midkiff

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

Supervision:

T. Durant  
Maske

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



### REPORT OF LABORATORY ANALYSIS

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.



Total Metals ICP

Gorgas Pooled Upgradient

WMWGORPU\_1308

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB03928          | 693672          | WMWGORPU_1308     |
| BB03929          | 693672          | WMWGORPU_1308     |
| BB03930          | 693672          | WMWGORPU_1308     |
| BB03931          | 693672          | WMWGORPU_1308     |
| BB03932          | 693672          | WMWGORPU_1308     |
| BB03933          | 693672          | WMWGORPU_1308     |
| BB03934          | 693672          | WMWGORPU_1308     |

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

#### General Quality Control Procedures:

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

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

#### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

| <u>Sample ID</u> | <u>Analyte</u>             | <u>Dilution factor</u> |
|------------------|----------------------------|------------------------|
| BB03928          | Calcium, Magnesium         | 20.3                   |
| BB03929          | Calcium, Magnesium         | 20.3                   |
| BB03930          | Calcium, Magnesium         | 20.3                   |
| BB03931          | Calcium, Magnesium, Sodium | 50.75                  |
| BB03933          | Calcium, Magnesium         | 20.3                   |

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



Dissolved Metals ICP

Gorgas Pooled Upgradient

WMWGORPU\_1308

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB03928          | 693642          | WMWGORPU_1308     |
| BB03929          | 693642          | WMWGORPU_1308     |
| BB03930          | 693642          | WMWGORPU_1308     |
| BB03931          | 693642          | WMWGORPU_1308     |
| BB03933          | 693642          | WMWGORPU_1308     |

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

#### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for precision were met.
7. All samples were analyzed without a dilution factor.
  8. The raw data results are shown with dilution factors included.

Total Metals ICPMS

Gorgas Pooled Upgradient

WMWGORPU\_1308

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB03928          | 693232          | WMWGORPU_1308     |
| BB03929          | 693232          | WMWGORPU_1308     |
| BB03930          | 693232          | WMWGORPU_1308     |
| BB03931          | 693232          | WMWGORPU_1308     |
| BB03932          | 693232          | WMWGORPU_1308     |
| BB03933          | 693232          | WMWGORPU_1308     |
| BB03934          | 693232          | WMWGORPU_1308     |

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

#### General Quality Control Procedures:

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

## Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution factor</u> |
|------------------|----------------|------------------------|
| BB03928          | Manganese      | 10.15                  |
| BB03929          | Manganese      | 10.15                  |
| BB03930          | Manganese      | 5.075                  |
| BB03931          | Manganese      | 5.075                  |

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

Dissolved Metals ICPMS

Gorgas Pooled Upgradient

WMWGORPU\_1308

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB03928          | 693188          | WMWGORPU_1308     |
| BB03929          | 693188          | WMWGORPU_1308     |
| BB03930          | 693188          | WMWGORPU_1308     |
| BB03931          | 693188          | WMWGORPU_1308     |
| BB03933          | 693188          | WMWGORPU_1308     |

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

#### General Quality Control Procedures:

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

## Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

| <u>Sample</u> | <u>Analyte</u> | <u>Dilution</u> |
|---------------|----------------|-----------------|
| BB03928       | Manganese      | 10.15           |
| BB03929       | Manganese      | 10.15           |
| BB03930       | Manganese      | 5.075           |
| BB03931       | Manganese      | 5.075           |

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

Mercury

Gorgas Pooled Upgradient

WMWGORPU\_1308

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB03928          | 693427          | WMWGORPU_1308     |
| BB03929          | 693427          | WMWGORPU_1308     |
| BB03930          | 693427          | WMWGORPU_1308     |
| BB03931          | 693427          | WMWGORPU_1308     |
| BB03932          | 693427          | WMWGORPU_1308     |
| BB03933          | 693427          | WMWGORPU_1308     |
| BB03934          | 693427          | WMWGORPU_1308     |

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

#### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.
7. All samples were analyzed without a dilution.
  8. The raw data results are shown with dilution factors included.



TDS

Gorgas Pooled Upgradient

WMWGORPU\_1308

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB03928          | 692991          | WMWGORPU_1308     |
| BB03929          | 692991          | WMWGORPU_1308     |
| BB03930          | 692991          | WMWGORPU_1308     |
| BB03931          | 692991          | WMWGORPU_1308     |
| BB03932          | 692991          | WMWGORPU_1308     |
| BB03933          | 692991          | WMWGORPU_1308     |
| BB03934          | 692991          | WMWGORPU_1308     |

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

#### General Quality Control Procedures:

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

## Anions

### Gorgas Pooled Upgradient

#### WMWGORPU\_1308

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

| <u>Sample ID</u> | <u>Batch ID</u>          | <u>Project ID</u> |
|------------------|--------------------------|-------------------|
| BB03928          | 693007, 693045, & 692856 | WMWGORPU_1308     |
| BB03929          | 693007, 693045, & 692856 | WMWGORPU_1308     |
| BB03930          | 693007, 693045, & 692856 | WMWGORPU_1308     |
| BB03931          | 693007, 693045, & 692856 | WMWGORPU_1308     |
| BB03932          | 693007, 693045, & 692856 | WMWGORPU_1308     |
| BB03933          | 693007, 693045, & 692856 | WMWGORPU_1308     |
| BB03934          | 693007, 693045, & 692856 | WMWGORPU_1308     |

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

#### General Quality Control Procedures:

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

## Matrix Specific Quality Control Procedures:

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

- A matrix spike was analyzed with each batch. Acceptance criteria for accuracy were met.
  - A sample duplicate was analyzed with each batch. Acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution factor</u> |
|------------------|----------------|------------------------|
| BB03928          | Sulfate        | 50                     |
| BB03929          | Sulfate        | 50                     |
| BB03930          | Sulfate        | 40                     |
| BB03931          | Sulfate        | 80                     |
| BB03933          | Sulfate        | 80                     |

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

Alkalinity

Gorgas Pooled Upgradient

WMWGORPU\_1308

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB03928          | 693348, 693349  | WMWGORPU_1308     |
| BB03929          | 693348, 693349  | WMWGORPU_1308     |
| BB03930          | 693348, 693349  | WMWGORPU_1308     |
| BB03931          | 693348, 693349  | WMWGORPU_1308     |
| BB03933          | 693348, 693349  | WMWGORPU_1308     |

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

#### General Quality Control Procedures:

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

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-1

**Location Code:** WMWGORPU

**Collected:** 2/22/21 10:47

**Customer ID:**

**Submittal Date:** 2/23/21 09:37

**Laboratory ID Number:** BB03928

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

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

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

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-1

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

**Laboratory ID Number:** BB03928

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

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

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

# Batch QC Summary

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

**Description:** Gorgas Pooled Upgradient - MW-1

**Laboratory ID Number:** BB03928

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

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

## Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 2/22/21 10:47

**Customer ID:**

**Delivery Date:** 2/23/21 09:37

**Description:** Gorgas Pooled Upgradient - MW-1

**Laboratory ID Number:** BB03928

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

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



# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-1 DUP

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

**Laboratory ID Number:** BB03929

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

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

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

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-1 DUP

**Location Code:** WMWGORPU

**Collected:** 2/22/21 10:47

**Customer ID:**

**Submittal Date:** 2/23/21 09:37

**Laboratory ID Number:** BB03929

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

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

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

# Batch QC Summary

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

**Description:** Gorgas Pooled Upgradient - MW-1 DUP

**Laboratory ID Number:** BB03929

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

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

## Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 2/22/21 10:47

**Customer ID:**

**Delivery Date:** 2/23/21 09:37

**Description:** Gorgas Pooled Upgradient - MW-1 DUP

**Laboratory ID Number:** BB03929

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

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

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-2

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

**Laboratory ID Number:** BB03930

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

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

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

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-2

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

**Laboratory ID Number:** BB03930

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

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

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

# Batch QC Summary

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

**Description:** Gorgas Pooled Upgradient - MW-2

**Laboratory ID Number:** BB03930

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

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

## Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 2/22/21 11:47

**Customer ID:**

**Delivery Date:** 2/23/21 09:37

**Description:** Gorgas Pooled Upgradient - MW-2

**Laboratory ID Number:** BB03930

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

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



# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-3

**Location Code:** WMWGORPU

**Collected:** 2/22/21 12:52

**Customer ID:**

**Submittal Date:** 2/23/21 09:37

**Laboratory ID Number:** BB03931

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

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

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

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-3

**Location Code:** WMWGORPU

**Collected:** 2/22/21 12:52

**Customer ID:**

**Submittal Date:** 2/23/21 09:37

**Laboratory ID Number:** BB03931

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

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

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

# Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 2/22/21 12:52

**Customer ID:**

**Delivery Date:** 2/23/21 09:37

**Description:** Gorgas Pooled Upgradient - MW-3

**Laboratory ID Number:** BB03931

| Sample  | Analysis               | Units | MB         |          |       |         |         | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec  | Limit       |       |       |
| BB03933 | Iron, Dissolved        | mg/L  | -0.000794  | 0.0176   | 0.2   | 0.197   | 0.200   | 0.205    | 0.170 to 0.230     | 98.5 | 70.0 to 130 | 1.51  | 20.0  |
| BB03934 | Arsenic, Total         | mg/L  | 0.000056   | 0.000147 | 0.10  | 0.105   | 0.104   | 0.105    | 0.0850 to 0.115    | 105  | 70.0 to 130 | 0.957 | 20.0  |
| BB03934 | Mercury, Total by CVAA | mg/L  | 0.000103   | 0.000500 | 0.004 | 0.00427 | 0.00420 | 0.00414  | 0.00340 to 0.00460 | 107  | 70.0 to 130 | 1.65  | 20.0  |
| BB03934 | Magnesium, Total       | mg/L  | -0.000195  | 0.0462   | 5.00  | 5.07    | 5.04    | 5.12     | 4.25 to 5.75       | 101  | 70.0 to 130 | 0.593 | 20.0  |
| BB03934 | Lead, Total            | mg/L  | 0.0000041  | 0.000147 | 0.10  | 0.113   | 0.109   | 0.109    | 0.0850 to 0.115    | 113  | 70.0 to 130 | 3.60  | 20.0  |
| BB03934 | Selenium, Total        | mg/L  | 0.0000614  | 0.00100  | 0.10  | 0.0984  | 0.0971  | 0.101    | 0.0850 to 0.115    | 98.4 | 70.0 to 130 | 1.33  | 20.0  |
| BB03934 | Barium, Total          | mg/L  | 0.0000266  | 0.000200 | 0.10  | 0.0985  | 0.102   | 0.0996   | 0.0850 to 0.115    | 98.5 | 70.0 to 130 | 3.49  | 20.0  |
| BB03934 | Beryllium, Total       | mg/L  | 0.0000157  | 0.000880 | 0.10  | 0.0921  | 0.0961  | 0.0977   | 0.0850 to 0.115    | 92.1 | 70.0 to 130 | 4.25  | 20.0  |
| BB03934 | Sodium, Total          | mg/L  | 0.00835    | 0.0440   | 5.00  | 5.04    | 4.98    | 5.24     | 4.25 to 5.75       | 101  | 70.0 to 130 | 1.20  | 20.0  |
| BB03934 | Boron, Total           | mg/L  | -0.00165   | 0.0650   | 1.00  | 1.00    | 1.00    | 1.02     | 0.850 to 1.15      | 100  | 70.0 to 130 | 0.00  | 20.0  |
| BB03934 | Cadmium, Total         | mg/L  | 0.0000032  | 0.000147 | 0.10  | 0.0999  | 0.0977  | 0.101    | 0.0850 to 0.115    | 99.9 | 70.0 to 130 | 2.23  | 20.0  |
| BB03934 | Lithium, Total         | mg/L  | -0.0000744 | 0.0154   | 0.20  | 0.202   | 0.200   | 0.210    | 0.170 to 0.230     | 101  | 70.0 to 130 | 0.995 | 20.0  |
| BB03934 | Manganese, Total       | mg/L  | 0.0000409  | 0.000147 | 0.10  | 0.0998  | 0.102   | 0.101    | 0.0850 to 0.115    | 99.7 | 70.0 to 130 | 2.18  | 20.0  |
| BB03934 | Antimony, Total        | mg/L  | 0.000234   | 0.00100  | 0.10  | 0.0937  | 0.0965  | 0.0942   | 0.0850 to 0.115    | 93.7 | 70.0 to 130 | 2.94  | 20.0  |
| BB03933 | Manganese, Dissolved   | mg/L  | 0.0000275  | 0.000147 | 0.10  | 0.100   | 0.0992  | 0.102    | 0.0850 to 0.115    | 99.7 | 70.0 to 130 | 0.803 | 20.0  |
| BB03934 | Calcium, Total         | mg/L  | 0.000993   | 0.152    | 5.00  | 5.03    | 5.02    | 4.98     | 4.25 to 5.75       | 101  | 70.0 to 130 | 0.199 | 20.0  |
| BB03934 | Cobalt, Total          | mg/L  | -0.0000680 | 0.000147 | 0.10  | 0.103   | 0.103   | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 0.00  | 20.0  |
| BB03934 | Iron, Total            | mg/L  | 0.000896   | 0.0176   | 0.2   | 0.202   | 0.202   | 0.201    | 0.170 to 0.230     | 101  | 70.0 to 130 | 0.00  | 20.0  |
| BB03934 | Potassium, Total       | mg/L  | -0.000271  | 0.367    | 10.0  | 10.1    | 9.95    | 10.1     | 8.50 to 11.5       | 101  | 70.0 to 130 | 1.50  | 20.0  |
| BB03934 | Thallium, Total        | mg/L  | -0.0000628 | 0.000147 | 0.10  | 0.108   | 0.104   | 0.104    | 0.0850 to 0.115    | 108  | 70.0 to 130 | 3.77  | 20.0  |
| BB03934 | Chromium, Total        | mg/L  | -0.000107  | 0.000440 | 0.10  | 0.102   | 0.104   | 0.104    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 1.94  | 20.0  |
| BB03934 | Molybdenum, Total      | mg/L  | -0.0000018 | 0.000147 | 0.10  | 0.0968  | 0.0945  | 0.0970   | 0.0850 to 0.115    | 96.8 | 70.0 to 130 | 2.40  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 2/22/21 12:52

**Customer ID:**

**Delivery Date:** 2/23/21 09:37

**Description:** Gorgas Pooled Upgradient - MW-3

**Laboratory ID Number:** BB03931

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

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

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient Field Blank-1

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

**Laboratory ID Number:** BB03932

| Name                                       | Prepared      | Analyzed      | Vio Spec            | DF    | Results                             | Units | MDL      | RL         | Q |
|--|---------------|---------------|---------------------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b>        |               |               | <b>Analyst: RDA</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                             | 3/11/21 14:53 | 3/12/21 14:44 |                     | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                           | 3/11/21 14:53 | 3/12/21 14:44 |                     | 1.015 | Not Detected                        | mg/L  | 0.070035 | 0.406      | U |
| * Iron, Total                              | 3/11/21 14:53 | 3/12/21 14:44 |                     | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| * Lithium, Total                           | 3/11/21 14:53 | 3/12/21 14:44 |                     | 1.015 | Not Detected                        | mg/L  | 0.007105 | 0.01999956 | U |
| * Magnesium, Total                         | 3/11/21 14:53 | 3/12/21 14:44 |                     | 1.015 | Not Detected                        | mg/L  | 0.021315 | 0.406      | U |
| * Sodium, Total                            | 3/11/21 14:53 | 3/12/21 14:44 |                     | 1.015 | Not Detected                        | mg/L  | 0.02030  | 0.406      | U |
| <b>Analytical Method: EPA 200.8</b>        |               |               | <b>Analyst: DLJ</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                          | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                           | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Barium, Total                            | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000101 | 0.000203   | U |
| * Beryllium, Total                         | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                           | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                          | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                            | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                              | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                        | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Manganese, Total                         | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | 0.0000796                           | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                         | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.169505 | 0.5075     | U |
| * Selenium, Total                          | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                          | 2/23/21 13:40 | 2/25/21 11:15 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 245.1</b>        |               |               | <b>Analyst: ABB</b> |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA                   | 3/8/21 11:16  | 3/9/21 11:57  |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2540C</b>         |               |               | <b>Analyst: TJW</b> |       |                                     |       |          |            |   |
| * Solids, Dissolved                        | 2/25/21 10:55 | 3/2/21 09:30  |                     | 1     | Not Detected                        | mg/L  |          | 25         | U |
| <b>Analytical Method: SM4500CI E</b>       |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Chloride                                 | 2/25/21 10:35 | 2/25/21 10:35 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |
| <b>Analytical Method: SM4500F G 2017</b>   |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Fluoride                                 | 2/25/21 15:13 | 2/25/21 15:13 |                     | 1     | Not Detected                        | mg/L  | 0.06     | 0.1        | U |
| <b>Analytical Method: SM4500SO4 E 2011</b> |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Sulfate                                  | 2/23/21 15:17 | 2/23/21 15:17 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORPUFB

**Sample Date:** 2/22/21 13:20

**Customer ID:**

**Delivery Date:** 2/23/21 09:37

**Description:** Gorgas Pooled Upgradient Field Blank-1

**Laboratory ID Number:** BB03932

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

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGORPUFB

**Sample Date:** 2/22/21 13:20

**Customer ID:**

**Delivery Date:** 2/23/21 09:37

**Description:** Gorgas Pooled Upgradient Field Blank-1

**Laboratory ID Number:** BB03932

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

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**Comments:**

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-4

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

**Laboratory ID Number:** BB03933

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

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

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



# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-4

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

**Laboratory ID Number:** BB03933

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

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

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

# Batch QC Summary

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

**Description:** Gorgas Pooled Upgradient - MW-4

**Laboratory ID Number:** BB03933

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

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

## Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 2/22/21 14:07

**Customer ID:**

**Delivery Date:** 2/23/21 09:37

**Description:** Gorgas Pooled Upgradient - MW-4

**Laboratory ID Number:** BB03933

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

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

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient Equipment Blank-1

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

**Laboratory ID Number:** BB03934

| Name                                       | Prepared      | Analyzed      | Vio Spec            | DF    | Results                             | Units | MDL      | RL         | Q |
|--|---------------|---------------|---------------------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b>        |               |               | <b>Analyst: RDA</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                             | 3/11/21 14:53 | 3/12/21 14:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                           | 3/11/21 14:53 | 3/12/21 14:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.070035 | 0.406      | U |
| * Iron, Total                              | 3/11/21 14:53 | 3/12/21 14:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| * Lithium, Total                           | 3/11/21 14:53 | 3/12/21 14:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.007105 | 0.01999956 | U |
| * Magnesium, Total                         | 3/11/21 14:53 | 3/12/21 14:51 |                     | 1.015 | 0.0263                              | mg/L  | 0.021315 | 0.406      | J |
| * Sodium, Total                            | 3/11/21 14:53 | 3/12/21 14:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.02030  | 0.406      | U |
| <b>Analytical Method: EPA 200.8</b>        |               |               | <b>Analyst: DLJ</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                          | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                           | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Barium, Total                            | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000101 | 0.000203   | U |
| * Beryllium, Total                         | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                           | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                          | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                            | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                              | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                        | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Manganese, Total                         | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | 0.0000749                           | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                         | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.169505 | 0.5075     | U |
| * Selenium, Total                          | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                          | 2/23/21 13:40 | 2/25/21 11:21 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 245.1</b>        |               |               | <b>Analyst: ABB</b> |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA                   | 3/8/21 11:16  | 3/9/21 12:02  |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2540C</b>         |               |               | <b>Analyst: TJW</b> |       |                                     |       |          |            |   |
| * Solids, Dissolved                        | 2/25/21 10:55 | 3/2/21 09:30  |                     | 1     | Not Detected                        | mg/L  |          | 25         | U |
| <b>Analytical Method: SM4500CI E</b>       |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Chloride                                 | 2/25/21 10:37 | 2/25/21 10:37 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |
| <b>Analytical Method: SM4500F G 2017</b>   |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Fluoride                                 | 2/25/21 15:15 | 2/25/21 15:15 |                     | 1     | Not Detected                        | mg/L  | 0.06     | 0.1        | U |
| <b>Analytical Method: SM4500SO4 E 2011</b> |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Sulfate                                  | 2/23/21 15:20 | 2/23/21 15:20 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORPUEB

**Sample Date:** 2/22/21 14:30

**Customer ID:**

**Delivery Date:** 2/23/21 09:37

**Description:** Gorgas Pooled Upgradient Equipment Blank-1

**Laboratory ID Number:** BB03934

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

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGORPUEB

**Sample Date:** 2/22/21 14:30

**Customer ID:**

**Delivery Date:** 2/23/21 09:37

**Description:** Gorgas Pooled Upgradient Equipment Blank-1

**Laboratory ID Number:** BB03934

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

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**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. |
| U         | Compound was analyzed, but not detected.  |



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

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

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

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

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

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

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

|              |                |   |
|--------------|----------------|---|
| SmarTroll ID | 7586-41443-5-2 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |
| Turbidity ID | 3901-20009-2-1 | Cooler Temp   |
| Sample Event | 1308           | Thermometer ID  |
|              |                | pH Strip ID   |
|              |                |   |

Bottles/Pre-Preserved Bottles are provided by the GTL





Chain of Custody  
Groundwater  
APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

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

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

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

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

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

|              |                |   |
|--------------|----------------|---|
| SmarTroll ID | 7586-41443-5-2 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |
| Turbidity ID | 3901-20009-2-1 |   |
| Sample Event | 1308           |   |
|              |                |   |
|              | Cooler Temp    | N/A   |
|              | Thermometer ID | N/A   |
|              | pH Strip ID    | 8206-45803-10-7   |

Bottles/Pre-Preserved Bottles are provided by the GTL

April 09, 2021

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

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

Dear Laura Midkiff:

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

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

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

---

### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Florida: Cert E871149 SEKS WET  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

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

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

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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**Method:** EPA 9315

**Description:** 9315 Total Radium

**Client:** Alabama Power

**Date:** April 09, 2021

**General Information:**

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

**Hold Time:**

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

**Method Blank:**

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

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

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

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

---

**Method:** EPA 9320

**Description:** 9320 Radium 228

**Client:** Alabama Power

**Date:** April 09, 2021

**General Information:**

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

**Hold Time:**

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

**Method Blank:**

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

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

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

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

---

**Method:** Total Radium Calculation

**Description:** Total Radium 228+226

**Client:** Alabama Power

**Date:** April 09, 2021

**General Information:**

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

**Hold Time:**

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

**Method Blank:**

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

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

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

**Additional Comments:**

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

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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

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

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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

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

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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

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

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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

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

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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

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

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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

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

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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

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

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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

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

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 439280   | Analysis Method:      | EPA 9315                              |
| QC Batch Method: | EPA 9315 | Analysis Description: | 9315 Total Radium                     |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92527335001, 92527335002, 92527335003, 92527335004, 92527335005, 92527335006, 92527335007, 92527335008, 92527335009

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METHOD BLANK: 2120834 Matrix: Water

Associated Lab Samples: 92527335001, 92527335002, 92527335003, 92527335004, 92527335005, 92527335006, 92527335007, 92527335008, 92527335009

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

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

QC Batch: 439308

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527335001, 92527335002, 92527335003, 92527335004, 92527335005, 92527335006, 92527335007, 92527335008, 92527335009

METHOD BLANK: 2120884

Matrix: Water

Associated Lab Samples: 92527335001, 92527335002, 92527335003, 92527335004, 92527335005, 92527335006, 92527335007, 92527335008, 92527335009

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

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

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## QUALIFIERS

Project: GORGAS POOLED UPGRADIENT 1308

Pace Project No.: 92527335

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

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

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

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# MO#: 92527335

## CHAIN-OF-CUSTODY / Analytical R

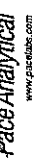
The Chain-of-Custody is a LEGAL DOCUMENT. All re 92527335



Company: Alabama Power Company  
 Address: 744 Highway 87 GSC Bldg #8 Calera, AL 35040  
 Email To: ldmickliff@southern.com  
 Phone: 205-664-6197 Fax: [blank]  
 Requested Due Date: 28 days  
 Purchase Order #: APC57570-0001  
 Project Name: Gorgas Pooled Upgrade  
 Project Number: WMMGORPU 1308  
 State Location: AL  
 Regulatory Agency: [blank]

| ITEM #                     | SAMPLE ID<br>One Character per box.<br>(A-Z, 0-9 /, -)<br>Sample IDs must be unique | MATRIX<br>Drinking Water<br>Water<br>Waste<br>Wastewater<br>Other | CODE<br>DW<br>WT<br>P<br>SL<br>OL<br>WP<br>AR<br>TS | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | START                        |       | END  |                           | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives                |       |      |      |           |         |          |       | Analyses Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | TEMP In C | Received on Ice (Y/N)     | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
|----------------------------|---|---|---|---------------------------------------|-----------------------------|------------------------------|-------|------|---------------------------|---------------------------|-----------------|------------------------------|-------|------|------|-----------|---------|----------|-------|---------------|-----------------------------------|-------------------------|-----------|---------------------------|-----------------------------|----------------------|----------|----------|------------------|-----------------------------|--|------|--|--|--|-------------------|--|--|--|---|--|--|--|
|                            |   |   |   |                                       |                             | DATE                         | TIME  | DATE | TIME                      |                           |                 | Unpreserved                  | H2SO4 | HNO3 | HCl  | NaOH      | Na2S2O3 | Methanol | Other |               |                                   |                         |           |                           |                             |                      | EPA 9316 | EPA 9320 | Total Radium Sum | Matrix Spike/Matrix Spike D |  |      |  |  |  |                   |  |  |  |   |  |  |  |
|                            |   |   |   |                                       |                             | REINQUISHED BY / AFFILIATION | DATE  | TIME | ACCEPTED BY / AFFILIATION |                           |                 | DATE                         | TIME  | DATE | TIME | DATE      | TIME    |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 1                          | BB03935   | MMW-1   | GW/G  |                                       |                             | 2/22/2021                    | 10:47 |      |                           | 1                         | X               |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 2                          | BB03936   | MMW-1 DUP   | GW/G  |                                       |                             | 2/22/2021                    | 10:47 |      |                           | 1                         | X               |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 3                          | BB03937   | MMW-2   | GW/G  |                                       |                             | 2/22/2021                    | 11:47 |      |                           | 3                         | X               |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 4                          | BB03938   | MMW-3   | GW/G  |                                       |                             | 2/22/2021                    | 12:52 |      |                           | 1                         | X               |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 5                          | BB03939   | FB-1  | GW/G  |                                       |                             | 2/22/2021                    | 13:20 |      |                           | 1                         | X               |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 6                          | BB03940   | MMW-4   | GW/G  |                                       |                             | 2/22/2021                    | 14:07 |      |                           | 1                         | X               |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 7                          | BB03941   | EB-1  | GW/G  |                                       |                             | 2/22/2021                    | 14:30 |      |                           | 1                         | X               |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 8                          |   |   |   |                                       |                             |                              |       |      |                           |                           |                 |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 9                          |   |   |   |                                       |                             |                              |       |      |                           |                           |                 |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 10                         |   |   |   |                                       |                             |                              |       |      |                           |                           |                 |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 11                         |   |   |   |                                       |                             |                              |       |      |                           |                           |                 |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| 12                         |   |   |   |                                       |                             |                              |       |      |                           |                           |                 |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| ADDITIONAL COMMENTS        |   |   |   |                                       |                             |                              |       |      |                           |                           |                 | REINQUISHED BY / AFFILIATION |       |      |      | DATE      |         |          |       | TIME          |                                   |                         |           | ACCEPTED BY / AFFILIATION |                             |                      |          | DATE     |                  |                             |  | TIME |  |  |  | SAMPLE CONDITIONS |  |  |  |   |  |  |  |
|                            |   |   |   |                                       |                             |                              |       |      |                           |                           |                 | Laura Mickliff APC GTL       |       |      |      | 2/23/2021 |         |          |       | 11:38         |                                   |                         |           | Nelsa Rind                |                             |                      |          | 3/1/21   |                  |                             |  | NA   |  |  |  | N                 |  |  |  | Y |  |  |  |
| SAMPLER NAME AND SIGNATURE |   |   |   |                                       |                             |                              |       |      |                           |                           |                 |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| PRINT Name of SAMPLER:     |   |   |   |                                       |                             |                              |       |      |                           |                           |                 |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| SIGNATURE of SAMPLER:      |   |   |   |                                       |                             |                              |       |      |                           |                           |                 |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |
| DATE Signed:               |   |   |   |                                       |                             |                              |       |      |                           |                           |                 |                              |       |      |      |           |         |          |       |               |                                   |                         |           |                           |                             |                      |          |          |                  |                             |  |      |  |  |  |                   |  |  |  |   |  |  |  |

# Quality Control Sample Performance Assessment



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

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

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

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

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

Comments:

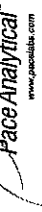
*DW 4/9/21*

Analyst Must Manually Enter All Fields Highlighted in Yellow.

| Sample Matrix Spike Control Assessment                            |             |
|---|-------------|
| Sample Collection Date:   | MS/MSD 1    |
| Sample I.D.   | 2/22/2021   |
| Sample MS I.D.  | 92527335003 |
| Sample MSD I.D.   | 92527335004 |
| Spike I.D.:   | 19-033      |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):              | 24.040      |
| Spike Volume Used in MS (mL):                                     | 0.20        |
| Spike Volume Used in MSD (mL):                                    | 0.20        |
| MS Aliquot (L, g, F):   | 0.206       |
| MS Target Conc. (pCi/L, g, F):                                    | 23.367      |
| MSD Aliquot (L, g, F):  | 0.212       |
| MSD Target Conc. (pCi/L, g, F):                                   | 22.686      |
| MSD Spike Uncertainty (calculated):                               | 0.280       |
| MSD Spike Uncertainty (calculated):                               | 0.272       |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 | 0.112       |
| Sample Matrix Spike Result:                                       | 0.168       |
| Sample Matrix Spike Result:                                       | 24.772      |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           | 1.663       |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): | 22.181      |
| MS Numerical Performance Indicator:                               | 1.513       |
| MSD Numerical Performance Indicator:                              | 1.495       |
| MS Percent Recovery:  | -0.782      |
| MSD Percent Recovery:   | 105.53%     |
| MS Status vs Numerical Indicator:                                 | 97.28%      |
| MSD Status vs Numerical Indicator:                                | N/A         |
| MS Status vs Recovery:  | N/A         |
| MSD Status vs Recovery:   | Pass        |
| MS/MSD Upper % Recovery Limits:                                   | 125%        |
| MS/MSD Lower % Recovery Limits:                                   | 75%         |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |             |
|---|-------------|
| Sample I.D.   | MS/MSD 2    |
| Sample MS I.D.  | 3/8/2021    |
| Sample MSD I.D.   | 92527915001 |
| Sample Matrix Spike Result:                                       | 92527915002 |
| Sample Matrix Spike Duplicate Result:                             | 92527915003 |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           | 21.941      |
| Sample Matrix Spike Duplicate Result:                             | 1.563       |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): | 24.134      |
| Duplicate Numerical Performance Indicator:                        | 1.655       |
| Duplicate Numerical Performance Indicator:                        | -1.888      |
| MS/MSD Duplicate Status vs Numerical Indicator:                   | 10.78%      |
| MS/MSD Duplicate Status vs RPD:                                   | N/A         |
| % RPD Limit:  | Pass        |
|   | 25%         |

# Quality Control Sample Performance Assessment



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

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2120864 |
| MB concentration:                   | 0.606   |
| M/B 2 Sigma CSU:                    | 0.355   |
| MB MDC:                             | 0.651   |
| MB Numerical Performance Indicator: | 3.34    |
| MB Status vs Numerical Indicator:   | Fail*   |
| MB Status vs. MDC:                  | Pass    |

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

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

| Sample Matrix Spike Control Assessment                   |                       |
|--|-----------------------|
| Sample Collection Date:                                  | MS/MSD 1<br>2/22/2021 |
| Sample I.D.:   | MS/MSD 2<br>3/8/2021  |
| Sample MS I.D.:  | 92527335002           |
| Sample MSD I.D.:   | 92527335004           |
| Sample MSD I.D.:   | 92527335005           |
| Spike I.D.:  | 21-003                |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):     | 38.726                |
| Spike Volume Used in MS (mL):                            | 0.20                  |
| Spike Volume Used in MSD (mL):                           | 0.20                  |
| MS Aliquot (L, g, F):                                    | 0.802                 |
| MS Target Conc. (pCi/L, g, F):                           | 9.473                 |
| MSD Aliquot (L, g, F):                                   | 0.815                 |
| MSD Target Conc. (pCi/L, g, F):                          | 9.503                 |
| MS Spike Uncertainty (calculated):                       | 0.464                 |
| MSD Spike Uncertainty (calculated):                      | 0.466                 |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                 | 0.644                 |
| Sample Matrix Spike Result:                              | 0.430                 |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           | 8.624                 |
| Sample Matrix Spike Duplicate Result:                    | 1.758                 |
| Sample Matrix Spike Duplicate Result:                    | 7.188                 |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 1.484                 |
| MS Numerical Performance Indicator:                      | -1.567                |
| MSD Numerical Performance Indicator:                     | -3.593                |
| MS Percent Recovery:                                     | 84.24%                |
| MSD Percent Recovery:                                    | 68.87%                |
| MS Status vs Numerical Indicator:                        | Pass                  |
| MSD Status vs Numerical Indicator:                       | Fail****              |
| MS Status vs Recovery:                                   | Pass                  |
| MSD Status vs Recovery:                                  | Pass                  |
| MS/MSD Upper % Recovery Limits:                          | 135%                  |
| MS/MSD Lower % Recovery Limits:                          | 60%                   |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment    |             |
|--|-------------|
| Sample I.D.:   | 92527335002 |
| Sample MS I.D.:  | 92527335004 |
| Sample MSD I.D.:   | 92527335005 |
| Spike I.D.:  | 21-003      |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           | 8.624       |
| Sample Matrix Spike Duplicate Result:                    | 1.758       |
| Sample Matrix Spike Duplicate Result:                    | 7.188       |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 1.484       |
| Duplicate Numerical Performance Indicator:               | 1.223       |
| Duplicate Numerical Performance Indicator:               | 20.08%      |
| MS/MSD Duplicate Status vs Numerical Indicator:          | Pass        |
| MS/MSD Duplicate Status vs RPD:                          | Pass        |
| % RPD Limit:   | 36%         |

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

Comments:

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

*MB activity < MDC - Pass*  
*04/17/21*



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

## ***Field Case Narrative***



## **Plant Gorgas Landfill**

### **2021 Compliance Event 1**

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

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

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

Field quality control procedures were performed as follows:

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

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

# *Analytical Report*



**Sample Group :** WMWGORLF\_1309

**Project/Site :** Gorgas Landfill  
Parrish, AL 35580

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

**Attention :** Dustin Brooks & Greg Dyer

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

March 31, 2021

Dear Dustin Brooks,

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

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

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

Sincerely,

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

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



### REPORT OF LABORATORY ANALYSIS

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.



Total Metals ICP

Gorgas Landfill

WMWGORLF\_1309

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

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

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

### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

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

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

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

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

Dissolved Metals ICP

Gorgas Landfill

WMWGORLF\_1309

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

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

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

### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

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



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

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution factor</u> |
|------------------|----------------|------------------------|
| BB04032          | Iron           | 101.5                  |
| BB04066          | Iron           | 10.15                  |
| BB04069          | Iron           | 10.15                  |
| BB04072          | Iron           | 101.5                  |
| BB04151          | Iron           | 10.15                  |
| BB04152          | Iron           | 10.15                  |
| BB04154          | Iron           | 10.15                  |

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

Total Metals ICPMS

Gorgas Landfill

WMWGORLF\_1309

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

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

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

General Quality Control Procedures:

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

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

Matrix Specific Quality Control Procedures:

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

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

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

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution factor</u> |
|------------------|----------------|------------------------|
| BB04032          | Mn             | 10.15                  |
| BB04033          | Mn             | 5.075                  |
| BB04064          | Mn             | 5.075                  |
| BB04065          | Mn             | 5.075                  |
| BB04066          | Mn             | 92.365                 |
| BB04067          | Mn             | 5.075                  |
| BB04068          | Mn             | 5.075                  |
| BB04069          | Mn             | 92.365                 |
| BB04072          | Mn             | 92.365                 |
| BB04151          | Mn             | 5.075                  |
| BB04155          | Mn             | 5.075                  |
| BB04156          | Mn             | 5.075                  |

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

## Dissolved Metals ICPMS

Gorgas Landfill

WMWGORLF\_1309

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

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

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

### General Quality Control Procedures:

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

Revision 5

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

Matrix Specific Quality Control Procedures:

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

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

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

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution factor</u> |
|------------------|----------------|------------------------|
| BB04032          | Mn             | 10.15                  |
| BB04033          | Mn             | 5.075                  |
| BB04064          | Mn             | 5.075                  |
| BB04065          | Mn             | 5.075                  |
| BB04066          | Mn             | 92.365                 |
| BB04067          | Mn             | 5.075                  |
| BB04068          | Mn             | 5.075                  |
| BB04069          | Mn             | 92.365                 |
| BB04072          | Mn             | 92.365                 |
| BB04151          | Mn             | 5.075                  |
| BB04155          | Mn             | 5.075                  |
| BB04156          | Mn             | 5.075                  |

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

Mercury

Gorgas Landfill

WMWGORLF\_1309

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

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

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

### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.
7. All samples were analyzed without a dilution.
  8. The raw data results are shown with dilution factors included.

TDS

Gorgas Landfill

WMWGORLF\_1309

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

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

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



### General Quality Control Procedures:

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

Anions

Gorgas Landfill

WMWGORLF\_1309

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

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

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

## General Quality Control Procedures:

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

## Matrix Specific Quality Control Procedures:

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

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

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

| <u>Sample ID</u> | <u>Analyte</u>     | <u>Dilution factor</u> |
|------------------|--------------------|------------------------|
| BB04032          | Sulfate            | 80                     |
| BB04033          | Sulfate            | 50                     |
| BB04034          | Sulfate            | 100                    |
| BB04064          | Sulfate            | 50                     |
| BB04065          | Sulfate            | 80                     |
| BB04066          | Sulfate            | 80                     |
| BB04067          | Sulfate            | 50                     |
| BB04068          | Sulfate            | 50                     |
| BB04069          | Sulfate            | 100                    |
| BB04070          | Sulfate            | 50                     |
| BB04071          | Chloride & Sulfate | 8 & 50                 |

## Case Narrative

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

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

Alkalinity

Gorgas Landfill

WMWGORLF\_1309

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

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

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

General Quality Control Procedures:

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-6

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

**Laboratory ID Number:** BB04032

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

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-6

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

**Laboratory ID Number:** BB04032

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

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 10:45

**Customer ID:**

**Delivery Date:** 2/24/21 09:29

**Description:** Gorgas Landfill - MW-6

**Laboratory ID Number:** BB04032

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

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



## Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 10:45

**Customer ID:**

**Delivery Date:** 2/24/21 09:29

**Description:** Gorgas Landfill - MW-6

**Laboratory ID Number:** BB04032

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-7

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

**Laboratory ID Number:** BB04033

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

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-7

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

**Laboratory ID Number:** BB04033

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

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 11:35

**Customer ID:**

**Delivery Date:** 2/24/21 09:29

**Description:** Gorgas Landfill - MW-7

**Laboratory ID Number:** BB04033

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

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

## Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 11:35

**Customer ID:**

**Delivery Date:** 2/24/21 09:29

**Description:** Gorgas Landfill - MW-7

**Laboratory ID Number:** BB04033

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-8

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

**Laboratory ID Number:** BB04034

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

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-8

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

**Laboratory ID Number:** BB04034

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

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 12:35

**Customer ID:**

**Delivery Date:** 2/24/21 09:29

**Description:** Gorgas Landfill - MW-8

**Laboratory ID Number:** BB04034

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

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



## Batch QC Summary

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

**Description:** Gorgas Landfill - MW-8

**Laboratory ID Number:** BB04034

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-13

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

**Laboratory ID Number:** BB04064

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

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-13

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

**Laboratory ID Number:** BB04064

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

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 08:33

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-13

**Laboratory ID Number:** BB04064

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

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

## Batch QC Summary

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

**Description:** Gorgas Landfill - MW-13

**Laboratory ID Number:** BB04064

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-14

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

**Laboratory ID Number:** BB04065

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

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-14

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

**Laboratory ID Number:** BB04065

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

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 09:45

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-14

**Laboratory ID Number:** BB04065

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

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



## Batch QC Summary

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

**Description:** Gorgas Landfill - MW-14

**Laboratory ID Number:** BB04065

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-15

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

**Laboratory ID Number:** BB04066

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

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-15

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

**Laboratory ID Number:** BB04066

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

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 10:45

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-15

**Laboratory ID Number:** BB04066

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

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

## Batch QC Summary

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

**Description:** Gorgas Landfill - MW-15

**Laboratory ID Number:** BB04066

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-16

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 11:40  
**Customer ID:**  
**Submission Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04067

| 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                      | 3/16/21 09:07 | 3/17/21 10:03       |          | 1.015 | 0.0487                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 10:40       |          | 20.3  | 317                                 | mg/L  | 1.4007   | 8.12       |   |
| * Iron, Total                       | 3/16/21 09:07 | 3/17/21 10:03       |          | 1.015 | 2.96                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:03       |          | 1.015 | 0.0200                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 10:40       |          | 20.3  | 262                                 | mg/L  | 0.4263   | 8.12       |   |
| * Sodium, Total                     | 3/16/21 09:07 | 3/17/21 10:03       |          | 1.015 | 35.2                                | mg/L  | 0.02030  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 11:54       |          | 1.015 | 2.90                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | 0.00257                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | 0.0127                              | mg/L  | 0.000101 | 0.000203   |   |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | 0.0100                              | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | 0.000486                            | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | 7.98                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 17:56       |          | 5.075 | 3.22                                | mg/L  | 0.000340 | 0.001015   |   |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 12:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 16:55       |          | 5.075 | 3.15                                | mg/L  | 0.000340 | 0.001015   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 12:38        |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 3/4/21 14:47  | 3/3/21 12:09        |          | 1     | 371                                 | mg/L  |          | 0.10       |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: TJW</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 2/25/21 10:55 | 3/2/21 09:30        |          | 1     | 2480                                | mg/L  |          | 125        |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-16

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 11:40  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04067

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/4/21 14:47  | 3/4/21 14:47        |          | 1  | 370     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/4/21 14:47  | 3/4/21 14:47        |          | 1  | 0.14    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500CI E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:19 | 2/25/21 11:19       |          | 1  | 3.08    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 15:53 | 2/25/21 15:53       |          | 1  | 0.161   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 11:54 | 2/26/21 11:54       |          | 50 | 1330    | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 2/23/21 11:37 | 2/23/21 11:37       |          |    | 2563.12 | uS/cm |       |     | FA |
| pH   | 2/23/21 11:37 | 2/23/21 11:37       |          |    | 6.47    | SU    |       |     | FA |
| Temperature                                  | 2/23/21 11:37 | 2/23/21 11:37       |          |    | 19.08   | C     |       |     | FA |
| Turbidity                                    | 2/23/21 11:37 | 2/23/21 11:37       |          |    | 0.08    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 11:40

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-16

**Laboratory ID Number:** BB04067

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

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



## Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 11:40

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-16

**Laboratory ID Number:** BB04067

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-16 DUP

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 11:40  
**Customer ID:**  
**Submission Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04068

| 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                      | 3/16/21 09:07 | 3/17/21 10:06       |          | 1.015 | 0.0475                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 10:44       |          | 20.3  | 319                                 | mg/L  | 1.4007   | 8.12       |   |
| * Iron, Total                       | 3/16/21 09:07 | 3/17/21 10:06       |          | 1.015 | 2.90                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:06       |          | 1.015 | 0.0197                              | mg/L  | 0.007105 | 0.01999956 | J |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 10:44       |          | 20.3  | 264                                 | mg/L  | 0.4263   | 8.12       |   |
| * Sodium, Total                     | 3/16/21 09:07 | 3/17/21 10:06       |          | 1.015 | 34.7                                | mg/L  | 0.02030  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 11:58       |          | 1.015 | 2.87                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | 0.00245                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | 0.0123                              | mg/L  | 0.000101 | 0.000203   |   |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | 0.0100                              | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | 0.000524                            | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | 8.12                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 18:00       |          | 5.075 | 3.11                                | mg/L  | 0.000340 | 0.001015   |   |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 12:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 16:59       |          | 5.075 | 3.13                                | mg/L  | 0.000340 | 0.001015   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 12:40        |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09        |          | 1     | 475                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: TJW</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 2/25/21 10:55 | 3/2/21 09:30        |          | 1     | 2440                                | mg/L  |          | 125        |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-16 DUP

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 11:40  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04068

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 475     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 0.18    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:20 | 2/25/21 11:20       |          | 1  | 3.08    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 15:54 | 2/25/21 15:54       |          | 1  | 0.163   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 11:55 | 2/26/21 11:55       |          | 50 | 1320    | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 2/23/21 11:37 | 2/23/21 11:37       |          |    | 2563.12 | uS/cm |       |     | FA |
| pH   | 2/23/21 11:37 | 2/23/21 11:37       |          |    | 6.47    | SU    |       |     | FA |
| Temperature                                  | 2/23/21 11:37 | 2/23/21 11:37       |          |    | 19.08   | C     |       |     | FA |
| Turbidity                                    | 2/23/21 11:37 | 2/23/21 11:37       |          |    | 0.08    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 11:40

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-16 DUP

**Laboratory ID Number:** BB04068

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

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

## Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 11:40

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-16 DUP

**Laboratory ID Number:** BB04068

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-17R

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 12:53  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04069

| Name                                | Prepared      | Analyzed      | Vio Spec            | DF     | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------|---------------------|--------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               |               | <b>Analyst: RDA</b> |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 3/16/21 09:07 | 3/17/21 10:10 |                     | 1.015  | 0.0536                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 10:47 |                     | 20.3   | 389                                 | mg/L  | 1.4007   | 8.12       |   |
| * Iron, Total                       | 3/16/21 09:07 | 3/19/21 10:47 |                     | 20.3   | 23.4                                | mg/L  | 0.1624   | 0.812      |   |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:10 |                     | 1.015  | 0.0569                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 10:47 |                     | 20.3   | 429                                 | mg/L  | 0.4263   | 8.12       |   |
| * Sodium, Total                     | 3/16/21 09:07 | 3/19/21 10:47 |                     | 20.3   | 37.8                                | mg/L  | 0.406    | 8.12       |   |
| <b>Analytical Method: EPA 200.7</b> |               |               | <b>Analyst: RDA</b> |        |                                     |       |          |            |   |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 13:18 |                     | 10.15  | 21.4                                | mg/L  | 0.08120  | 0.406      |   |
| <b>Analytical Method: EPA 200.8</b> |               |               | <b>Analyst: DLJ</b> |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | 0.00190                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | 0.0130                              | mg/L  | 0.000101 | 0.000203   |   |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | 0.385                               | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | 0.000159                            | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | 7.36                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 18:03 |                     | 92.365 | 23.3                                | mg/L  | 0.006188 | 0.018473   |   |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | 0.000778                            | mg/L  | 0.000507 | 0.001015   | J |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 12:26 |                     | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               |               | <b>Analyst: DLJ</b> |        |                                     |       |          |            |   |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 17:03 |                     | 92.365 | 20.9                                | mg/L  | 0.006188 | 0.018473   |   |
| <b>Analytical Method: EPA 245.1</b> |               |               | <b>Analyst: ABB</b> |        |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 12:43  |                     | 1      | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               |               | <b>Analyst: JAG</b> |        |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09  |                     | 1      | 212                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               |               | <b>Analyst: TJW</b> |        |                                     |       |          |            |   |
| * Solids, Dissolved                 | 2/25/21 10:55 | 3/2/21 09:30  |                     | 1      | 3930                                | mg/L  |          | 250        |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-17R

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 12:53  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04069

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1   | 212     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1   | 0.03    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:22 | 2/25/21 11:22       |          | 1   | 2.36    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 15:56 | 2/25/21 15:56       |          | 1   | 0.154   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 11:56 | 2/26/21 11:56       |          | 100 | 2380    | mg/L  | 50.00 | 100 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 2/23/21 12:51 | 2/23/21 12:51       |          |     | 3239.73 | uS/cm |       |     | FA |
| pH   | 2/23/21 12:51 | 2/23/21 12:51       |          |     | 5.91    | SU    |       |     | FA |
| Temperature                                  | 2/23/21 12:51 | 2/23/21 12:51       |          |     | 21.27   | C     |       |     | FA |
| Turbidity                                    | 2/23/21 12:51 | 2/23/21 12:51       |          |     | 0.47    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 12:53

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-17R

**Laboratory ID Number:** BB04069

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

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



## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 2/23/21 12:53  
**Customer ID:**  
**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-17R

**Laboratory ID Number:** BB04069

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-18

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 14:00  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04070

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL       | Q  |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|----------|----|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |          |    |
| * Boron, Total                      | 3/16/21 09:07 | 3/17/21 10:13       |          | 1.015 | 0.0343                              | mg/L  | 0.030000 | 0.1015   | J  |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 10:50       |          | 20.3  | 284                                 | mg/L  | 1.4007   | 8.12     | RA |
| * Iron, Total                       | 3/16/21 09:07 | 3/17/21 10:13       |          | 1.015 | 0.00812                             | mg/L  | 0.008120 | 0.0406   | J  |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:13       |          | 1.015 | 0.0627                              | mg/L  | 0.007105 | 0.019999 | R  |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 10:50       |          | 20.3  | 287                                 | mg/L  | 0.4263   | 8.12     | RA |
| * Sodium, Total                     | 3/16/21 09:07 | 3/17/21 10:13       |          | 1.015 | 35.7                                | mg/L  | 0.02030  | 0.406    |    |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       |                                     |       |          |          |    |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 12:04       |          | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406   | U  |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |          |    |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015 | U  |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203 | U  |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | 0.0103                              | mg/L  | 0.000101 | 0.000203 |    |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015 | U  |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203 | U  |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015 | U  |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203 | U  |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203 | U  |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | 0.000120                            | mg/L  | 0.000068 | 0.000203 | J  |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | 6.73                                | mg/L  | 0.169505 | 0.5075   |    |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | 0.000224                            | mg/L  | 0.000068 | 0.000203 |    |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | 0.00310                             | mg/L  | 0.000507 | 0.001015 |    |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 12:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203 | U  |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |          |    |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 10:41       |          | 1.015 | 0.000169                            | mg/L  | 0.000068 | 0.000203 | J  |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |          |    |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 12:45        |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005   | U  |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |          |    |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09        |          | 1     | 212                                 | mg/L  |          | 0.1      |    |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: TJW</b> |          |       |                                     |       |          |          |    |
| * Solids, Dissolved                 | 2/25/21 10:55 | 3/2/21 09:30        |          | 1     | 2570                                | mg/L  |          | 125      |    |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-18

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 14:00  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04070

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 212     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 0.12    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:23 | 2/25/21 11:23       |          | 1  | 1.34    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 15:57 | 2/25/21 15:57       |          | 1  | 0.290   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 11:57 | 2/26/21 11:57       |          | 50 | 1560    | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 2/23/21 13:58 | 2/23/21 13:58       |          |    | 2615.49 | uS/cm |       |     | FA |
| pH   | 2/23/21 13:58 | 2/23/21 13:58       |          |    | 6.47    | SU    |       |     | FA |
| Temperature                                  | 2/23/21 13:58 | 2/23/21 13:58       |          |    | 20.34   | C     |       |     | FA |
| Turbidity                                    | 2/23/21 13:58 | 2/23/21 13:58       |          |    | 1.01    | NTU   |       |     | FA |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 14:00

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-18

**Laboratory ID Number:** BB04070

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 2/23/21 14:00  
**Customer ID:**  
**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-18

**Laboratory ID Number:** BB04070

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-12V

**Location Code:** WMWGORLF  
**Collected:** 2/24/21 08:38  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04071

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 3/16/21 09:07 | 3/17/21 10:30       |          | 1.015 | 0.160                               | mg/L  | 0.030000 | 0.1015     |   |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 11:07       |          | 20.3  | 293                                 | mg/L  | 1.4007   | 8.12       |   |
| * Iron, Total                       | 3/16/21 09:07 | 3/17/21 10:30       |          | 1.015 | 3.84                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:30       |          | 1.015 | 0.345                               | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 11:07       |          | 20.3  | 194                                 | mg/L  | 0.4263   | 8.12       |   |
| * Sodium, Total                     | 3/16/21 09:07 | 3/19/21 11:07       |          | 20.3  | 109                                 | mg/L  | 0.406    | 8.12       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 12:28       |          | 1.015 | 3.87                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | 0.00584                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | 0.0185                              | mg/L  | 0.000101 | 0.000203   |   |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | 0.000378                            | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | 0.00174                             | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | 7.27                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | 0.523                               | mg/L  | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 12:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 11:03       |          | 1.015 | 0.512                               | mg/L  | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 13:01        |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09        |          | 1     | 218                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: TJW</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 3/1/21 16:45  | 3/3/21 09:00        |          | 1     | 2240                                | mg/L  |          | 125        |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-12V

**Location Code:** WMWGORLF  
**Collected:** 2/24/21 08:38  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04071

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 218     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 0.18    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:41 | 2/25/21 11:41       |          | 8  | 101     | mg/L  | 4.00  | 8   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 15:58 | 2/25/21 15:58       |          | 1  | 0.170   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 11:59 | 2/26/21 11:59       |          | 50 | 1220    | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 2/24/21 08:34 | 2/24/21 08:34       |          |    | 2603.60 | uS/cm |       |     | FA |
| pH   | 2/24/21 08:34 | 2/24/21 08:34       |          |    | 6.83    | SU    |       |     | FA |
| Temperature                                  | 2/24/21 08:34 | 2/24/21 08:34       |          |    | 20.02   | C     |       |     | FA |
| Turbidity                                    | 2/24/21 08:34 | 2/24/21 08:34       |          |    | 0.11    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/24/21 08:38

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-12V

**Laboratory ID Number:** BB04071

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec  | Limit       |       |       |
| BB04156 | Calcium, Total         | mg/L  | 0.00281    | 0.152    | 5.00  | 333     | 332     | 5.12     | 4.25 to 5.75       | 107  | 70.0 to 130 | 0.401 | 20.0  |
| BB04156 | Antimony, Total        | mg/L  | 0.000196   | 0.00100  | 0.10  | 0.0980  | 0.0989  | 0.0942   | 0.0850 to 0.115    | 98.0 | 70.0 to 130 | 0.914 | 20.0  |
| BB04156 | Thallium, Total        | mg/L  | -0.0000241 | 0.000147 | 0.10  | 0.0950  | 0.0964  | 0.0951   | 0.0850 to 0.115    | 95.0 | 70.0 to 130 | 1.46  | 20.0  |
| BB04156 | Arsenic, Total         | mg/L  | 0.0000554  | 0.000147 | 0.10  | 0.103   | 0.107   | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 3.81  | 20.0  |
| BB04156 | Molybdenum, Total      | mg/L  | 0.0000035  | 0.000147 | 0.10  | 0.0996  | 0.101   | 0.0987   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 1.40  | 20.0  |
| BB04156 | Manganese, Total       | mg/L  | 0.000015   | 0.000147 | 0.10  | 2.16    | 2.19    | 0.0992   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 1.38  | 20.0  |
| BB04156 | Sodium, Total          | mg/L  | 0.00298    | 0.0660   | 5.00  | 36.7    | 36.2    | 5.15     | 4.25 to 5.75       | 109  | 70.0 to 130 | 1.24  | 20.0  |
| BB04156 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0973  | 0.0969  | 0.0984   | 0.0850 to 0.115    | 97.3 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cobalt, Total          | mg/L  | -0.0000279 | 0.000147 | 0.10  | 0.138   | 0.137   | 0.102    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.727 | 20.0  |
| BB04156 | Iron, Dissolved        | mg/L  | 0.000207   | 0.0176   | 0.2   | 1.85    | 1.86    | 0.205    | 0.170 to 0.230     | 80.0 | 70.0 to 130 | 0.539 | 20.0  |
| BB04156 | Iron, Total            | mg/L  | 0.00121    | 0.0176   | 0.2   | 2.62    | 2.61    | 0.209    | 0.170 to 0.230     | 90.0 | 70.0 to 130 | 0.382 | 20.0  |
| BB04156 | Mercury, Total by CVAA | mg/L  | 0.0000917  | 0.000500 | 0.004 | 0.00422 | 0.00461 | 0.00412  | 0.00340 to 0.00460 | 106  | 70.0 to 130 | 8.83  | 20.0  |
| BB04156 | Manganese, Dissolved   | mg/L  | 0.0000065  | 0.000147 | 0.10  | 2.14    | 2.13    | 0.0997   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 0.468 | 20.0  |
| BB04156 | Barium, Total          | mg/L  | -0.0000324 | 0.000200 | 0.10  | 0.112   | 0.113   | 0.0999   | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.889 | 20.0  |
| BB04156 | Potassium, Total       | mg/L  | -0.00457   | 0.367    | 10.0  | 16.4    | 16.5    | 10.3     | 8.50 to 11.5       | 103  | 70.0 to 130 | 0.608 | 20.0  |
| BB04156 | Lead, Total            | mg/L  | 0.0000054  | 0.000147 | 0.10  | 0.0970  | 0.0974  | 0.0981   | 0.0850 to 0.115    | 97.0 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Beryllium, Total       | mg/L  | -0.0000045 | 0.000880 | 0.10  | 0.0955  | 0.0941  | 0.0942   | 0.0850 to 0.115    | 95.5 | 70.0 to 130 | 1.48  | 20.0  |
| BB04156 | Boron, Total           | mg/L  | 0.0138     | 0.0650   | 1.00  | 1.09    | 1.09    | 1.03     | 0.850 to 1.15      | 105  | 70.0 to 130 | 0.00  | 20.0  |
| BB04156 | Chromium, Total        | mg/L  | -0.0000886 | 0.000440 | 0.10  | 0.0994  | 0.0988  | 0.0985   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 0.605 | 20.0  |
| BB04156 | Lithium, Total         | mg/L  | -0.0000484 | 0.0154   | 0.200 | 0.366   | 0.362   | 0.207    | 0.170 to 0.230     | 145  | 70.0 to 130 | 1.10  | 20.0  |
| BB04156 | Magnesium, Total       | mg/L  | 0.00253    | 0.0462   | 5.00  | 351     | 349     | 5.15     | 4.25 to 5.75       | 145  | 70.0 to 130 | 0.640 | 20.0  |
| BB04156 | Selenium, Total        | mg/L  | -0.0000277 | 0.00100  | 0.10  | 0.102   | 0.103   | 0.102    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.976 | 20.0  |

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



## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 2/24/21 08:38  
**Customer ID:**  
**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-12V

**Laboratory ID Number:** BB04071

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB04073 | Chloride                   | mg/L  | -0.0751 | 0.500    | 10.0  | 12.1 | 0.137            | 10.8     | 9.00 to 11.0   | 121  | 80.0 to 120 | 0.00  | 20.0       |
| BB04073 | Sulfate                    | mg/L  | -0.310  | 0.500    | 20.0  | 18.7 | -0.318           | 18.9     | 18.0 to 22.0   | 93.5 | 80.0 to 120 | 0.00  | 20.0       |
| BB04156 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 224              | 52.0     | 45.0 to 55.0   |      |             | 2.21  | 10.0       |
| BB04073 | Fluoride                   | mg/L  | 0.0184  | 0.0500   | 2.50  | 2.53 | 0.0137           | 2.63     | 2.25 to 2.75   | 101  | 80.0 to 120 | 0.00  | 20.0       |
| BB04155 | Solids, Dissolved          | mg/L  | 2.00    | 25.0     |       |      | 3120             | 50.0     | 40.0 to 60.0   |      |             | 0.808 | 5.00       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-12

**Location Code:** WMWGORLF  
**Collected:** 2/24/21 09:48  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04072

| Name                                | Prepared      | Analyzed            | Vio Spec | DF                                  | Results      | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------------------------------------|--------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          | <b>Preparation Method: EPA 1638</b> |              |       |          |            |   |
| * Boron, Total                      | 3/16/21 09:07 | 3/17/21 10:33       |          | 1.015                               | 0.193        | mg/L  | 0.030000 | 0.1015     |   |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 11:11       |          | 50.75                               | 346          | mg/L  | 3.50175  | 20.3       |   |
| * Iron, Total                       | 3/16/21 09:07 | 3/19/21 11:11       |          | 50.75                               | 165          | mg/L  | 0.40600  | 2.03       |   |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:33       |          | 1.015                               | 0.0949       | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 11:11       |          | 50.75                               | 370          | mg/L  | 1.06575  | 20.3       |   |
| * Sodium, Total                     | 3/16/21 09:07 | 3/19/21 11:11       |          | 50.75                               | 46.2         | mg/L  | 1.0150   | 20.3       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |                                     |              |       |          |            |   |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 13:22       |          | 101.5                               | 155          | mg/L  | 0.8120   | 4.06       |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          | <b>Preparation Method: EPA 1638</b> |              |       |          |            |   |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | Not Detected | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | 0.0516       | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | 0.0123       | mg/L  | 0.000101 | 0.000203   |   |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | Not Detected | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | Not Detected | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | Not Detected | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | 0.0442       | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | 0.000178     | mg/L  | 0.000068 | 0.000203   | J |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | 0.000088     | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | 22.2         | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 18:18       |          | 92.365                              | 19.6         | mg/L  | 0.006188 | 0.018473   |   |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | Not Detected | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 12:54       |          | 1.015                               | Not Detected | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |                                     |              |       |          |            |   |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 17:06       |          | 92.365                              | 19.3         | mg/L  | 0.006188 | 0.018473   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |                                     |              |       |          |            |   |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 13:04        |          | 1                                   | Not Detected | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |                                     |              |       |          |            |   |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09        |          | 1                                   | 281          | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: TJW</b> |          |                                     |              |       |          |            |   |
| * Solids, Dissolved                 | 3/1/21 16:45  | 3/3/21 09:00        |          | 1                                   | 3810         | mg/L  |          | 166.7      |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-12

**Location Code:** WMWGORLF  
**Collected:** 2/24/21 09:48  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04072

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1   | 281     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1   | 0.02    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:25 | 2/25/21 11:25       |          | 1   | 11.2    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 15:59 | 2/25/21 15:59       |          | 1   | 0.172   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 12:00 | 2/26/21 12:00       |          | 100 | 2280    | mg/L  | 50.00 | 100 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 2/24/21 09:45 | 2/24/21 09:45       |          |     | 3570.82 | uS/cm |       |     | FA |
| pH   | 2/24/21 09:45 | 2/24/21 09:45       |          |     | 5.83    | SU    |       |     | FA |
| Temperature                                  | 2/24/21 09:45 | 2/24/21 09:45       |          |     | 20.29   | C     |       |     | FA |
| Turbidity                                    | 2/24/21 09:45 | 2/24/21 09:45       |          |     | 3.19    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/24/21 09:48

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-12

**Laboratory ID Number:** BB04072

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec  | Limit       |       |       |
| BB04156 | Calcium, Total         | mg/L  | 0.00281    | 0.152    | 5.00  | 333     | 332     | 5.12     | 4.25 to 5.75       | 107  | 70.0 to 130 | 0.401 | 20.0  |
| BB04156 | Antimony, Total        | mg/L  | 0.000196   | 0.00100  | 0.10  | 0.0980  | 0.0989  | 0.0942   | 0.0850 to 0.115    | 98.0 | 70.0 to 130 | 0.914 | 20.0  |
| BB04156 | Thallium, Total        | mg/L  | -0.0000241 | 0.000147 | 0.10  | 0.0950  | 0.0964  | 0.0951   | 0.0850 to 0.115    | 95.0 | 70.0 to 130 | 1.46  | 20.0  |
| BB04156 | Barium, Total          | mg/L  | -0.0000324 | 0.000200 | 0.10  | 0.112   | 0.113   | 0.0999   | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.889 | 20.0  |
| BB04156 | Potassium, Total       | mg/L  | -0.00457   | 0.367    | 10.0  | 16.4    | 16.5    | 10.3     | 8.50 to 11.5       | 103  | 70.0 to 130 | 0.608 | 20.0  |
| BB04156 | Lead, Total            | mg/L  | 0.0000054  | 0.000147 | 0.10  | 0.0970  | 0.0974  | 0.0981   | 0.0850 to 0.115    | 97.0 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0973  | 0.0969  | 0.0984   | 0.0850 to 0.115    | 97.3 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cobalt, Total          | mg/L  | -0.0000279 | 0.000147 | 0.10  | 0.138   | 0.137   | 0.102    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.727 | 20.0  |
| BB04156 | Iron, Dissolved        | mg/L  | 0.000207   | 0.0176   | 0.2   | 1.85    | 1.86    | 0.205    | 0.170 to 0.230     | 80.0 | 70.0 to 130 | 0.539 | 20.0  |
| BB04156 | Iron, Total            | mg/L  | 0.00121    | 0.0176   | 0.2   | 2.62    | 2.61    | 0.209    | 0.170 to 0.230     | 90.0 | 70.0 to 130 | 0.382 | 20.0  |
| BB04156 | Mercury, Total by CVAA | mg/L  | 0.0000917  | 0.000500 | 0.004 | 0.00422 | 0.00461 | 0.00412  | 0.00340 to 0.00460 | 106  | 70.0 to 130 | 8.83  | 20.0  |
| BB04156 | Manganese, Dissolved   | mg/L  | 0.0000065  | 0.000147 | 0.10  | 2.14    | 2.13    | 0.0997   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 0.468 | 20.0  |
| BB04156 | Beryllium, Total       | mg/L  | -0.0000045 | 0.000880 | 0.10  | 0.0955  | 0.0941  | 0.0942   | 0.0850 to 0.115    | 95.5 | 70.0 to 130 | 1.48  | 20.0  |
| BB04156 | Boron, Total           | mg/L  | 0.0138     | 0.0650   | 1.00  | 1.09    | 1.09    | 1.03     | 0.850 to 1.15      | 105  | 70.0 to 130 | 0.00  | 20.0  |
| BB04156 | Chromium, Total        | mg/L  | -0.0000886 | 0.000440 | 0.10  | 0.0994  | 0.0988  | 0.0985   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 0.605 | 20.0  |
| BB04156 | Lithium, Total         | mg/L  | -0.0000484 | 0.0154   | 0.200 | 0.366   | 0.362   | 0.207    | 0.170 to 0.230     | 145  | 70.0 to 130 | 1.10  | 20.0  |
| BB04156 | Magnesium, Total       | mg/L  | 0.00253    | 0.0462   | 5.00  | 351     | 349     | 5.15     | 4.25 to 5.75       | 145  | 70.0 to 130 | 0.640 | 20.0  |
| BB04156 | Selenium, Total        | mg/L  | -0.0000277 | 0.00100  | 0.10  | 0.102   | 0.103   | 0.102    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.976 | 20.0  |
| BB04156 | Manganese, Total       | mg/L  | 0.000015   | 0.000147 | 0.10  | 2.16    | 2.19    | 0.0992   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 1.38  | 20.0  |
| BB04156 | Sodium, Total          | mg/L  | 0.00298    | 0.0660   | 5.00  | 36.7    | 36.2    | 5.15     | 4.25 to 5.75       | 109  | 70.0 to 130 | 1.24  | 20.0  |
| BB04156 | Arsenic, Total         | mg/L  | 0.0000554  | 0.000147 | 0.10  | 0.103   | 0.107   | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 3.81  | 20.0  |
| BB04156 | Molybdenum, Total      | mg/L  | 0.0000035  | 0.000147 | 0.10  | 0.0996  | 0.101   | 0.0987   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 1.40  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 2/24/21 09:48  
**Customer ID:**  
**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill - MW-12

**Laboratory ID Number:** BB04072

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB04073 | Chloride                   | mg/L  | -0.0751 | 0.500    | 10.0  | 12.1 | 0.137            | 10.8     | 9.00 to 11.0   | 121  | 80.0 to 120 | 0.00  | 20.0       |
| BB04073 | Sulfate                    | mg/L  | -0.310  | 0.500    | 20.0  | 18.7 | -0.318           | 18.9     | 18.0 to 22.0   | 93.5 | 80.0 to 120 | 0.00  | 20.0       |
| BB04156 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 224              | 52.0     | 45.0 to 55.0   |      |             | 2.21  | 10.0       |
| BB04155 | Solids, Dissolved          | mg/L  | 2.00    | 25.0     |       |      | 3120             | 50.0     | 40.0 to 60.0   |      |             | 0.808 | 5.00       |
| BB04073 | Fluoride                   | mg/L  | 0.0184  | 0.0500   | 2.50  | 2.53 | 0.0137           | 2.63     | 2.25 to 2.75   | 101  | 80.0 to 120 | 0.00  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill Field Blank-1

**Location Code:** WMWGORLFFB  
**Collected:** 2/24/21 10:20  
**Customer ID:**  
**Submittal Date:** 2/24/21 13:49

**Laboratory ID Number:** BB04073

| Name                                       | Prepared      | Analyzed      | Vio Spec            | DF    | Results                             | Units | MDL      | RL         | Q |
|--|---------------|---------------|---------------------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b>        |               |               | <b>Analyst: RDA</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                             | 3/16/21 09:07 | 3/17/21 10:37 |                     | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                           | 3/16/21 09:07 | 3/17/21 10:37 |                     | 1.015 | Not Detected                        | mg/L  | 0.070035 | 0.406      | U |
| * Iron, Total                              | 3/16/21 09:07 | 3/17/21 10:37 |                     | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| * Lithium, Total                           | 3/16/21 09:07 | 3/17/21 10:37 |                     | 1.015 | Not Detected                        | mg/L  | 0.007105 | 0.01999956 | U |
| * Magnesium, Total                         | 3/16/21 09:07 | 3/17/21 10:37 |                     | 1.015 | Not Detected                        | mg/L  | 0.021315 | 0.406      | U |
| * Sodium, Total                            | 3/16/21 09:07 | 3/17/21 10:37 |                     | 1.015 | Not Detected                        | mg/L  | 0.02030  | 0.406      | U |
| <b>Analytical Method: EPA 200.8</b>        |               |               | <b>Analyst: DLJ</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                          | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                           | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Barium, Total                            | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000101 | 0.000203   | U |
| * Beryllium, Total                         | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                           | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                          | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                            | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                              | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                        | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Manganese, Total                         | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | 0.000110                            | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                         | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.169505 | 0.5075     | U |
| * Selenium, Total                          | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                          | 2/26/21 06:45 | 2/26/21 12:58 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 245.1</b>        |               |               | <b>Analyst: ABB</b> |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA                   | 3/8/21 11:16  | 3/9/21 13:06  |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2540C</b>         |               |               | <b>Analyst: TJW</b> |       |                                     |       |          |            |   |
| * Solids, Dissolved                        | 3/1/21 16:45  | 3/3/21 09:00  |                     | 1     | Not Detected                        | mg/L  |          | 25         | U |
| <b>Analytical Method: SM4500CI E</b>       |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Chloride                                 | 2/25/21 11:26 | 2/25/21 11:26 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |
| <b>Analytical Method: SM4500F G 2017</b>   |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Fluoride                                 | 2/25/21 16:00 | 2/25/21 16:00 |                     | 1     | Not Detected                        | mg/L  | 0.06     | 0.1        | U |
| <b>Analytical Method: SM4500SO4 E 2011</b> |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Sulfate                                  | 2/26/21 12:01 | 2/26/21 12:01 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |

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

**Comments:** Matrix spike recovery for Chloride is outside of the specification limit. LBM 3/1/2021

# Batch QC Summary

**Customer Account:** WMWGORLFFB

**Sample Date:** 2/24/21 10:20

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill Field Blank-1

**Laboratory ID Number:** BB04073

| Sample  | Analysis               | Units | MB         | MB       |       |         |         | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       |            | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec  | Limit       |       |       |
| BB04156 | Calcium, Total         | mg/L  | 0.00281    | 0.152    | 5.00  | 333     | 332     | 5.12     | 4.25 to 5.75       | 107  | 70.0 to 130 | 0.401 | 20.0  |
| BB04156 | Antimony, Total        | mg/L  | 0.000196   | 0.00100  | 0.10  | 0.0980  | 0.0989  | 0.0942   | 0.0850 to 0.115    | 98.0 | 70.0 to 130 | 0.914 | 20.0  |
| BB04156 | Thallium, Total        | mg/L  | -0.0000241 | 0.000147 | 0.10  | 0.0950  | 0.0964  | 0.0951   | 0.0850 to 0.115    | 95.0 | 70.0 to 130 | 1.46  | 20.0  |
| BB04156 | Barium, Total          | mg/L  | -0.0000324 | 0.000200 | 0.10  | 0.112   | 0.113   | 0.0999   | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.889 | 20.0  |
| BB04156 | Potassium, Total       | mg/L  | -0.00457   | 0.367    | 10.0  | 16.4    | 16.5    | 10.3     | 8.50 to 11.5       | 103  | 70.0 to 130 | 0.608 | 20.0  |
| BB04156 | Lead, Total            | mg/L  | 0.0000054  | 0.000147 | 0.10  | 0.0970  | 0.0974  | 0.0981   | 0.0850 to 0.115    | 97.0 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0973  | 0.0969  | 0.0984   | 0.0850 to 0.115    | 97.3 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cobalt, Total          | mg/L  | -0.0000279 | 0.000147 | 0.10  | 0.138   | 0.137   | 0.102    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.727 | 20.0  |
| BB04156 | Iron, Total            | mg/L  | 0.00121    | 0.0176   | 0.2   | 2.62    | 2.61    | 0.209    | 0.170 to 0.230     | 90.0 | 70.0 to 130 | 0.382 | 20.0  |
| BB04156 | Mercury, Total by CVAA | mg/L  | 0.0000917  | 0.000500 | 0.004 | 0.00422 | 0.00461 | 0.00412  | 0.00340 to 0.00460 | 106  | 70.0 to 130 | 8.83  | 20.0  |
| BB04156 | Beryllium, Total       | mg/L  | -0.0000045 | 0.000880 | 0.10  | 0.0955  | 0.0941  | 0.0942   | 0.0850 to 0.115    | 95.5 | 70.0 to 130 | 1.48  | 20.0  |
| BB04156 | Boron, Total           | mg/L  | 0.0138     | 0.0650   | 1.00  | 1.09    | 1.09    | 1.03     | 0.850 to 1.15      | 105  | 70.0 to 130 | 0.00  | 20.0  |
| BB04156 | Chromium, Total        | mg/L  | -0.0000886 | 0.000440 | 0.10  | 0.0994  | 0.0988  | 0.0985   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 0.605 | 20.0  |
| BB04156 | Lithium, Total         | mg/L  | -0.0000484 | 0.0154   | 0.200 | 0.366   | 0.362   | 0.207    | 0.170 to 0.230     | 145  | 70.0 to 130 | 1.10  | 20.0  |
| BB04156 | Magnesium, Total       | mg/L  | 0.00253    | 0.0462   | 5.00  | 351     | 349     | 5.15     | 4.25 to 5.75       | 145  | 70.0 to 130 | 0.640 | 20.0  |
| BB04156 | Selenium, Total        | mg/L  | -0.0000277 | 0.00100  | 0.10  | 0.102   | 0.103   | 0.102    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.976 | 20.0  |
| BB04156 | Manganese, Total       | mg/L  | 0.000015   | 0.000147 | 0.10  | 2.16    | 2.19    | 0.0992   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 1.38  | 20.0  |
| BB04156 | Sodium, Total          | mg/L  | 0.00298    | 0.0660   | 5.00  | 36.7    | 36.2    | 5.15     | 4.25 to 5.75       | 109  | 70.0 to 130 | 1.24  | 20.0  |
| BB04156 | Arsenic, Total         | mg/L  | 0.0000554  | 0.000147 | 0.10  | 0.103   | 0.107   | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 3.81  | 20.0  |
| BB04156 | Molybdenum, Total      | mg/L  | 0.0000035  | 0.000147 | 0.10  | 0.0996  | 0.101   | 0.0987   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 1.40  | 20.0  |

**Comments:** Matrix spike recovery for Chloride is outside of the specification limit. LBM 3/1/2021

## Batch QC Summary

**Customer Account:** WMWGORLFFB

**Sample Date:** 2/24/21 10:20

**Customer ID:**

**Delivery Date:** 2/24/21 13:49

**Description:** Gorgas Landfill Field Blank-1

**Laboratory ID Number:** BB04073

| Sample  | Analysis          | Units | MB      | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec  | Limit       | Prec  | Prec<br>Limit |
|---------|-------------------|-------|---------|-------------|-------|------|---------------------|----------|-------------------|------|-------------|-------|---------------|
| BB04073 | Sulfate           | mg/L  | -0.310  | 0.500       | 20.0  | 18.7 | -0.318              | 18.9     | 18.0 to 22.0      | 93.5 | 80.0 to 120 | 0.00  | 20.0          |
| BB04073 | Chloride          | mg/L  | -0.0751 | 0.500       | 10.0  | 12.1 | 0.137               | 10.8     | 9.00 to 11.0      | 121  | 80.0 to 120 | 0.00  | 20.0          |
| BB04073 | Fluoride          | mg/L  | 0.0184  | 0.0500      | 2.50  | 2.53 | 0.0137              | 2.63     | 2.25 to 2.75      | 101  | 80.0 to 120 | 0.00  | 20.0          |
| BB04155 | Solids, Dissolved | mg/L  | 2.00    | 25.0        |       |      | 3120                | 50.0     | 40.0 to 60.0      |      |             | 0.808 | 5.00          |

**Comments:** Matrix spike recovery for Chloride is outside of the specification limit. LBM 3/1/2021



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-5

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 11:58  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04150

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 3/16/21 09:07 | 3/17/21 10:40       |          | 1.015 | 0.0369                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 11:14       |          | 20.3  | 394                                 | mg/L  | 1.4007   | 8.12       |   |
| * Iron, Total                       | 3/16/21 09:07 | 3/17/21 10:40       |          | 1.015 | 2.30                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:40       |          | 1.015 | 0.133                               | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 11:14       |          | 20.3  | 413                                 | mg/L  | 0.4263   | 8.12       |   |
| * Sodium, Total                     | 3/16/21 09:07 | 3/19/21 11:14       |          | 20.3  | 56.4                                | mg/L  | 0.406    | 8.12       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 12:35       |          | 1.015 | 2.09                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | 0.000309                            | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | 0.0116                              | mg/L  | 0.000101 | 0.000203   |   |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | 0.00102                             | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | 0.00140                             | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | 6.74                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | 0.384                               | mg/L  | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | 0.00233                             | mg/L  | 0.000507 | 0.001015   |   |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 13:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 11:11       |          | 1.015 | 0.386                               | mg/L  | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 13:09        |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09        |          | 1     | 288                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: TJW</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 3/1/21 16:45  | 3/3/21 09:00        |          | 1     | 3740                                | mg/L  |          | 166.7      |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-5

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 11:58  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04150

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1   | 288     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1   | 0.12    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:42 | 2/25/21 11:42       |          | 1   | 6.19    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 16:14 | 2/25/21 16:14       |          | 1   | 0.287   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 12:40 | 2/26/21 12:40       |          | 100 | 2210    | mg/L  | 50.00 | 100 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 2/23/21 11:54 | 2/23/21 11:54       |          |     | 3701.43 | uS/cm |       |     | FA |
| pH   | 2/23/21 11:54 | 2/23/21 11:54       |          |     | 6.47    | SU    |       |     | FA |
| Temperature                                  | 2/23/21 11:54 | 2/23/21 11:54       |          |     | 19.94   | C     |       |     | FA |
| Turbidity                                    | 2/23/21 11:54 | 2/23/21 11:54       |          |     | 2.58    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 11:58

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-5

**Laboratory ID Number:** BB04150

| Sample  | Analysis               | Units | MB         |          |       |         | Standard |          | Rec                |      | Prec        | Limit |       |
|---------|------------------------|-------|------------|----------|-------|---------|----------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD      | Standard | Limit              | Rec  |             |       | Limit |
| BB04156 | Calcium, Total         | mg/L  | 0.00281    | 0.152    | 5.00  | 333     | 332      | 5.12     | 4.25 to 5.75       | 107  | 70.0 to 130 | 0.401 | 20.0  |
| BB04156 | Arsenic, Total         | mg/L  | 0.0000554  | 0.000147 | 0.10  | 0.103   | 0.107    | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 3.81  | 20.0  |
| BB04156 | Molybdenum, Total      | mg/L  | 0.0000035  | 0.000147 | 0.10  | 0.0996  | 0.101    | 0.0987   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 1.40  | 20.0  |
| BB04156 | Antimony, Total        | mg/L  | 0.000196   | 0.00100  | 0.10  | 0.0980  | 0.0989   | 0.0942   | 0.0850 to 0.115    | 98.0 | 70.0 to 130 | 0.914 | 20.0  |
| BB04156 | Thallium, Total        | mg/L  | -0.0000241 | 0.000147 | 0.10  | 0.0950  | 0.0964   | 0.0951   | 0.0850 to 0.115    | 95.0 | 70.0 to 130 | 1.46  | 20.0  |
| BB04156 | Manganese, Total       | mg/L  | 0.000015   | 0.000147 | 0.10  | 2.16    | 2.19     | 0.0992   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 1.38  | 20.0  |
| BB04156 | Sodium, Total          | mg/L  | 0.00298    | 0.0660   | 5.00  | 36.7    | 36.2     | 5.15     | 4.25 to 5.75       | 109  | 70.0 to 130 | 1.24  | 20.0  |
| BB04156 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0973  | 0.0969   | 0.0984   | 0.0850 to 0.115    | 97.3 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cobalt, Total          | mg/L  | -0.0000279 | 0.000147 | 0.10  | 0.138   | 0.137    | 0.102    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.727 | 20.0  |
| BB04156 | Iron, Dissolved        | mg/L  | 0.000207   | 0.0176   | 0.2   | 1.85    | 1.86     | 0.205    | 0.170 to 0.230     | 80.0 | 70.0 to 130 | 0.539 | 20.0  |
| BB04156 | Iron, Total            | mg/L  | 0.00121    | 0.0176   | 0.2   | 2.62    | 2.61     | 0.209    | 0.170 to 0.230     | 90.0 | 70.0 to 130 | 0.382 | 20.0  |
| BB04156 | Mercury, Total by CVAA | mg/L  | 0.0000917  | 0.000500 | 0.004 | 0.00422 | 0.00461  | 0.00412  | 0.00340 to 0.00460 | 106  | 70.0 to 130 | 8.83  | 20.0  |
| BB04156 | Manganese, Dissolved   | mg/L  | 0.0000065  | 0.000147 | 0.10  | 2.14    | 2.13     | 0.0997   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 0.468 | 20.0  |
| BB04156 | Beryllium, Total       | mg/L  | -0.0000045 | 0.000880 | 0.10  | 0.0955  | 0.0941   | 0.0942   | 0.0850 to 0.115    | 95.5 | 70.0 to 130 | 1.48  | 20.0  |
| BB04156 | Boron, Total           | mg/L  | 0.0138     | 0.0650   | 1.00  | 1.09    | 1.09     | 1.03     | 0.850 to 1.15      | 105  | 70.0 to 130 | 0.00  | 20.0  |
| BB04156 | Chromium, Total        | mg/L  | -0.0000886 | 0.000440 | 0.10  | 0.0994  | 0.0988   | 0.0985   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 0.605 | 20.0  |
| BB04156 | Lithium, Total         | mg/L  | -0.0000484 | 0.0154   | 0.200 | 0.366   | 0.362    | 0.207    | 0.170 to 0.230     | 145  | 70.0 to 130 | 1.10  | 20.0  |
| BB04156 | Magnesium, Total       | mg/L  | 0.00253    | 0.0462   | 5.00  | 351     | 349      | 5.15     | 4.25 to 5.75       | 145  | 70.0 to 130 | 0.640 | 20.0  |
| BB04156 | Selenium, Total        | mg/L  | -0.0000277 | 0.00100  | 0.10  | 0.102   | 0.103    | 0.102    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.976 | 20.0  |
| BB04156 | Barium, Total          | mg/L  | -0.0000324 | 0.000200 | 0.10  | 0.112   | 0.113    | 0.0999   | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.889 | 20.0  |
| BB04156 | Potassium, Total       | mg/L  | -0.00457   | 0.367    | 10.0  | 16.4    | 16.5     | 10.3     | 8.50 to 11.5       | 103  | 70.0 to 130 | 0.608 | 20.0  |
| BB04156 | Lead, Total            | mg/L  | 0.0000054  | 0.000147 | 0.10  | 0.0970  | 0.0974   | 0.0981   | 0.0850 to 0.115    | 97.0 | 70.0 to 130 | 0.412 | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 2/23/21 11:58  
**Customer ID:**  
**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-5

**Laboratory ID Number:** BB04150

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB04157 | Sulfate                    | mg/L  | -0.276  | 0.500    | 20.0  | 19.1 | -0.324           | 19.0     | 18.0 to 22.0   | 95.5 | 80.0 to 120 | 0.00  | 20.0       |
| BB04155 | Solids, Dissolved          | mg/L  | 2.00    | 25.0     |       |      | 3120             | 50.0     | 40.0 to 60.0   |      |             | 0.808 | 5.00       |
| BB04157 | Chloride                   | mg/L  | -0.0488 | 0.500    | 10.0  | 10.3 | 0.135            | 10.1     | 9.00 to 11.0   | 103  | 80.0 to 120 | 0.00  | 20.0       |
| BB04156 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 224              | 52.0     | 45.0 to 55.0   |      |             | 2.21  | 10.0       |
| BB04157 | Fluoride                   | mg/L  | 0.0213  | 0.0500   | 2.50  | 2.51 | 0.0138           | 2.63     | 2.25 to 2.75   | 100  | 80.0 to 120 | 0.00  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-10

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 13:40  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04151

| Name                                | Prepared      | Analyzed            | Vio Spec | DF                                  | Results      | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------------------------------------|--------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          | <b>Preparation Method: EPA 1638</b> |              |       |          |            |   |
| * Boron, Total                      | 3/16/21 09:07 | 3/17/21 10:44       |          | 1.015                               | 0.205        | mg/L  | 0.030000 | 0.1015     |   |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 11:17       |          | 20.3                                | 151          | mg/L  | 1.4007   | 8.12       |   |
| * Iron, Total                       | 3/16/21 09:07 | 3/19/21 11:17       |          | 20.3                                | 11.3         | mg/L  | 0.1624   | 0.812      |   |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:44       |          | 1.015                               | 0.223        | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 11:17       |          | 20.3                                | 74.0         | mg/L  | 0.4263   | 8.12       |   |
| * Sodium, Total                     | 3/16/21 09:07 | 3/19/21 11:17       |          | 20.3                                | 66.5         | mg/L  | 0.406    | 8.12       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |                                     |              |       |          |            |   |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 13:25       |          | 10.15                               | 14.5         | mg/L  | 0.08120  | 0.406      |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          | <b>Preparation Method: EPA 1638</b> |              |       |          |            |   |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | Not Detected | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | 0.00160      | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | 0.0201       | mg/L  | 0.000101 | 0.000203   |   |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | 0.00128      | mg/L  | 0.000406 | 0.001015   |   |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | 0.000148     | mg/L  | 0.000068 | 0.000203   | J |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | Not Detected | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | 0.0167       | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | Not Detected | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | Not Detected | mg/L  | 0.000068 | 0.000203   | U |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | 5.92         | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 18:21       |          | 5.075                               | 1.47         | mg/L  | 0.000340 | 0.001015   |   |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | 0.00217      | mg/L  | 0.000507 | 0.001015   |   |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 13:05       |          | 1.015                               | Not Detected | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |                                     |              |       |          |            |   |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 17:10       |          | 5.075                               | 1.81         | mg/L  | 0.000340 | 0.001015   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |                                     |              |       |          |            |   |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 13:11        |          | 1                                   | Not Detected | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |                                     |              |       |          |            |   |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09        |          | 1                                   | 134          | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: TJW</b> |          |                                     |              |       |          |            |   |
| * Solids, Dissolved                 | 3/1/21 16:45  | 3/3/21 09:00        |          | 1                                   | 1110         | mg/L  |          | 83.3       |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-10

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 13:40  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04151

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 134     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 0.03    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:43 | 2/25/21 11:43       |          | 1  | 3.63    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 16:15 | 2/25/21 16:15       |          | 1  | 0.202   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 12:41 | 2/26/21 12:41       |          | 40 | 747     | mg/L  | 20.00 | 40  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 2/23/21 13:37 | 2/23/21 13:37       |          |    | 1434.52 | uS/cm |       |     | FA |
| pH   | 2/23/21 13:37 | 2/23/21 13:37       |          |    | 6.45    | SU    |       |     | FA |
| Temperature                                  | 2/23/21 13:37 | 2/23/21 13:37       |          |    | 19.52   | C     |       |     | FA |
| Turbidity                                    | 2/23/21 13:37 | 2/23/21 13:37       |          |    | 6.45    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 13:40

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-10

**Laboratory ID Number:** BB04151

| Sample  | Analysis               | Units | MB         |          |       |         | Standard |          | Rec                |      | Prec        | Limit |       |
|---------|------------------------|-------|------------|----------|-------|---------|----------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD      | Standard | Limit              | Rec  |             |       | Limit |
| BB04156 | Calcium, Total         | mg/L  | 0.00281    | 0.152    | 5.00  | 333     | 332      | 5.12     | 4.25 to 5.75       | 107  | 70.0 to 130 | 0.401 | 20.0  |
| BB04156 | Antimony, Total        | mg/L  | 0.000196   | 0.00100  | 0.10  | 0.0980  | 0.0989   | 0.0942   | 0.0850 to 0.115    | 98.0 | 70.0 to 130 | 0.914 | 20.0  |
| BB04156 | Thallium, Total        | mg/L  | -0.0000241 | 0.000147 | 0.10  | 0.0950  | 0.0964   | 0.0951   | 0.0850 to 0.115    | 95.0 | 70.0 to 130 | 1.46  | 20.0  |
| BB04156 | Manganese, Total       | mg/L  | 0.000015   | 0.000147 | 0.10  | 2.16    | 2.19     | 0.0992   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 1.38  | 20.0  |
| BB04156 | Sodium, Total          | mg/L  | 0.00298    | 0.0660   | 5.00  | 36.7    | 36.2     | 5.15     | 4.25 to 5.75       | 109  | 70.0 to 130 | 1.24  | 20.0  |
| BB04156 | Arsenic, Total         | mg/L  | 0.0000554  | 0.000147 | 0.10  | 0.103   | 0.107    | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 3.81  | 20.0  |
| BB04156 | Molybdenum, Total      | mg/L  | 0.0000035  | 0.000147 | 0.10  | 0.0996  | 0.101    | 0.0987   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 1.40  | 20.0  |
| BB04156 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0973  | 0.0969   | 0.0984   | 0.0850 to 0.115    | 97.3 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cobalt, Total          | mg/L  | -0.0000279 | 0.000147 | 0.10  | 0.138   | 0.137    | 0.102    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.727 | 20.0  |
| BB04156 | Iron, Dissolved        | mg/L  | 0.000207   | 0.0176   | 0.2   | 1.85    | 1.86     | 0.205    | 0.170 to 0.230     | 80.0 | 70.0 to 130 | 0.539 | 20.0  |
| BB04156 | Iron, Total            | mg/L  | 0.00121    | 0.0176   | 0.2   | 2.62    | 2.61     | 0.209    | 0.170 to 0.230     | 90.0 | 70.0 to 130 | 0.382 | 20.0  |
| BB04156 | Mercury, Total by CVAA | mg/L  | 0.0000917  | 0.000500 | 0.004 | 0.00422 | 0.00461  | 0.00412  | 0.00340 to 0.00460 | 106  | 70.0 to 130 | 8.83  | 20.0  |
| BB04156 | Manganese, Dissolved   | mg/L  | 0.0000065  | 0.000147 | 0.10  | 2.14    | 2.13     | 0.0997   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 0.468 | 20.0  |
| BB04156 | Barium, Total          | mg/L  | -0.0000324 | 0.000200 | 0.10  | 0.112   | 0.113    | 0.0999   | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.889 | 20.0  |
| BB04156 | Potassium, Total       | mg/L  | -0.00457   | 0.367    | 10.0  | 16.4    | 16.5     | 10.3     | 8.50 to 11.5       | 103  | 70.0 to 130 | 0.608 | 20.0  |
| BB04156 | Lead, Total            | mg/L  | 0.0000054  | 0.000147 | 0.10  | 0.0970  | 0.0974   | 0.0981   | 0.0850 to 0.115    | 97.0 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Beryllium, Total       | mg/L  | -0.0000045 | 0.000880 | 0.10  | 0.0955  | 0.0941   | 0.0942   | 0.0850 to 0.115    | 95.5 | 70.0 to 130 | 1.48  | 20.0  |
| BB04156 | Boron, Total           | mg/L  | 0.0138     | 0.0650   | 1.00  | 1.09    | 1.09     | 1.03     | 0.850 to 1.15      | 105  | 70.0 to 130 | 0.00  | 20.0  |
| BB04156 | Chromium, Total        | mg/L  | -0.0000886 | 0.000440 | 0.10  | 0.0994  | 0.0988   | 0.0985   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 0.605 | 20.0  |
| BB04156 | Lithium, Total         | mg/L  | -0.0000484 | 0.0154   | 0.200 | 0.366   | 0.362    | 0.207    | 0.170 to 0.230     | 145  | 70.0 to 130 | 1.10  | 20.0  |
| BB04156 | Magnesium, Total       | mg/L  | 0.00253    | 0.0462   | 5.00  | 351     | 349      | 5.15     | 4.25 to 5.75       | 145  | 70.0 to 130 | 0.640 | 20.0  |
| BB04156 | Selenium, Total        | mg/L  | -0.0000277 | 0.00100  | 0.10  | 0.102   | 0.103    | 0.102    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.976 | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 2/23/21 13:40  
**Customer ID:**  
**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-10

**Laboratory ID Number:** BB04151

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB04157 | Sulfate                    | mg/L  | -0.276  | 0.500    | 20.0  | 19.1 | -0.324           | 19.0     | 18.0 to 22.0   | 95.5 | 80.0 to 120 | 0.00  | 20.0       |
| BB04156 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 224              | 52.0     | 45.0 to 55.0   |      |             | 2.21  | 10.0       |
| BB04157 | Fluoride                   | mg/L  | 0.0213  | 0.0500   | 2.50  | 2.51 | 0.0138           | 2.63     | 2.25 to 2.75   | 100  | 80.0 to 120 | 0.00  | 20.0       |
| BB04155 | Solids, Dissolved          | mg/L  | 2.00    | 25.0     |       |      | 3120             | 50.0     | 40.0 to 60.0   |      |             | 0.808 | 5.00       |
| BB04157 | Chloride                   | mg/L  | -0.0488 | 0.500    | 10.0  | 10.3 | 0.135            | 10.1     | 9.00 to 11.0   | 103  | 80.0 to 120 | 0.00  | 20.0       |

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



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-20

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 14:50  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04152

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 3/16/21 09:07 | 3/17/21 10:47       |          | 1.015 | 0.110                               | mg/L  | 0.030000 | 0.1015     |   |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 11:21       |          | 20.3  | 343                                 | mg/L  | 1.4007   | 8.12       |   |
| * Iron, Total                       | 3/16/21 09:07 | 3/19/21 11:21       |          | 20.3  | 6.76                                | mg/L  | 0.1624   | 0.812      |   |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:47       |          | 1.015 | 0.270                               | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 11:21       |          | 20.3  | 183                                 | mg/L  | 0.4263   | 8.12       |   |
| * Sodium, Total                     | 3/16/21 09:07 | 3/19/21 11:21       |          | 20.3  | 137                                 | mg/L  | 0.406    | 8.12       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 13:29       |          | 10.15 | 6.75                                | mg/L  | 0.08120  | 0.406      |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | 0.000849                            | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | 0.0167                              | mg/L  | 0.000101 | 0.000203   |   |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | 0.000234                            | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | 0.00108                             | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | 6.09                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | 1.12                                | mg/L  | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 13:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 11:18       |          | 1.015 | 1.12                                | mg/L  | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 13:13        |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09        |          | 1     | 343                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: TJW</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 3/1/21 16:45  | 3/3/21 09:00        |          | 1     | 2460                                | mg/L  |          | 166.7      |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-20

**Location Code:** WMWGORLF  
**Collected:** 2/23/21 14:50  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04152

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 343     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 0.24    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:50 | 2/25/21 11:50       |          | 10 | 129     | mg/L  | 5.00  | 10  |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 16:16 | 2/25/21 16:16       |          | 1  | 0.117   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 12:42 | 2/26/21 12:42       |          | 50 | 1420    | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 2/23/21 14:46 | 2/23/21 14:46       |          |    | 2908.99 | uS/cm |       |     | FA |
| pH   | 2/23/21 14:46 | 2/23/21 14:46       |          |    | 6.75    | SU    |       |     | FA |
| Temperature                                  | 2/23/21 14:46 | 2/23/21 14:46       |          |    | 19.18   | C     |       |     | FA |
| Turbidity                                    | 2/23/21 14:46 | 2/23/21 14:46       |          |    | 0.7     | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 14:50

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-20

**Laboratory ID Number:** BB04152

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec  | Limit       |       |       |
| BB04156 | Calcium, Total         | mg/L  | 0.00281    | 0.152    | 5.00  | 333     | 332     | 5.12     | 4.25 to 5.75       | 107  | 70.0 to 130 | 0.401 | 20.0  |
| BB04156 | Arsenic, Total         | mg/L  | 0.0000554  | 0.000147 | 0.10  | 0.103   | 0.107   | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 3.81  | 20.0  |
| BB04156 | Molybdenum, Total      | mg/L  | 0.0000035  | 0.000147 | 0.10  | 0.0996  | 0.101   | 0.0987   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 1.40  | 20.0  |
| BB04156 | Barium, Total          | mg/L  | -0.0000324 | 0.000200 | 0.10  | 0.112   | 0.113   | 0.0999   | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.889 | 20.0  |
| BB04156 | Potassium, Total       | mg/L  | -0.00457   | 0.367    | 10.0  | 16.4    | 16.5    | 10.3     | 8.50 to 11.5       | 103  | 70.0 to 130 | 0.608 | 20.0  |
| BB04156 | Lead, Total            | mg/L  | 0.0000054  | 0.000147 | 0.10  | 0.0970  | 0.0974  | 0.0981   | 0.0850 to 0.115    | 97.0 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0973  | 0.0969  | 0.0984   | 0.0850 to 0.115    | 97.3 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cobalt, Total          | mg/L  | -0.0000279 | 0.000147 | 0.10  | 0.138   | 0.137   | 0.102    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.727 | 20.0  |
| BB04156 | Iron, Dissolved        | mg/L  | 0.000207   | 0.0176   | 0.2   | 1.85    | 1.86    | 0.205    | 0.170 to 0.230     | 80.0 | 70.0 to 130 | 0.539 | 20.0  |
| BB04156 | Iron, Total            | mg/L  | 0.00121    | 0.0176   | 0.2   | 2.62    | 2.61    | 0.209    | 0.170 to 0.230     | 90.0 | 70.0 to 130 | 0.382 | 20.0  |
| BB04156 | Mercury, Total by CVAA | mg/L  | 0.0000917  | 0.000500 | 0.004 | 0.00422 | 0.00461 | 0.00412  | 0.00340 to 0.00460 | 106  | 70.0 to 130 | 8.83  | 20.0  |
| BB04156 | Manganese, Dissolved   | mg/L  | 0.0000065  | 0.000147 | 0.10  | 2.14    | 2.13    | 0.0997   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 0.468 | 20.0  |
| BB04156 | Antimony, Total        | mg/L  | 0.000196   | 0.00100  | 0.10  | 0.0980  | 0.0989  | 0.0942   | 0.0850 to 0.115    | 98.0 | 70.0 to 130 | 0.914 | 20.0  |
| BB04156 | Thallium, Total        | mg/L  | -0.0000241 | 0.000147 | 0.10  | 0.0950  | 0.0964  | 0.0951   | 0.0850 to 0.115    | 95.0 | 70.0 to 130 | 1.46  | 20.0  |
| BB04156 | Beryllium, Total       | mg/L  | -0.0000045 | 0.000880 | 0.10  | 0.0955  | 0.0941  | 0.0942   | 0.0850 to 0.115    | 95.5 | 70.0 to 130 | 1.48  | 20.0  |
| BB04156 | Boron, Total           | mg/L  | 0.0138     | 0.0650   | 1.00  | 1.09    | 1.09    | 1.03     | 0.850 to 1.15      | 105  | 70.0 to 130 | 0.00  | 20.0  |
| BB04156 | Chromium, Total        | mg/L  | -0.0000886 | 0.000440 | 0.10  | 0.0994  | 0.0988  | 0.0985   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 0.605 | 20.0  |
| BB04156 | Lithium, Total         | mg/L  | -0.0000484 | 0.0154   | 0.200 | 0.366   | 0.362   | 0.207    | 0.170 to 0.230     | 145  | 70.0 to 130 | 1.10  | 20.0  |
| BB04156 | Magnesium, Total       | mg/L  | 0.00253    | 0.0462   | 5.00  | 351     | 349     | 5.15     | 4.25 to 5.75       | 145  | 70.0 to 130 | 0.640 | 20.0  |
| BB04156 | Selenium, Total        | mg/L  | -0.0000277 | 0.00100  | 0.10  | 0.102   | 0.103   | 0.102    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.976 | 20.0  |
| BB04156 | Manganese, Total       | mg/L  | 0.000015   | 0.000147 | 0.10  | 2.16    | 2.19    | 0.0992   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 1.38  | 20.0  |
| BB04156 | Sodium, Total          | mg/L  | 0.00298    | 0.0660   | 5.00  | 36.7    | 36.2    | 5.15     | 4.25 to 5.75       | 109  | 70.0 to 130 | 1.24  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/23/21 14:50

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-20

**Laboratory ID Number:** BB04152

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB04157 | Sulfate                    | mg/L  | -0.276  | 0.500    | 20.0  | 19.1 | -0.324           | 19.0     | 18.0 to 22.0   | 95.5 | 80.0 to 120 | 0.00  | 20.0       |
| BB04156 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 224              | 52.0     | 45.0 to 55.0   |      |             | 2.21  | 10.0       |
| BB04157 | Fluoride                   | mg/L  | 0.0213  | 0.0500   | 2.50  | 2.51 | 0.0138           | 2.63     | 2.25 to 2.75   | 100  | 80.0 to 120 | 0.00  | 20.0       |
| BB04155 | Solids, Dissolved          | mg/L  | 2.00    | 25.0     |       |      | 3120             | 50.0     | 40.0 to 60.0   |      |             | 0.808 | 5.00       |
| BB04157 | Chloride                   | mg/L  | -0.0488 | 0.500    | 10.0  | 10.3 | 0.135            | 10.1     | 9.00 to 11.0   | 103  | 80.0 to 120 | 0.00  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill Field Blank-2

**Location Code:** WMWGORLFFB  
**Collected:** 2/23/21 15:10  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04153

| Name                                       | Prepared      | Analyzed      | Vio Spec            | DF    | Results                             | Units | MDL      | RL         | Q |
|--|---------------|---------------|---------------------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b>        |               |               | <b>Analyst: RDA</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                             | 3/16/21 09:07 | 3/17/21 10:50 |                     | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                           | 3/16/21 09:07 | 3/17/21 10:50 |                     | 1.015 | Not Detected                        | mg/L  | 0.070035 | 0.406      | U |
| * Iron, Total                              | 3/16/21 09:07 | 3/17/21 10:50 |                     | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| * Lithium, Total                           | 3/16/21 09:07 | 3/17/21 10:50 |                     | 1.015 | Not Detected                        | mg/L  | 0.007105 | 0.01999956 | U |
| * Magnesium, Total                         | 3/16/21 09:07 | 3/17/21 10:50 |                     | 1.015 | Not Detected                        | mg/L  | 0.021315 | 0.406      | U |
| * Sodium, Total                            | 3/16/21 09:07 | 3/17/21 10:50 |                     | 1.015 | Not Detected                        | mg/L  | 0.02030  | 0.406      | U |
| <b>Analytical Method: EPA 200.8</b>        |               |               | <b>Analyst: DLJ</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                          | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                           | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Barium, Total                            | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000101 | 0.000203   | U |
| * Beryllium, Total                         | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                           | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                          | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                            | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                              | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                        | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Manganese, Total                         | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Potassium, Total                         | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.169505 | 0.5075     | U |
| * Selenium, Total                          | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                          | 2/26/21 06:45 | 2/26/21 13:12 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 245.1</b>        |               |               | <b>Analyst: ABB</b> |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA                   | 3/8/21 11:16  | 3/9/21 13:16  |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2540C</b>         |               |               | <b>Analyst: TJW</b> |       |                                     |       |          |            |   |
| * Solids, Dissolved                        | 3/1/21 16:45  | 3/3/21 09:00  |                     | 1     | Not Detected                        | mg/L  |          | 25         | U |
| <b>Analytical Method: SM4500CI E</b>       |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Chloride                                 | 2/25/21 11:45 | 2/25/21 11:45 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |
| <b>Analytical Method: SM4500F G 2017</b>   |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Fluoride                                 | 2/25/21 16:18 | 2/25/21 16:18 |                     | 1     | Not Detected                        | mg/L  | 0.06     | 0.1        | U |
| <b>Analytical Method: SM4500SO4 E 2011</b> |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Sulfate                                  | 2/26/21 12:43 | 2/26/21 12:43 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLFFB

**Sample Date:** 2/23/21 15:10

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill Field Blank-2

**Laboratory ID Number:** BB04153

| Sample  | Analysis               | Units | MB         | MB       |       |         |         | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       |            | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec  | Limit       |       |       |
| BB04156 | Calcium, Total         | mg/L  | 0.00281    | 0.152    | 5.00  | 333     | 332     | 5.12     | 4.25 to 5.75       | 107  | 70.0 to 130 | 0.401 | 20.0  |
| BB04156 | Antimony, Total        | mg/L  | 0.000196   | 0.00100  | 0.10  | 0.0980  | 0.0989  | 0.0942   | 0.0850 to 0.115    | 98.0 | 70.0 to 130 | 0.914 | 20.0  |
| BB04156 | Thallium, Total        | mg/L  | -0.0000241 | 0.000147 | 0.10  | 0.0950  | 0.0964  | 0.0951   | 0.0850 to 0.115    | 95.0 | 70.0 to 130 | 1.46  | 20.0  |
| BB04156 | Manganese, Total       | mg/L  | 0.000015   | 0.000147 | 0.10  | 2.16    | 2.19    | 0.0992   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 1.38  | 20.0  |
| BB04156 | Sodium, Total          | mg/L  | 0.00298    | 0.0660   | 5.00  | 36.7    | 36.2    | 5.15     | 4.25 to 5.75       | 109  | 70.0 to 130 | 1.24  | 20.0  |
| BB04156 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0973  | 0.0969  | 0.0984   | 0.0850 to 0.115    | 97.3 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cobalt, Total          | mg/L  | -0.0000279 | 0.000147 | 0.10  | 0.138   | 0.137   | 0.102    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.727 | 20.0  |
| BB04156 | Iron, Total            | mg/L  | 0.00121    | 0.0176   | 0.2   | 2.62    | 2.61    | 0.209    | 0.170 to 0.230     | 90.0 | 70.0 to 130 | 0.382 | 20.0  |
| BB04156 | Mercury, Total by CVAA | mg/L  | 0.0000917  | 0.000500 | 0.004 | 0.00422 | 0.00461 | 0.00412  | 0.00340 to 0.00460 | 106  | 70.0 to 130 | 8.83  | 20.0  |
| BB04156 | Arsenic, Total         | mg/L  | 0.0000554  | 0.000147 | 0.10  | 0.103   | 0.107   | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 3.81  | 20.0  |
| BB04156 | Molybdenum, Total      | mg/L  | 0.0000035  | 0.000147 | 0.10  | 0.0996  | 0.101   | 0.0987   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 1.40  | 20.0  |
| BB04156 | Barium, Total          | mg/L  | -0.0000324 | 0.000200 | 0.10  | 0.112   | 0.113   | 0.0999   | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.889 | 20.0  |
| BB04156 | Potassium, Total       | mg/L  | -0.00457   | 0.367    | 10.0  | 16.4    | 16.5    | 10.3     | 8.50 to 11.5       | 103  | 70.0 to 130 | 0.608 | 20.0  |
| BB04156 | Lead, Total            | mg/L  | 0.0000054  | 0.000147 | 0.10  | 0.0970  | 0.0974  | 0.0981   | 0.0850 to 0.115    | 97.0 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Beryllium, Total       | mg/L  | -0.0000045 | 0.000880 | 0.10  | 0.0955  | 0.0941  | 0.0942   | 0.0850 to 0.115    | 95.5 | 70.0 to 130 | 1.48  | 20.0  |
| BB04156 | Boron, Total           | mg/L  | 0.0138     | 0.0650   | 1.00  | 1.09    | 1.09    | 1.03     | 0.850 to 1.15      | 105  | 70.0 to 130 | 0.00  | 20.0  |
| BB04156 | Chromium, Total        | mg/L  | -0.0000886 | 0.000440 | 0.10  | 0.0994  | 0.0988  | 0.0985   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 0.605 | 20.0  |
| BB04156 | Lithium, Total         | mg/L  | -0.0000484 | 0.0154   | 0.200 | 0.366   | 0.362   | 0.207    | 0.170 to 0.230     | 145  | 70.0 to 130 | 1.10  | 20.0  |
| BB04156 | Magnesium, Total       | mg/L  | 0.00253    | 0.0462   | 5.00  | 351     | 349     | 5.15     | 4.25 to 5.75       | 145  | 70.0 to 130 | 0.640 | 20.0  |
| BB04156 | Selenium, Total        | mg/L  | -0.0000277 | 0.00100  | 0.10  | 0.102   | 0.103   | 0.102    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.976 | 20.0  |

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGORLFFB

**Sample Date:** 2/23/21 15:10

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill Field Blank-2

**Laboratory ID Number:** BB04153

| Sample  | Analysis          | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|-------------------|-------|---------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB04157 | Sulfate           | mg/L  | -0.276  | 0.500    | 20.0  | 19.1 | -0.324           | 19.0     | 18.0 to 22.0   | 95.5 | 80.0 to 120 | 0.00  | 20.0       |
| BB04157 | Fluoride          | mg/L  | 0.0213  | 0.0500   | 2.50  | 2.51 | 0.0138           | 2.63     | 2.25 to 2.75   | 100  | 80.0 to 120 | 0.00  | 20.0       |
| BB04155 | Solids, Dissolved | mg/L  | 2.00    | 25.0     |       |      | 3120             | 50.0     | 40.0 to 60.0   |      |             | 0.808 | 5.00       |
| BB04157 | Chloride          | mg/L  | -0.0488 | 0.500    | 10.0  | 10.3 | 0.135            | 10.1     | 9.00 to 11.0   | 103  | 80.0 to 120 | 0.00  | 20.0       |

**Comments:**

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-11

**Location Code:** WMWGORLF  
**Collected:** 2/24/21 10:13  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04154

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 3/16/21 09:07 | 3/17/21 10:54       |          | 1.015 | 0.108                               | mg/L  | 0.030000 | 0.1015     |   |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 11:24       |          | 20.3  | 325                                 | mg/L  | 1.4007   | 8.12       |   |
| * Iron, Total                       | 3/16/21 09:07 | 3/19/21 11:24       |          | 20.3  | 4.42                                | mg/L  | 0.1624   | 0.812      |   |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:54       |          | 1.015 | 0.300                               | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 11:24       |          | 20.3  | 169                                 | mg/L  | 0.4263   | 8.12       |   |
| * Sodium, Total                     | 3/16/21 09:07 | 3/19/21 11:24       |          | 20.3  | 139                                 | mg/L  | 0.406    | 8.12       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: RDA</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 13:32       |          | 10.15 | 4.39                                | mg/L  | 0.08120  | 0.406      |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | 0.000834                            | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | 0.0150                              | mg/L  | 0.000101 | 0.000203   |   |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | 0.000260                            | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | 0.00148                             | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | 6.40                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | 1.23                                | mg/L  | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 13:16       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 11:21       |          | 1.015 | 1.22                                | mg/L  | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 13:18        |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09        |          | 1     | 299                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: TJW</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 3/1/21 16:45  | 3/3/21 09:00        |          | 1     | 2370                                | mg/L  |          | 125        |   |

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

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



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-11

**Location Code:** WMWGORLF  
**Collected:** 2/24/21 10:13  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04154

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 299     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1  | 0.20    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:51 | 2/25/21 11:51       |          | 10 | 113     | mg/L  | 5.00  | 10  |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 16:19 | 2/25/21 16:19       |          | 1  | 0.107   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 12:45 | 2/26/21 12:45       |          | 50 | 1330    | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 2/24/21 10:10 | 2/24/21 10:10       |          |    | 2839.08 | uS/cm |       |     | FA |
| pH   | 2/24/21 10:10 | 2/24/21 10:10       |          |    | 6.67    | SU    |       |     | FA |
| Temperature                                  | 2/24/21 10:10 | 2/24/21 10:10       |          |    | 18.25   | C     |       |     | FA |
| Turbidity                                    | 2/24/21 10:10 | 2/24/21 10:10       |          |    | 0.59    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/24/21 10:13

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-11

**Laboratory ID Number:** BB04154

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec  | Limit       |       |       |
| BB04156 | Calcium, Total         | mg/L  | 0.00281    | 0.152    | 5.00  | 333     | 332     | 5.12     | 4.25 to 5.75       | 107  | 70.0 to 130 | 0.401 | 20.0  |
| BB04156 | Manganese, Total       | mg/L  | 0.000015   | 0.000147 | 0.10  | 2.16    | 2.19    | 0.0992   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 1.38  | 20.0  |
| BB04156 | Sodium, Total          | mg/L  | 0.00298    | 0.0660   | 5.00  | 36.7    | 36.2    | 5.15     | 4.25 to 5.75       | 109  | 70.0 to 130 | 1.24  | 20.0  |
| BB04156 | Arsenic, Total         | mg/L  | 0.0000554  | 0.000147 | 0.10  | 0.103   | 0.107   | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 3.81  | 20.0  |
| BB04156 | Molybdenum, Total      | mg/L  | 0.0000035  | 0.000147 | 0.10  | 0.0996  | 0.101   | 0.0987   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 1.40  | 20.0  |
| BB04156 | Antimony, Total        | mg/L  | 0.000196   | 0.00100  | 0.10  | 0.0980  | 0.0989  | 0.0942   | 0.0850 to 0.115    | 98.0 | 70.0 to 130 | 0.914 | 20.0  |
| BB04156 | Thallium, Total        | mg/L  | -0.0000241 | 0.000147 | 0.10  | 0.0950  | 0.0964  | 0.0951   | 0.0850 to 0.115    | 95.0 | 70.0 to 130 | 1.46  | 20.0  |
| BB04156 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0973  | 0.0969  | 0.0984   | 0.0850 to 0.115    | 97.3 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cobalt, Total          | mg/L  | -0.0000279 | 0.000147 | 0.10  | 0.138   | 0.137   | 0.102    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.727 | 20.0  |
| BB04156 | Iron, Dissolved        | mg/L  | 0.000207   | 0.0176   | 0.2   | 1.85    | 1.86    | 0.205    | 0.170 to 0.230     | 80.0 | 70.0 to 130 | 0.539 | 20.0  |
| BB04156 | Iron, Total            | mg/L  | 0.00121    | 0.0176   | 0.2   | 2.62    | 2.61    | 0.209    | 0.170 to 0.230     | 90.0 | 70.0 to 130 | 0.382 | 20.0  |
| BB04156 | Mercury, Total by CVAA | mg/L  | 0.0000917  | 0.000500 | 0.004 | 0.00422 | 0.00461 | 0.00412  | 0.00340 to 0.00460 | 106  | 70.0 to 130 | 8.83  | 20.0  |
| BB04156 | Manganese, Dissolved   | mg/L  | 0.0000065  | 0.000147 | 0.10  | 2.14    | 2.13    | 0.0997   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 0.468 | 20.0  |
| BB04156 | Barium, Total          | mg/L  | -0.0000324 | 0.000200 | 0.10  | 0.112   | 0.113   | 0.0999   | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.889 | 20.0  |
| BB04156 | Potassium, Total       | mg/L  | -0.00457   | 0.367    | 10.0  | 16.4    | 16.5    | 10.3     | 8.50 to 11.5       | 103  | 70.0 to 130 | 0.608 | 20.0  |
| BB04156 | Lead, Total            | mg/L  | 0.0000054  | 0.000147 | 0.10  | 0.0970  | 0.0974  | 0.0981   | 0.0850 to 0.115    | 97.0 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Beryllium, Total       | mg/L  | -0.0000045 | 0.000880 | 0.10  | 0.0955  | 0.0941  | 0.0942   | 0.0850 to 0.115    | 95.5 | 70.0 to 130 | 1.48  | 20.0  |
| BB04156 | Boron, Total           | mg/L  | 0.0138     | 0.0650   | 1.00  | 1.09    | 1.09    | 1.03     | 0.850 to 1.15      | 105  | 70.0 to 130 | 0.00  | 20.0  |
| BB04156 | Chromium, Total        | mg/L  | -0.0000886 | 0.000440 | 0.10  | 0.0994  | 0.0988  | 0.0985   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 0.605 | 20.0  |
| BB04156 | Lithium, Total         | mg/L  | -0.0000484 | 0.0154   | 0.200 | 0.366   | 0.362   | 0.207    | 0.170 to 0.230     | 145  | 70.0 to 130 | 1.10  | 20.0  |
| BB04156 | Magnesium, Total       | mg/L  | 0.00253    | 0.0462   | 5.00  | 351     | 349     | 5.15     | 4.25 to 5.75       | 145  | 70.0 to 130 | 0.640 | 20.0  |
| BB04156 | Selenium, Total        | mg/L  | -0.0000277 | 0.00100  | 0.10  | 0.102   | 0.103   | 0.102    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.976 | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/24/21 10:13

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-11

**Laboratory ID Number:** BB04154

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB04157 | Sulfate                    | mg/L  | -0.276  | 0.500    | 20.0  | 19.1 | -0.324           | 19.0     | 18.0 to 22.0   | 95.5 | 80.0 to 120 | 0.00  | 20.0       |
| BB04156 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 224              | 52.0     | 45.0 to 55.0   |      |             | 2.21  | 10.0       |
| BB04157 | Fluoride                   | mg/L  | 0.0213  | 0.0500   | 2.50  | 2.51 | 0.0138           | 2.63     | 2.25 to 2.75   | 100  | 80.0 to 120 | 0.00  | 20.0       |
| BB04155 | Solids, Dissolved          | mg/L  | 2.00    | 25.0     |       |      | 3120             | 50.0     | 40.0 to 60.0   |      |             | 0.808 | 5.00       |
| BB04157 | Chloride                   | mg/L  | -0.0488 | 0.500    | 10.0  | 10.3 | 0.135            | 10.1     | 9.00 to 11.0   | 103  | 80.0 to 120 | 0.00  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-19

**Location Code:** WMWGORLF  
**Collected:** 2/24/21 12:40  
**Customer ID:**  
**Submission Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04155

| 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                      | 3/16/21 09:07 | 3/17/21 10:57 |                     | 1.015 | 0.0393                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 11:28 |                     | 20.3  | 332                                 | mg/L  | 1.4007   | 8.12       |   |
| * Iron, Total                       | 3/16/21 09:07 | 3/17/21 10:57 |                     | 1.015 | 2.40                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 10:57 |                     | 1.015 | 0.0739                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 11:28 |                     | 20.3  | 349                                 | mg/L  | 0.4263   | 8.12       |   |
| * Sodium, Total                     | 3/16/21 09:07 | 3/17/21 10:57 |                     | 1.015 | 40.5                                | mg/L  | 0.02030  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               |               | <b>Analyst: RDA</b> |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 12:48 |                     | 1.015 | 1.68                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               |               | <b>Analyst: DLJ</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | 0.000212                            | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | 0.00981                             | mg/L  | 0.000101 | 0.000203   |   |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | 0.0382                              | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | 0.000197                            | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | 6.08                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 18:25 |                     | 5.075 | 2.07                                | mg/L  | 0.000340 | 0.001015   |   |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 13:19 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               |               | <b>Analyst: DLJ</b> |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 17:24 |                     | 5.075 | 2.06                                | mg/L  | 0.000340 | 0.001015   |   |
| <b>Analytical Method: EPA 245.1</b> |               |               | <b>Analyst: ABB</b> |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 13:20  |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               |               | <b>Analyst: JAG</b> |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09  |                     | 1     | 223                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               |               | <b>Analyst: TJW</b> |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 3/1/21 16:45  | 3/3/21 09:00  |                     | 1     | 3070                                | mg/L  |          | 166.7      |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-19

**Location Code:** WMWGORLF  
**Collected:** 2/24/21 12:40  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04155

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1   | 223     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1   | 0.05    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:48 | 2/25/21 11:48       |          | 1   | 2.02    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 16:20 | 2/25/21 16:20       |          | 1   | 0.343   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 12:46 | 2/26/21 12:46       |          | 100 | 1970    | mg/L  | 50.00 | 100 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 2/24/21 12:36 | 2/24/21 12:36       |          |     | 3183.22 | uS/cm |       |     | FA |
| pH   | 2/24/21 12:36 | 2/24/21 12:36       |          |     | 6.26    | SU    |       |     | FA |
| Temperature                                  | 2/24/21 12:36 | 2/24/21 12:36       |          |     | 20.14   | C     |       |     | FA |
| Turbidity                                    | 2/24/21 12:36 | 2/24/21 12:36       |          |     | 5.12    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/24/21 12:40

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-19

**Laboratory ID Number:** BB04155

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec  | Limit       |       |       |
| BB04156 | Calcium, Total         | mg/L  | 0.00281    | 0.152    | 5.00  | 333     | 332     | 5.12     | 4.25 to 5.75       | 107  | 70.0 to 130 | 0.401 | 20.0  |
| BB04156 | Manganese, Total       | mg/L  | 0.000015   | 0.000147 | 0.10  | 2.16    | 2.19    | 0.0992   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 1.38  | 20.0  |
| BB04156 | Sodium, Total          | mg/L  | 0.00298    | 0.0660   | 5.00  | 36.7    | 36.2    | 5.15     | 4.25 to 5.75       | 109  | 70.0 to 130 | 1.24  | 20.0  |
| BB04156 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0973  | 0.0969  | 0.0984   | 0.0850 to 0.115    | 97.3 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cobalt, Total          | mg/L  | -0.0000279 | 0.000147 | 0.10  | 0.138   | 0.137   | 0.102    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.727 | 20.0  |
| BB04156 | Iron, Dissolved        | mg/L  | 0.000207   | 0.0176   | 0.2   | 1.85    | 1.86    | 0.205    | 0.170 to 0.230     | 80.0 | 70.0 to 130 | 0.539 | 20.0  |
| BB04156 | Iron, Total            | mg/L  | 0.00121    | 0.0176   | 0.2   | 2.62    | 2.61    | 0.209    | 0.170 to 0.230     | 90.0 | 70.0 to 130 | 0.382 | 20.0  |
| BB04156 | Mercury, Total by CVAA | mg/L  | 0.0000917  | 0.000500 | 0.004 | 0.00422 | 0.00461 | 0.00412  | 0.00340 to 0.00460 | 106  | 70.0 to 130 | 8.83  | 20.0  |
| BB04156 | Manganese, Dissolved   | mg/L  | 0.0000065  | 0.000147 | 0.10  | 2.14    | 2.13    | 0.0997   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 0.468 | 20.0  |
| BB04156 | Beryllium, Total       | mg/L  | -0.0000045 | 0.000880 | 0.10  | 0.0955  | 0.0941  | 0.0942   | 0.0850 to 0.115    | 95.5 | 70.0 to 130 | 1.48  | 20.0  |
| BB04156 | Boron, Total           | mg/L  | 0.0138     | 0.0650   | 1.00  | 1.09    | 1.09    | 1.03     | 0.850 to 1.15      | 105  | 70.0 to 130 | 0.00  | 20.0  |
| BB04156 | Chromium, Total        | mg/L  | -0.0000886 | 0.000440 | 0.10  | 0.0994  | 0.0988  | 0.0985   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 0.605 | 20.0  |
| BB04156 | Lithium, Total         | mg/L  | -0.0000484 | 0.0154   | 0.200 | 0.366   | 0.362   | 0.207    | 0.170 to 0.230     | 145  | 70.0 to 130 | 1.10  | 20.0  |
| BB04156 | Magnesium, Total       | mg/L  | 0.00253    | 0.0462   | 5.00  | 351     | 349     | 5.15     | 4.25 to 5.75       | 145  | 70.0 to 130 | 0.640 | 20.0  |
| BB04156 | Selenium, Total        | mg/L  | -0.0000277 | 0.00100  | 0.10  | 0.102   | 0.103   | 0.102    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.976 | 20.0  |
| BB04156 | Barium, Total          | mg/L  | -0.0000324 | 0.000200 | 0.10  | 0.112   | 0.113   | 0.0999   | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.889 | 20.0  |
| BB04156 | Potassium, Total       | mg/L  | -0.00457   | 0.367    | 10.0  | 16.4    | 16.5    | 10.3     | 8.50 to 11.5       | 103  | 70.0 to 130 | 0.608 | 20.0  |
| BB04156 | Lead, Total            | mg/L  | 0.0000054  | 0.000147 | 0.10  | 0.0970  | 0.0974  | 0.0981   | 0.0850 to 0.115    | 97.0 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Arsenic, Total         | mg/L  | 0.0000554  | 0.000147 | 0.10  | 0.103   | 0.107   | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 3.81  | 20.0  |
| BB04156 | Molybdenum, Total      | mg/L  | 0.0000035  | 0.000147 | 0.10  | 0.0996  | 0.101   | 0.0987   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 1.40  | 20.0  |
| BB04156 | Antimony, Total        | mg/L  | 0.000196   | 0.00100  | 0.10  | 0.0980  | 0.0989  | 0.0942   | 0.0850 to 0.115    | 98.0 | 70.0 to 130 | 0.914 | 20.0  |
| BB04156 | Thallium, Total        | mg/L  | -0.0000241 | 0.000147 | 0.10  | 0.0950  | 0.0964  | 0.0951   | 0.0850 to 0.115    | 95.0 | 70.0 to 130 | 1.46  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 2/24/21 12:40  
**Customer ID:**  
**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-19

**Laboratory ID Number:** BB04155

| Sample  | Analysis                   | Units | MB      | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec  | Rec<br>Limit | Prec  | Prec<br>Limit |
|---------|----------------------------|-------|---------|-------------|-------|------|---------------------|----------|-------------------|------|--------------|-------|---------------|
| BB04157 | Sulfate                    | mg/L  | -0.276  | 0.500       | 20.0  | 19.1 | -0.324              | 19.0     | 18.0 to 22.0      | 95.5 | 80.0 to 120  | 0.00  | 20.0          |
| BB04155 | Solids, Dissolved          | mg/L  | 2.00    | 25.0        |       |      | 3120                | 50.0     | 40.0 to 60.0      |      |              | 0.808 | 5.00          |
| BB04157 | Chloride                   | mg/L  | -0.0488 | 0.500       | 10.0  | 10.3 | 0.135               | 10.1     | 9.00 to 11.0      | 103  | 80.0 to 120  | 0.00  | 20.0          |
| BB04156 | Alkalinity, Total as CaCO3 | mg/L  |         |             |       |      | 224                 | 52.0     | 45.0 to 55.0      |      |              | 2.21  | 10.0          |
| BB04157 | Fluoride                   | mg/L  | 0.0213  | 0.0500      | 2.50  | 2.51 | 0.0138              | 2.63     | 2.25 to 2.75      | 100  | 80.0 to 120  | 0.00  | 20.0          |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-19 DUP

**Location Code:** WMWGORLF  
**Collected:** 2/24/21 12:40  
**Customer ID:**  
**Submission Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04156

| 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                      | 3/16/21 09:07 | 3/17/21 11:00 |                     | 1.015 | 0.0391                              | mg/L  | 0.030000 | 0.1015   | J  |
| * Calcium, Total                    | 3/16/21 09:07 | 3/19/21 11:31 |                     | 20.3  | 328                                 | mg/L  | 1.4007   | 8.12     |    |
| * Iron, Total                       | 3/16/21 09:07 | 3/17/21 11:00 |                     | 1.015 | 2.44                                | mg/L  | 0.008120 | 0.0406   |    |
| * Lithium, Total                    | 3/16/21 09:07 | 3/17/21 11:00 |                     | 1.015 | 0.0752                              | mg/L  | 0.007105 | 0.019999 | R  |
| * Magnesium, Total                  | 3/16/21 09:07 | 3/19/21 11:31 |                     | 20.3  | 344                                 | mg/L  | 0.4263   | 8.12     | RA |
| * Sodium, Total                     | 3/16/21 09:07 | 3/19/21 11:31 |                     | 20.3  | 31.2                                | mg/L  | 0.406    | 8.12     |    |
| <b>Analytical Method: EPA 200.7</b> |               |               | <b>Analyst: RDA</b> |       |                                     |       |          |          |    |
| * Iron, Dissolved                   | 3/11/21 11:00 | 3/12/21 12:52 |                     | 1.015 | 1.69                                | mg/L  | 0.008120 | 0.0406   |    |
| <b>Analytical Method: EPA 200.8</b> |               |               | <b>Analyst: DLJ</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |          |    |
| * Antimony, Total                   | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015 | U  |
| * Arsenic, Total                    | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | 0.000218                            | mg/L  | 0.000068 | 0.000203 |    |
| * Barium, Total                     | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | 0.00981                             | mg/L  | 0.000101 | 0.000203 |    |
| * Beryllium, Total                  | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015 | U  |
| * Cadmium, Total                    | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203 | U  |
| * Chromium, Total                   | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015 | U  |
| * Cobalt, Total                     | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | 0.0379                              | mg/L  | 0.000068 | 0.000203 |    |
| * Lead, Total                       | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203 | U  |
| * Molybdenum, Total                 | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | 0.000194                            | mg/L  | 0.000068 | 0.000203 | J  |
| * Potassium, Total                  | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | 6.13                                | mg/L  | 0.169505 | 0.5075   |    |
| * Manganese, Total                  | 2/26/21 06:45 | 2/26/21 18:28 |                     | 5.075 | 2.12                                | mg/L  | 0.000340 | 0.001015 | RA |
| * Selenium, Total                   | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015 | U  |
| * Thallium, Total                   | 2/26/21 06:45 | 2/26/21 13:23 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203 | U  |
| <b>Analytical Method: EPA 200.8</b> |               |               | <b>Analyst: DLJ</b> |       |                                     |       |          |          |    |
| * Manganese, Dissolved              | 2/26/21 08:46 | 2/26/21 17:28 |                     | 5.075 | 2.10                                | mg/L  | 0.000340 | 0.001015 | RA |
| <b>Analytical Method: EPA 245.1</b> |               |               | <b>Analyst: ABB</b> |       |                                     |       |          |          |    |
| * Mercury, Total by CVAA            | 3/8/21 11:16  | 3/9/21 13:23  |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005   | U  |
| <b>Analytical Method: SM 2320 B</b> |               |               | <b>Analyst: JAG</b> |       |                                     |       |          |          |    |
| Alkalinity, Total as CaCO3          | 3/3/21 11:10  | 3/3/21 12:09  |                     | 1     | 229                                 | mg/L  |          | 0.1      |    |
| <b>Analytical Method: SM 2540C</b>  |               |               | <b>Analyst: TJW</b> |       |                                     |       |          |          |    |
| * Solids, Dissolved                 | 3/1/21 16:45  | 3/3/21 09:00  |                     | 1     | 3060                                | mg/L  |          | 166.7    |    |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-19 DUP

**Location Code:** WMWGORLF  
**Collected:** 2/24/21 12:40  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04156

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 3/3/21 11:10  | 3/3/21 12:09        |          | 1   | 229     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 3/3/21 11:10  | 3/3/21 12:09        |          | 1   | 0.05    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 2/25/21 11:49 | 2/25/21 11:49       |          | 1   | 1.98    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 2/25/21 16:21 | 2/25/21 16:21       |          | 1   | 0.337   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 2/26/21 12:47 | 2/26/21 12:47       |          | 100 | 1900    | mg/L  | 50.00 | 100 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 2/24/21 12:36 | 2/24/21 12:36       |          |     | 3183.22 | uS/cm |       |     | FA |
| pH   | 2/24/21 12:36 | 2/24/21 12:36       |          |     | 6.26    | SU    |       |     | FA |
| Temperature                                  | 2/24/21 12:36 | 2/24/21 12:36       |          |     | 20.14   | C     |       |     | FA |
| Turbidity                                    | 2/24/21 12:36 | 2/24/21 12:36       |          |     | 5.12    | NTU   |       |     | FA |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 2/24/21 12:40

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-19 DUP

**Laboratory ID Number:** BB04156

| Sample  | Analysis               | Units | MB         |          |       |         | Standard |          |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|----------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD      | Standard | Limit              | Rec  | Limit       |       |       |
| BB04156 | Calcium, Total         | mg/L  | 0.00281    | 0.152    | 5.00  | 333     | 332      | 5.12     | 4.25 to 5.75       | 107  | 70.0 to 130 | 0.401 | 20.0  |
| BB04156 | Antimony, Total        | mg/L  | 0.000196   | 0.00100  | 0.10  | 0.0980  | 0.0989   | 0.0942   | 0.0850 to 0.115    | 98.0 | 70.0 to 130 | 0.914 | 20.0  |
| BB04156 | Thallium, Total        | mg/L  | -0.0000241 | 0.000147 | 0.10  | 0.0950  | 0.0964   | 0.0951   | 0.0850 to 0.115    | 95.0 | 70.0 to 130 | 1.46  | 20.0  |
| BB04156 | Arsenic, Total         | mg/L  | 0.0000554  | 0.000147 | 0.10  | 0.103   | 0.107    | 0.104    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 3.81  | 20.0  |
| BB04156 | Molybdenum, Total      | mg/L  | 0.0000035  | 0.000147 | 0.10  | 0.0996  | 0.101    | 0.0987   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 1.40  | 20.0  |
| BB04156 | Manganese, Total       | mg/L  | 0.000015   | 0.000147 | 0.10  | 2.16    | 2.19     | 0.0992   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 1.38  | 20.0  |
| BB04156 | Sodium, Total          | mg/L  | 0.00298    | 0.0660   | 5.00  | 36.7    | 36.2     | 5.15     | 4.25 to 5.75       | 109  | 70.0 to 130 | 1.24  | 20.0  |
| BB04156 | Beryllium, Total       | mg/L  | -0.0000045 | 0.000880 | 0.10  | 0.0955  | 0.0941   | 0.0942   | 0.0850 to 0.115    | 95.5 | 70.0 to 130 | 1.48  | 20.0  |
| BB04156 | Boron, Total           | mg/L  | 0.0138     | 0.0650   | 1.00  | 1.09    | 1.09     | 1.03     | 0.850 to 1.15      | 105  | 70.0 to 130 | 0.00  | 20.0  |
| BB04156 | Chromium, Total        | mg/L  | -0.0000886 | 0.000440 | 0.10  | 0.0994  | 0.0988   | 0.0985   | 0.0850 to 0.115    | 99.4 | 70.0 to 130 | 0.605 | 20.0  |
| BB04156 | Lithium, Total         | mg/L  | -0.0000484 | 0.0154   | 0.200 | 0.366   | 0.362    | 0.207    | 0.170 to 0.230     | 145  | 70.0 to 130 | 1.10  | 20.0  |
| BB04156 | Magnesium, Total       | mg/L  | 0.00253    | 0.0462   | 5.00  | 351     | 349      | 5.15     | 4.25 to 5.75       | 145  | 70.0 to 130 | 0.640 | 20.0  |
| BB04156 | Selenium, Total        | mg/L  | -0.0000277 | 0.00100  | 0.10  | 0.102   | 0.103    | 0.102    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.976 | 20.0  |
| BB04156 | Barium, Total          | mg/L  | -0.0000324 | 0.000200 | 0.10  | 0.112   | 0.113    | 0.0999   | 0.0850 to 0.115    | 102  | 70.0 to 130 | 0.889 | 20.0  |
| BB04156 | Potassium, Total       | mg/L  | -0.00457   | 0.367    | 10.0  | 16.4    | 16.5     | 10.3     | 8.50 to 11.5       | 103  | 70.0 to 130 | 0.608 | 20.0  |
| BB04156 | Lead, Total            | mg/L  | 0.0000054  | 0.000147 | 0.10  | 0.0970  | 0.0974   | 0.0981   | 0.0850 to 0.115    | 97.0 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0973  | 0.0969   | 0.0984   | 0.0850 to 0.115    | 97.3 | 70.0 to 130 | 0.412 | 20.0  |
| BB04156 | Cobalt, Total          | mg/L  | -0.0000279 | 0.000147 | 0.10  | 0.138   | 0.137    | 0.102    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.727 | 20.0  |
| BB04156 | Iron, Dissolved        | mg/L  | 0.000207   | 0.0176   | 0.2   | 1.85    | 1.86     | 0.205    | 0.170 to 0.230     | 80.0 | 70.0 to 130 | 0.539 | 20.0  |
| BB04156 | Iron, Total            | mg/L  | 0.00121    | 0.0176   | 0.2   | 2.62    | 2.61     | 0.209    | 0.170 to 0.230     | 90.0 | 70.0 to 130 | 0.382 | 20.0  |
| BB04156 | Mercury, Total by CVAA | mg/L  | 0.0000917  | 0.000500 | 0.004 | 0.00422 | 0.00461  | 0.00412  | 0.00340 to 0.00460 | 106  | 70.0 to 130 | 8.83  | 20.0  |
| BB04156 | Manganese, Dissolved   | mg/L  | 0.0000065  | 0.000147 | 0.10  | 2.14    | 2.13     | 0.0997   | 0.0850 to 0.115    | 40.0 | 70.0 to 130 | 0.468 | 20.0  |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 2/24/21 12:40  
**Customer ID:**  
**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill - MW-19 DUP

**Laboratory ID Number:** BB04156

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB04157 | Chloride                   | mg/L  | -0.0488 | 0.500    | 10.0  | 10.3 | 0.135            | 10.1     | 9.00 to 11.0   | 103  | 80.0 to 120 | 0.00  | 20.0       |
| BB04156 | Solids, Dissolved          | mg/L  | 2.00    | 25.0     |       |      | 3120             | 50.0     | 40.0 to 60.0   |      |             | 0.971 | 5.00       |
| BB04157 | Sulfate                    | mg/L  | -0.276  | 0.500    | 20.0  | 19.1 | -0.324           | 19.0     | 18.0 to 22.0   | 95.5 | 80.0 to 120 | 0.00  | 20.0       |
| BB04156 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 224              | 52.0     | 45.0 to 55.0   |      |             | 2.21  | 10.0       |
| BB04157 | Fluoride                   | mg/L  | 0.0213  | 0.0500   | 2.50  | 2.51 | 0.0138           | 2.63     | 2.25 to 2.75   | 100  | 80.0 to 120 | 0.00  | 20.0       |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Lithium MS/MSD recoveries failed. Post digestion spike and serial dilution were performed. Matrix issue is suspected. LBM 3/30/21

# Certificate Of Analysis

**Description:** Gorgas Landfill Equipment Blank-1

**Location Code:** WMWGORLFEB  
**Collected:** 2/24/21 13:30  
**Customer ID:**  
**Submittal Date:** 2/25/21 09:38

**Laboratory ID Number:** BB04157

| Name                                       | Prepared      | Analyzed      | Vio Spec            | DF    | Results                             | Units | MDL      | RL         | Q |
|--|---------------|---------------|---------------------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b>        |               |               | <b>Analyst: RDA</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                             | 3/16/21 09:07 | 3/17/21 11:24 |                     | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                           | 3/16/21 09:07 | 3/17/21 11:24 |                     | 1.015 | Not Detected                        | mg/L  | 0.070035 | 0.406      | U |
| * Iron, Total                              | 3/16/21 09:07 | 3/17/21 11:24 |                     | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| * Lithium, Total                           | 3/16/21 09:07 | 3/17/21 11:24 |                     | 1.015 | Not Detected                        | mg/L  | 0.007105 | 0.01999956 | U |
| * Magnesium, Total                         | 3/16/21 09:07 | 3/17/21 11:24 |                     | 1.015 | Not Detected                        | mg/L  | 0.021315 | 0.406      | U |
| * Sodium, Total                            | 3/16/21 09:07 | 3/17/21 11:24 |                     | 1.015 | Not Detected                        | mg/L  | 0.02030  | 0.406      | U |
| <b>Analytical Method: EPA 200.8</b>        |               |               | <b>Analyst: DLJ</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                          | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Arsenic, Total                           | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Barium, Total                            | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | 0.000179                            | mg/L  | 0.000101 | 0.000203   | J |
| * Beryllium, Total                         | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                           | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                          | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                            | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                              | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                        | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Manganese, Total                         | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Potassium, Total                         | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.169505 | 0.5075     | U |
| * Selenium, Total                          | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000507 | 0.001015   | U |
| * Thallium, Total                          | 2/26/21 06:45 | 2/26/21 13:51 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 245.1</b>        |               |               | <b>Analyst: ABB</b> |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA                   | 3/8/21 11:16  | 3/9/21 13:39  |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2540C</b>         |               |               | <b>Analyst: TJW</b> |       |                                     |       |          |            |   |
| * Solids, Dissolved                        | 3/1/21 16:45  | 3/3/21 09:00  |                     | 1     | Not Detected                        | mg/L  |          | 25         | U |
| <b>Analytical Method: SM4500CI E</b>       |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Chloride                                 | 2/25/21 11:53 | 2/25/21 11:53 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |
| <b>Analytical Method: SM4500F G 2017</b>   |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Fluoride                                 | 2/25/21 16:22 | 2/25/21 16:22 |                     | 1     | Not Detected                        | mg/L  | 0.06     | 0.1        | U |
| <b>Analytical Method: SM4500SO4 E 2011</b> |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Sulfate                                  | 2/26/21 12:48 | 2/26/21 12:48 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLFEB

**Sample Date:** 2/24/21 13:30

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill Equipment Blank-1

**Laboratory ID Number:** BB04157

| Sample  | Analysis               | Units | MB         |          |       |         | Standard |          | Rec                |      | Prec        | Limit |      |
|---------|------------------------|-------|------------|----------|-------|---------|----------|----------|--------------------|------|-------------|-------|------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD      | Standard | Limit              | Rec  |             |       |      |
| BB04157 | Lithium, Total         | mg/L  | -0.000170  | 0.0154   | 0.200 | 0.208   | 0.212    | 0.217    | 0.170 to 0.230     | 104  | 70.0 to 130 | 1.90  | 20.0 |
| BB04157 | Antimony, Total        | mg/L  | 0.000222   | 0.00100  | 0.10  | 0.0920  | 0.0931   | 0.0931   | 0.0850 to 0.115    | 92.0 | 70.0 to 130 | 1.19  | 20.0 |
| BB04157 | Potassium, Total       | mg/L  | 0.00276    | 0.367    | 10.0  | 10.4    | 10.3     | 11.0     | 8.50 to 11.5       | 104  | 70.0 to 130 | 0.966 | 20.0 |
| BB04157 | Selenium, Total        | mg/L  | 0.0000388  | 0.00100  | 0.10  | 0.0979  | 0.101    | 0.102    | 0.0850 to 0.115    | 97.9 | 70.0 to 130 | 3.12  | 20.0 |
| BB04157 | Barium, Total          | mg/L  | -0.0000222 | 0.000200 | 0.10  | 0.0987  | 0.0994   | 0.0995   | 0.0850 to 0.115    | 98.5 | 70.0 to 130 | 0.707 | 20.0 |
| BB04157 | Beryllium, Total       | mg/L  | 0.0000134  | 0.000880 | 0.10  | 0.0971  | 0.102    | 0.101    | 0.0850 to 0.115    | 97.1 | 70.0 to 130 | 4.92  | 20.0 |
| BB04157 | Calcium, Total         | mg/L  | 0.00134    | 0.152    | 5.00  | 4.92    | 4.90     | 4.92     | 4.25 to 5.75       | 98.4 | 70.0 to 130 | 0.407 | 20.0 |
| BB04157 | Iron, Total            | mg/L  | 0.000326   | 0.0176   | 0.2   | 0.202   | 0.203    | 0.201    | 0.170 to 0.230     | 101  | 70.0 to 130 | 0.494 | 20.0 |
| BB04157 | Arsenic, Total         | mg/L  | 0.0000375  | 0.000147 | 0.10  | 0.101   | 0.100    | 0.102    | 0.0850 to 0.115    | 101  | 70.0 to 130 | 0.995 | 20.0 |
| BB04157 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.10  | 0.0959  | 0.0977   | 0.0988   | 0.0850 to 0.115    | 95.9 | 70.0 to 130 | 1.86  | 20.0 |
| BB04157 | Manganese, Total       | mg/L  | 0.0000216  | 0.000147 | 0.10  | 0.103   | 0.0981   | 0.101    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 4.87  | 20.0 |
| BB04157 | Lead, Total            | mg/L  | 0.000005   | 0.000147 | 0.10  | 0.0982  | 0.0994   | 0.0986   | 0.0850 to 0.115    | 98.2 | 70.0 to 130 | 1.21  | 20.0 |
| BB04157 | Boron, Total           | mg/L  | 0.0101     | 0.0650   | 1.00  | 1.02    | 1.03     | 1.03     | 0.850 to 1.15      | 102  | 70.0 to 130 | 0.976 | 20.0 |
| BB04157 | Cobalt, Total          | mg/L  | -0.0000274 | 0.000147 | 0.10  | 0.1000  | 0.100    | 0.106    | 0.0850 to 0.115    | 100  | 70.0 to 130 | 0.00  | 20.0 |
| BB04157 | Chromium, Total        | mg/L  | -0.000120  | 0.000440 | 0.10  | 0.0983  | 0.0973   | 0.102    | 0.0850 to 0.115    | 98.3 | 70.0 to 130 | 1.02  | 20.0 |
| BB04157 | Magnesium, Total       | mg/L  | 0.00289    | 0.0462   | 5.00  | 5.05    | 5.06     | 5.10     | 4.25 to 5.75       | 101  | 70.0 to 130 | 0.198 | 20.0 |
| BB04157 | Mercury, Total by CVAA | mg/L  | 0.000108   | 0.000500 | 0.004 | 0.00416 | 0.00424  | 0.00422  | 0.00340 to 0.00460 | 104  | 70.0 to 130 | 1.90  | 20.0 |
| BB04157 | Molybdenum, Total      | mg/L  | -0.0000037 | 0.000147 | 0.10  | 0.0951  | 0.0978   | 0.0971   | 0.0850 to 0.115    | 95.1 | 70.0 to 130 | 2.80  | 20.0 |
| BB04157 | Sodium, Total          | mg/L  | 0.000966   | 0.0660   | 5.00  | 5.20    | 5.23     | 5.34     | 4.25 to 5.75       | 104  | 70.0 to 130 | 0.575 | 20.0 |
| BB04157 | Thallium, Total        | mg/L  | -0.000025  | 0.000147 | 0.10  | 0.0961  | 0.0965   | 0.0966   | 0.0850 to 0.115    | 96.1 | 70.0 to 130 | 0.415 | 20.0 |

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGORLFEB

**Sample Date:** 2/24/21 13:30

**Customer ID:**

**Delivery Date:** 2/25/21 09:38

**Description:** Gorgas Landfill Equipment Blank-1

**Laboratory ID Number:** BB04157

| Sample  | Analysis          | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|-------------------|-------|---------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB04157 | Fluoride          | mg/L  | 0.0213  | 0.0500   | 2.50  | 2.51 | 0.0138           | 2.63     | 2.25 to 2.75   | 100  | 80.0 to 120 | 0.00  | 20.0       |
| BB04157 | Sulfate           | mg/L  | -0.276  | 0.500    | 20.0  | 19.1 | -0.324           | 19.0     | 18.0 to 22.0   | 95.5 | 80.0 to 120 | 0.00  | 20.0       |
| BB04155 | Solids, Dissolved | mg/L  | 2.00    | 25.0     |       |      | 3120             | 50.0     | 40.0 to 60.0   |      |             | 0.808 | 5.00       |
| BB04157 | Chloride          | mg/L  | -0.0488 | 0.500    | 10.0  | 10.3 | 0.135            | 10.1     | 9.00 to 11.0   | 103  | 80.0 to 120 | 0.00  | 20.0       |

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**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  
 Lab Complete

Outside Lab

Lab ETA

|                         |                 |              |                          |
|-------------------------|-----------------|--------------|--------------------------|
| Requested Complete Date | Routine         | Results To   | Dustin Brooks, Greg Dyer |
| Site Representative     | John Pate       | Requested By | Greg Dyer                |
| Collector               | Anthony Goggins | Location     | Gorgas Landfill          |

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

Comments

| Sample # | Date       | Time  | Bottle Count | Description | Lab Filter | Lab Id  |
|----------|------------|-------|--------------|-------------|------------|---------|
| MW-6     | 02/23/2021 | 10:45 | 6            | Groundwater |            | BB04032 |
| MW-7     | 02/23/2021 | 11:35 | 6            | Groundwater |            | BB04033 |
| MW-8     | 02/23/2021 | 12:35 | 6            | Groundwater |            | BB04034 |
|          |            |       |              |             |            |         |
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|------------------------|------------------|------------------|
| Relinquished By        | Received By      | Date/Time        |
| <i>Anthony Goggins</i> | <i>Greg Dyer</i> | 02/24/2021 08:30 |
|                        |                  |                  |
|                        |                  |                  |

|                |                 |   |
|----------------|-----------------|---|
| SmarTroll ID   | 7586-41445-5-4  | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |
| Turbidity ID   | 4677-23343-4-2  |   |
| Sample Event   | 1309            |   |
| Cooler Temp    | 0.0 degrees C   |   |
| Thermometer ID | 5408-27568-2-2  |   |
| pH Strip ID    | 8206-45803-10-7 |   |





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

Field Complete  
 Outside Lab  
 Lab Complete

Lab ETA

|   |               |  |                          |
|---|---------------|--|--------------------------|
| Requested Complete Date<br>Site Representative<br>Collector | Routine       | Results To<br>Requested By<br>Location | Dustin Brooks, Greg Dyer |
|   | John Pate     |  | Greg Dyer                |
|   | Dallas Gentry |  | Gorgas Landfill          |

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

Comments

| Sample #  | Date       | Time  | Bottle Count | Description      | Lab Filter | Lab Id  |
|-----------|------------|-------|--------------|------------------|------------|---------|
| MW-13     | 02/23/2021 | 08:33 | 6            | Groundwater      |            | BB04064 |
| MW-14     | 02/23/2021 | 09:45 | 6            | Groundwater      |            | BB04065 |
| MW-15     | 02/23/2021 | 10:45 | 6            | Groundwater      |            | BB04066 |
| MW-16     | 02/23/2021 | 11:40 | 6            | Groundwater      |            | BB04067 |
| MW-16 dup | 02/23/2021 | 11:40 | 6            | Sample Duplicate |            | BB04068 |
| MW-17R    | 02/23/2021 | 12:53 | 6            | Groundwater      |            | BB04069 |
| MW-18     | 02/23/2021 | 14:00 | 6            | Groundwater      |            | BB04070 |
| MW-12V    | 02/24/2021 | 08:38 | 6            | Groundwater      |            | BB04071 |
| MW-12     | 02/24/2021 | 09:48 | 6            | Groundwater      |            | BB04072 |
| FB-1      | 02/24/2021 | 10:20 | 4            | Field Blank      |            | BB04073 |
|           |            |       |              |                  |            |         |
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|-----------------------------------|-----------------------------------|-------------------------------|
| Relinquished By<br><i>M. Dyer</i> | Received By<br><i>A. M. Kelly</i> | Date/Time<br>02/24/2021 12:50 |
|                                   |                                   |                               |
|                                   |                                   |                               |

|              |                |
|--------------|----------------|
| SmarTroll ID | 7586-41442-5-1 |
| Turbidity ID | 3901-20010-2-2 |
| Sample Event | 1309           |

All metals and radiological bottles have pH < 2

|                |                 |
|----------------|-----------------|
| Cooler Temp    | 0.6 degrees C   |
| Thermometer ID | 5408-27568-2-2  |
| pH Strip ID    | 8206-45803-10-7 |

Bottles/Pre-Preserved Bottles are provided by the GTL



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA 02/25/2021 09:00

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

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

Comments

| Sample #  | Date       | Time  | Bottle Count | Description      | Lab Filter | Lab Id  |
|-----------|------------|-------|--------------|------------------|------------|---------|
| MW-5      | 02/23/2021 | 11:58 | 6            | Groundwater      |            | BB04150 |
| MW-10     | 02/23/2021 | 13:40 | 6            | Groundwater      |            | BB04151 |
| MW-20     | 02/23/2021 | 14:50 | 6            | Groundwater      |            | BB04152 |
| FB-2      | 02/23/2021 | 15:10 | 4            | Field Blank      |            | BB04153 |
| MW-11     | 02/24/2021 | 10:13 | 6            | Groundwater      |            | BB04154 |
| MW-19     | 02/24/2021 | 12:40 | 6            | Groundwater      |            | BB04155 |
| MW-19 Dup | 02/24/2021 | 12:40 | 6            | Sample Duplicate |            | BB04156 |
| EB-1      | 02/24/2021 | 13:30 | 4            | Equipment Blank  |            | BB04157 |
|           |            |       |              |                  |            |         |
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| Relinquished By | Received By | Date/Time        |
|                 |             | 02/25/2021 08:45 |
|                 |             |                  |
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|              |                |   |
|--------------|----------------|---|
| SmarTroll ID | 7586-41443-5-2 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |
| Turbidity ID | 3901-20009-2-1 | Cooler Temp   |
| Sample Event | 1309           | 0.3 degrees C   |
|              |                | Thermometer ID  |
|              |                | 5408-27568-2-2  |
|              |                | pH Strip ID   |
|              |                | 8206-45803-10-7   |

Bottles/Pre-Preserved Bottles are provided by the GTL



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

|                         |                 |              |                          |
|-------------------------|-----------------|--------------|--------------------------|
| Requested Complete Date | Routine         | Results To   | Dustin Brooks, Greg Dyer |
| Site Representative     | John Pate       | Requested By | Greg Dyer                |
| Collector               | Anthony Goggins | Location     | Gorgas Landfill          |

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

Comments: Rad MS/MSD collected at MW-6. LBM 2/24/21

| Sample # | Date       | Time  | Bottle Count | Description | Lab Filter | Lab Id  |
|----------|------------|-------|--------------|-------------|------------|---------|
| MW-6     | 02/23/2021 | 10:45 | 3            | Groundwater |            | BB04035 |
| MW-7     | 02/23/2021 | 11:35 | 1            | Groundwater |            | BB04036 |
| MW-8     | 02/23/2021 | 12:35 | 1            | Groundwater |            | BB04037 |
|          |            |       |              |             |            |         |
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|                        |                    |                  |
|------------------------|--------------------|------------------|
| Relinquished By        | Received By        | Date/Time        |
| <i>Anthony Goggins</i> | <i>James Alvey</i> | 02/24/2021 08:30 |
|                        |                    |                  |
|                        |                    |                  |

|                |                 |   |
|----------------|-----------------|---|
| SmarTroll ID   | 7586-41445-5-4  | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |
| Turbidity ID   | 4677-23343-4-2  |   |
| Sample Event   | 1309            |   |
| Cooler Temp    | N/A             |   |
| Thermometer ID | N/A             |   |
| pH Strip ID    | 8206-45803-10-7 |   |

Bottles/Pre-Preserved Bottles are provided by the GTL



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

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

|                         |               |  |  |              |                          |  |  |
|-------------------------|---------------|--|--|--------------|--------------------------|--|--|
| Requested Complete Date | Routine       |  |  | Results To   | Dustin Brooks, Greg Dyer |  |  |
| Site Representative     | John Pate     |  |  | Requested By | Greg Dyer                |  |  |
| Collector               | Dallas Gentry |  |  | Location     | Gorgas Landfill          |  |  |

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

|          |                                  |
|----------|----------------------------------|
| Comments | Radium MS/MSD collected at MW-14 |
|----------|----------------------------------|

| Sample #  | Date       | Time  | Bottle Count | Description      | Lab Filter | Lab Id  |
|-----------|------------|-------|--------------|------------------|------------|---------|
| MW-13     | 02/23/2021 | 08:33 | 1            | Groundwater      |            | BB04074 |
| MW-14     | 02/23/2021 | 09:45 | 3            | Groundwater      |            | BB04075 |
| MW-15     | 02/23/2021 | 10:45 | 1            | Groundwater      |            | BB04076 |
| MW-16     | 02/23/2021 | 11:40 | 1            | Groundwater      |            | BB04077 |
| MW-16 dup | 02/23/2021 | 11:40 | 1            | Sample Duplicate |            | BB04078 |
| MW-17R    | 02/23/2021 | 12:53 | 1            | Groundwater      |            | BB04079 |
| MW-18     | 02/23/2021 | 14:00 | 1            | Groundwater      |            | BB04080 |
| MW-12V    | 02/24/2021 | 08:38 | 1            | Groundwater      |            | BB04081 |
| MW-12     | 02/24/2021 | 09:48 | 1            | Groundwater      |            | BB04082 |
| FB-1      | 02/24/2021 | 10:20 | 1            | Field Blank      |            | BB04083 |
|           |            |       |              |                  |            |         |
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|----------------------|--------------------|------------------|
| Relinquished By      | Received By        | Date/Time        |
| <i>Dallas Gentry</i> | <i>Laura Wiley</i> | 02/24/2021 12:51 |
|                      |                    |                  |
|                      |                    |                  |

|                |                 |   |
|----------------|-----------------|---|
| SmarTroll ID   | 7586-41442-5-1  | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |
| Turbidity ID   | 3901-20010-2-2  |   |
| Sample Event   | 1309            |   |
| Cooler Temp    | N/A             |   |
| Thermometer ID | N/A             |   |
| pH Strip ID    | 8206-45803-10-7 |   |

Bottles/Pre-Preserved Bottles are provided by the GTL



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA 02/25/2021 09:00

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

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

Comments

| Sample #  | Date       | Time  | Bottle Count | Description      | Lab Filter | Lab Id  |
|-----------|------------|-------|--------------|------------------|------------|---------|
| MW-5      | 02/23/2021 | 11:58 | 1            | Groundwater      |            | BB04158 |
| MW-10     | 02/23/2021 | 13:40 | 1            | Groundwater      |            | BB04159 |
| MW-20     | 02/23/2021 | 14:50 | 1            | Groundwater      |            | BB04160 |
| FB-2      | 02/23/2021 | 15:10 | 1            | Field Blank      |            | BB04161 |
| MW-11     | 02/24/2021 | 10:13 | 1            | Groundwater      |            | BB04162 |
| MW-19     | 02/24/2021 | 12:40 | 1            | Groundwater      |            | BB04163 |
| MW-19 Dup | 02/24/2021 | 12:40 | 1            | Sample Duplicate |            | BB04164 |
| EB-1      | 02/24/2021 | 13:30 | 1            | Equipment Blank  |            | BB04165 |
|           |            |       |              |                  |            |         |
|           |            |       |              |                  |            |         |
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|           |            |       |              |                  |            |         |
|           |            |       |              |                  |            |         |
|           |            |       |              |                  |            |         |
|           |            |       |              |                  |            |         |

|                 |             |                  |
|-----------------|-------------|------------------|
| Relinquished By | Received By | Date/Time        |
|                 |             | 02/25/2021 08:45 |
|                 |             |                  |
|                 |             |                  |

|              |                |   |
|--------------|----------------|---|
| SmarTroll ID | 7586-41443-5-2 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |
| Turbidity ID | 3901-20009-2-1 | Cooler Temp   |
| Sample Event | 1309           | Thermometer ID  |
|              |                | pH Strip ID   |
|              |                | 8206-45803-10-7   |

Bottles/Pre-Preserved Bottles are provided by the GTL

April 05, 2021

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

RE: Project: GORGAS LANDFILL WMWGORLF\_1309  
Pace Project No.: 92526258

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on March 08, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: GORGAS LANDFILL WMWGORLF\_1309  
Pace Project No.: 92526258

---

### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Florida: Cert E871149 SEKS WET  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

| Lab ID      | Sample ID         | Matrix | Date Collected | Date Received  |
|-------------|-------------------|--------|----------------|----------------|
| 92526258001 | BB04035 MW-6      | Water  | 02/23/21 10:45 | 03/08/21 09:00 |
| 92526258002 | BB04035 MW-6 MS   | Water  | 02/23/21 10:45 | 03/08/21 09:00 |
| 92526258003 | BB04035 MW-6 MSD  | Water  | 02/23/21 10:45 | 03/08/21 09:00 |
| 92526258004 | BB04036 MW-7      | Water  | 02/23/21 11:35 | 03/08/21 09:00 |
| 92526258005 | BB04037 MW-8      | Water  | 02/23/21 12:35 | 03/08/21 09:00 |
| 92526258006 | BB04074 MW-13     | Water  | 02/23/21 08:33 | 03/08/21 09:00 |
| 92526258007 | BB04075 MW-14     | Water  | 02/23/21 09:45 | 03/08/21 09:00 |
| 92526258008 | BB04075 MW-14 MS  | Water  | 02/23/21 09:45 | 03/08/21 09:00 |
| 92526258009 | BB04075 MW-14 MSD | Water  | 02/23/21 09:45 | 03/08/21 09:00 |
| 92526258010 | BB04076 MW-15     | Water  | 02/23/21 10:45 | 03/08/21 09:00 |
| 92526258011 | BB04077 MW-16     | Water  | 02/23/21 11:40 | 03/08/21 09:00 |
| 92526258012 | BB04078 MW-16 DUP | Water  | 02/23/21 11:40 | 03/08/21 09:00 |
| 92526258013 | BB04079 MW-17R    | Water  | 02/23/21 12:53 | 03/08/21 09:00 |
| 92526258014 | BB04080 MW-18     | Water  | 02/23/21 14:00 | 03/08/21 09:00 |
| 92526258015 | BB04081 MW-12V    | Water  | 02/24/21 08:38 | 03/08/21 09:00 |
| 92526258016 | BB04082 MW-12     | Water  | 02/24/21 09:48 | 03/08/21 09:00 |
| 92526258017 | BB04083 FB-1      | Water  | 02/24/21 10:20 | 03/08/21 09:00 |
| 92526258018 | BB04158 MW-5      | Water  | 02/23/21 11:58 | 03/08/21 09:00 |
| 92526258019 | BB04159 MW-10     | Water  | 02/23/21 13:40 | 03/08/21 09:00 |
| 92526258020 | BB04160 MW-20     | Water  | 02/23/21 14:50 | 03/08/21 09:00 |
| 92526258021 | BB04161 FB-2      | Water  | 02/23/21 15:10 | 03/08/21 09:00 |
| 92526258022 | BB04162 MW-11     | Water  | 02/24/21 10:13 | 03/08/21 09:00 |
| 92526258023 | BB04163 MW-19     | Water  | 02/24/21 12:40 | 03/08/21 09:00 |
| 92526258024 | BB04164 MW-19 DUP | Water  | 02/24/21 12:40 | 03/08/21 09:00 |
| 92526258025 | BB04165 EB-1      | Water  | 02/24/21 13:30 | 03/08/21 09:00 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GORGAS LANDFILL WMWGORLF\_1309  
Pace Project No.: 92526258

| Lab ID      | Sample ID         | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|-------------------|--------------------------|----------|-------------------|------------|
| 92526258001 | BB04035 MW-6      | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92526258002 | BB04035 MW-6 MS   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258003 | BB04035 MW-6 MSD  | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258004 | BB04036 MW-7      | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92526258005 | BB04037 MW-8      | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92526258006 | BB04074 MW-13     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92526258007 | BB04075 MW-14     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92526258008 | BB04075 MW-14 MS  | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258009 | BB04075 MW-14 MSD | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258010 | BB04076 MW-15     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92526258011 | BB04077 MW-16     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92526258012 | BB04078 MW-16 DUP | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92526258013 | BB04079 MW-17R    | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
| 92526258014 | BB04080 MW-18     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |

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### SAMPLE ANALYTE COUNT

Project: GORGAS LANDFILL WMWGORLF\_1309  
Pace Project No.: 92526258

| Lab ID      | Sample ID         | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|-------------------|--------------------------|----------|-------------------|------------|
| 92526258015 | BB04081 MW-12V    | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258016 | BB04082 MW-12     | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258017 | BB04083 FB-1      | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258018 | BB04158 MW-5      | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258019 | BB04159 MW-10     | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258020 | BB04160 MW-20     | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258021 | BB04161 FB-2      | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258022 | BB04162 MW-11     | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258023 | BB04163 MW-19     | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258024 | BB04164 MW-19 DUP | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92526258025 | BB04165 EB-1      | Total Radium Calculation | CMC      | 1                 | PASI-PA    |
|             |                   | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | CMC      | 1                 | PASI-PA    |

PASI-PA = Pace Analytical Services - Greensburg

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## PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

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**Method:** EPA 9315

**Description:** 9315 Total Radium

**Client:** Alabama Power

**Date:** April 05, 2021

**General Information:**

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

**Hold Time:**

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

**Method Blank:**

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

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

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

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

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**Method:** EPA 9320

**Description:** 9320 Radium 228

**Client:** Alabama Power

**Date:** April 05, 2021

**General Information:**

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

**Hold Time:**

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

**Method Blank:**

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

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

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

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

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**Method:** Total Radium Calculation

**Description:** Total Radium 228+226

**Client:** Alabama Power

**Date:** April 05, 2021

**General Information:**

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

**Hold Time:**

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

**Method Blank:**

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

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

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

**Additional Comments:**

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

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04035 MW-6**      **Lab ID: 92526258001**      Collected: 02/23/21 10:45      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|--|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.262U ± 0.269 (0.537)</b><br><b>C:84% T:NA</b> | pCi/L | 04/02/21 09:56 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.892 ± 0.404 (0.666)</b><br><b>C:74% T:90%</b> | pCi/L | 03/31/21 11:15 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>1.15U ± 0.673 (1.20)</b>                        | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04035 MW-6 MS**      **Lab ID: 92526258002**      Collected: 02/23/21 10:45      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters | Method                                | Act ± Unc (MDC) Carr Trac                        | Units | Analyzed       | CAS No.    | Qual |
|------------|---------------------------------------|--|-------|----------------|------------|------|
|            | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226 | EPA 9315                              | <b>104.79 %REC ± NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 04/02/21 09:56 | 13982-63-3 |      |
|            | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228 | EPA 9320                              | <b>82.97 %REC ± NA (NA)</b><br><b>C:NA T:NA</b>  | pCi/L | 03/31/21 11:15 | 15262-20-1 |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04035 MW-6 MSD**      **Lab ID: 92526258003**      Collected: 02/23/21 10:45      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method   | Act ± Unc (MDC) Carr Trac  | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|----------|--|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |          |  |       |                |            |      |
| Radium-226                            | EPA 9315 | <b>108.46 %REC 3.45RPD ±</b><br><b>NA (NA)</b><br><b>C:NA T:NA</b>   | pCi/L | 04/02/21 09:57 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |          |  |       |                |            |      |
| Radium-228                            | EPA 9320 | <b>103.43 %REC 21.95 RPD ±</b><br><b>NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 03/31/21 11:15 | 15262-20-1 |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04036 MW-7**      **Lab ID: 92526258004**      Collected: 02/23/21 11:35      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.206U ± 0.213 (0.386)</b><br><b>C:72% T:NA</b>  | pCi/L | 04/02/21 09:57 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.490U ± 0.436 (0.887)</b><br><b>C:74% T:84%</b> | pCi/L | 03/31/21 11:15 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.696U ± 0.649 (1.27)</b>                        | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04037 MW-8**      **Lab ID: 92526258005**      Collected: 02/23/21 12:35      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.159U ± 0.209 (0.442)</b><br><b>C:88% T:NA</b>  | pCi/L | 04/02/21 09:57 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.526U ± 0.382 (0.749)</b><br><b>C:77% T:90%</b> | pCi/L | 03/31/21 11:15 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.685U ± 0.591 (1.19)</b>                        | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04074 MW-13**      **Lab ID: 92526258006**      Collected: 02/23/21 08:33      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0305U ± 0.145 (0.380)</b><br><b>C:92% T:NA</b> | pCi/L | 04/02/21 09:57 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.422U ± 0.317 (0.621)</b><br><b>C:78% T:96%</b> | pCi/L | 03/31/21 11:15 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.453U ± 0.462 (1.00)</b>                        | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04075 MW-14**      **Lab ID: 92526258007**      Collected: 02/23/21 09:45      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.245U ± 0.218 (0.392)</b><br><b>C:92% T:NA</b>  | pCi/L | 04/02/21 09:57 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.559U ± 0.361 (0.681)</b><br><b>C:76% T:89%</b> | pCi/L | 03/31/21 11:15 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.804U ± 0.579 (1.07)</b>                        | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04075 MW-14 MS**      **Lab ID: 92526258008**      Collected: 02/23/21 09:45      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters | Method                                | Act ± Unc (MDC) Carr Trac                        | Units | Analyzed       | CAS No.    | Qual |
|------------|---------------------------------------|--|-------|----------------|------------|------|
|            | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226 | EPA 9315                              | <b>103.27 %REC ± NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 04/02/21 09:57 | 13982-63-3 |      |
|            | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228 | EPA 9320                              | <b>88.52 %REC ± NA (NA)</b><br><b>C:NA T:NA</b>  | pCi/L | 03/31/21 11:15 | 15262-20-1 |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04075 MW-14 MSD**      **Lab ID: 92526258009**      Collected: 02/23/21 09:45      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method   | Act ± Unc (MDC) Carr Trac   | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|----------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |          |   |       |                |            |      |
| Radium-226                            | EPA 9315 | <b>104.01 %REC</b> <b>0.72RPD ±</b><br><b>NA (NA)</b><br><b>C:NA T:NA</b>   | pCi/L | 04/02/21 09:57 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |          |   |       |                |            |      |
| Radium-228                            | EPA 9320 | <b>105.07 %REC</b> <b>17.10 RPD ±</b><br><b>NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 03/31/21 11:15 | 15262-20-1 |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04076 MW-15**      **Lab ID: 92526258010**      Collected: 02/23/21 10:45      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                            | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|--|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.209U ± 0.222 (0.442)</b><br><b>C:94% T:NA</b>   | pCi/L | 04/02/21 09:57 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.378U ± 0.313 (0.628)</b><br><b>C:75% T:103%</b> | pCi/L | 03/31/21 11:16 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.587U ± 0.535 (1.07)</b>                         | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04077 MW-16**      **Lab ID: 92526258011**      Collected: 02/23/21 11:40      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>-0.308U ± 0.246 (0.765)</b><br><b>C:96% T:NA</b> | pCi/L | 04/02/21 09:58 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.546U ± 0.405 (0.798)</b><br><b>C:72% T:88%</b> | pCi/L | 03/31/21 11:16 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.546U ± 0.651 (1.56)</b>                        | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04078 MW-16 DUP**      **Lab ID: 92526258012**      Collected: 02/23/21 11:40      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.348U ± 0.253 (0.435)</b><br><b>C:95% T:NA</b>  | pCi/L | 04/02/21 09:58 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.261U ± 0.373 (0.801)</b><br><b>C:74% T:88%</b> | pCi/L | 03/31/21 11:16 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.609U ± 0.626 (1.24)</b>                        | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04079 MW-17R**      **Lab ID: 92526258013**      Collected: 02/23/21 12:53      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.177U ± 0.231 (0.495)</b><br><b>C:99% T:NA</b>  | pCi/L | 04/02/21 09:58 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.263U ± 0.317 (0.666)</b><br><b>C:72% T:86%</b> | pCi/L | 03/31/21 11:16 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.440U ± 0.548 (1.16)</b>                        | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04080 MW-18**      **Lab ID: 92526258014**      Collected: 02/23/21 14:00      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.494U ± 0.414 (0.831)</b><br><b>C:84% T:NA</b>  | pCi/L | 04/02/21 09:58 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.254U ± 0.283 (0.590)</b><br><b>C:75% T:96%</b> | pCi/L | 03/31/21 11:16 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.748U ± 0.697 (1.42)</b>                        | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04081 MW-12V**      **Lab ID: 92526258015**      Collected: 02/24/21 08:38      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                             | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.865 ± 0.404 (0.587)</b><br><b>C:91% T:NA</b>     | pCi/L | 04/02/21 09:58 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>-0.0367U ± 0.259 (0.619)</b><br><b>C:77% T:91%</b> | pCi/L | 03/31/21 11:16 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.865U ± 0.663 (1.21)</b>                          | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04082 MW-12**      **Lab ID: 92526258016**      Collected: 02/24/21 09:48      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.260U ± 0.266 (0.526)</b><br><b>C:84% T:NA</b> | pCi/L | 04/02/21 09:47 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.975 ± 0.427 (0.697)</b><br><b>C:80% T:82%</b> | pCi/L | 03/31/21 11:16 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>1.24 ± 0.693 (1.22)</b>                         | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04083 FB-1**      **Lab ID: 92526258017**      Collected: 02/24/21 10:20      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.189U ± 0.343 (0.781)</b><br><b>C:90% T:NA</b>  | pCi/L | 04/02/21 09:47 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.253U ± 0.338 (0.723)</b><br><b>C:75% T:90%</b> | pCi/L | 03/31/21 11:16 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.442U ± 0.681 (1.50)</b>                        | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04158 MW-5**      **Lab ID: 92526258018**      Collected: 02/23/21 11:58      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                            | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|--|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.129U ± 0.233 (0.531)</b><br><b>C:88% T:NA</b>   | pCi/L | 04/02/21 09:47 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.581U ± 0.324 (0.590)</b><br><b>C:80% T:102%</b> | pCi/L | 03/31/21 11:17 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.710U ± 0.557 (1.12)</b>                         | pCi/L | 04/02/21 15:26 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04159 MW-10**      **Lab ID: 92526258019**      Collected: 02/23/21 13:40      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.164U ± 0.245 (0.541)</b><br><b>C:90% T:NA</b>  | pCi/L | 04/02/21 09:47 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.165U ± 0.350 (0.773)</b><br><b>C:80% T:81%</b> | pCi/L | 03/31/21 11:17 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.329U ± 0.595 (1.31)</b>                        | pCi/L | 04/02/21 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04160 MW-20**      **Lab ID: 92526258020**      Collected: 02/23/21 14:50      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.464U ± 0.312 (0.547)</b><br><b>C:96% T:NA</b> | pCi/L | 04/02/21 09:47 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.727 ± 0.385 (0.680)</b><br><b>C:81% T:85%</b> | pCi/L | 03/31/21 11:17 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>1.19U ± 0.697 (1.23)</b>                        | pCi/L | 04/02/21 16:11 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04161 FB-2**      **Lab ID: 92526258021**      Collected: 02/23/21 15:10      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0821U ± 0.220 (0.527)</b><br><b>C:95% T:NA</b> | pCi/L | 04/02/21 09:48 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.295U ± 0.363 (0.768)</b><br><b>C:73% T:82%</b> | pCi/L | 03/22/21 13:06 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.377U ± 0.583 (1.30)</b>                        | pCi/L | 04/05/21 09:03 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04162 MW-11**      **Lab ID: 92526258022**      Collected: 02/24/21 10:13      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.261U ± 0.293 (0.610)</b><br><b>C:96% T:NA</b>  | pCi/L | 04/02/21 09:48 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.608U ± 0.383 (0.706)</b><br><b>C:71% T:83%</b> | pCi/L | 03/22/21 13:06 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.869U ± 0.676 (1.32)</b>                        | pCi/L | 04/05/21 09:03 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04163 MW-19**      **Lab ID: 92526258023**      Collected: 02/24/21 12:40      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.295U ± 0.254 (0.475)</b><br><b>C:97% T:NA</b>  | pCi/L | 04/02/21 09:43 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.525U ± 0.391 (0.761)</b><br><b>C:66% T:90%</b> | pCi/L | 03/22/21 13:06 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.820U ± 0.645 (1.24)</b>                        | pCi/L | 04/05/21 09:03 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04164 MW-19 DUP**      **Lab ID: 92526258024**      Collected: 02/24/21 12:40      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.103U ± 0.246 (0.581)</b><br><b>C:97% T:NA</b>  | pCi/L | 04/02/21 09:43 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.578U ± 0.379 (0.717)</b><br><b>C:68% T:95%</b> | pCi/L | 03/22/21 13:06 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.681U ± 0.625 (1.30)</b>                        | pCi/L | 04/05/21 09:03 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

**Sample: BB04165 EB-1**      **Lab ID: 92526258025**      Collected: 02/24/21 13:30      Received: 03/08/21 09:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.362U ± 0.235 (0.400)</b><br><b>C:100% T:NA</b> | pCi/L | 04/02/21 13:56 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.294U ± 0.384 (0.818)</b><br><b>C:69% T:82%</b> | pCi/L | 03/22/21 13:07 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.656U ± 0.619 (1.22)</b>                        | pCi/L | 04/05/21 09:03 | 7440-14-4  |      |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

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|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 438036   | Analysis Method:      | EPA 9315                              |
| QC Batch Method: | EPA 9315 | Analysis Description: | 9315 Total Radium                     |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92526258021, 92526258022, 92526258023, 92526258024, 92526258025

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METHOD BLANK: 2114421 Matrix: Water

Associated Lab Samples: 92526258021, 92526258022, 92526258023, 92526258024, 92526258025

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | 0.660 ± 0.339 (0.509) C:100% T:NA | pCi/L | 04/02/21 09:47 |            |

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

QC Batch: 437939

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92526258001, 92526258002, 92526258003, 92526258004, 92526258005, 92526258006, 92526258007, 92526258008, 92526258009, 92526258010, 92526258011, 92526258012, 92526258013, 92526258014, 92526258015, 92526258016, 92526258017, 92526258018, 92526258019, 92526258020

METHOD BLANK: 2114111

Matrix: Water

Associated Lab Samples: 92526258001, 92526258002, 92526258003, 92526258004, 92526258005, 92526258006, 92526258007, 92526258008, 92526258009, 92526258010, 92526258011, 92526258012, 92526258013, 92526258014, 92526258015, 92526258016, 92526258017, 92526258018, 92526258019, 92526258020

| Parameter  | Act ± Unc (MDC) Carr Trac        | Units | Analyzed       | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.202 ± 0.272 (0.582) C:78% T:NA | pCi/L | 04/02/21 09:56 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

QC Batch: 437954

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92526258001, 92526258002, 92526258003, 92526258004, 92526258005, 92526258006, 92526258007, 92526258008, 92526258009, 92526258010, 92526258011, 92526258012, 92526258013, 92526258014, 92526258015, 92526258016, 92526258017, 92526258018, 92526258019, 92526258020

METHOD BLANK: 2114137

Matrix: Water

Associated Lab Samples: 92526258001, 92526258002, 92526258003, 92526258004, 92526258005, 92526258006, 92526258007, 92526258008, 92526258009, 92526258010, 92526258011, 92526258012, 92526258013, 92526258014, 92526258015, 92526258016, 92526258017, 92526258018, 92526258019, 92526258020

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.108 ± 0.317 (0.711) C:76% T:87% | pCi/L | 03/31/21 11:20 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

QC Batch: 437961

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92526258021, 92526258022, 92526258023, 92526258024, 92526258025

METHOD BLANK: 2114144

Matrix: Water

Associated Lab Samples: 92526258021, 92526258022, 92526258023, 92526258024, 92526258025

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.271 ± 0.377 (0.808) C:72% T:79% | pCi/L | 03/22/21 13:07 |            |

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

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## QUALIFIERS

Project: GORGAS LANDFILL WMWGORLF\_1309

Pace Project No.: 92526258

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS LANDFILL WMWGORLF\_1309  
Pace Project No.: 92526258

| Lab ID      | Sample ID         | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------------|-----------------|----------|-------------------|------------------|
| 92526258001 | BB04035 MW-6      | EPA 9315        | 437939   |                   |                  |
| 92526258002 | BB04035 MW-6 MS   | EPA 9315        | 437939   |                   |                  |
| 92526258003 | BB04035 MW-6 MSD  | EPA 9315        | 437939   |                   |                  |
| 92526258004 | BB04036 MW-7      | EPA 9315        | 437939   |                   |                  |
| 92526258005 | BB04037 MW-8      | EPA 9315        | 437939   |                   |                  |
| 92526258006 | BB04074 MW-13     | EPA 9315        | 437939   |                   |                  |
| 92526258007 | BB04075 MW-14     | EPA 9315        | 437939   |                   |                  |
| 92526258008 | BB04075 MW-14 MS  | EPA 9315        | 437939   |                   |                  |
| 92526258009 | BB04075 MW-14 MSD | EPA 9315        | 437939   |                   |                  |
| 92526258010 | BB04076 MW-15     | EPA 9315        | 437939   |                   |                  |
| 92526258011 | BB04077 MW-16     | EPA 9315        | 437939   |                   |                  |
| 92526258012 | BB04078 MW-16 DUP | EPA 9315        | 437939   |                   |                  |
| 92526258013 | BB04079 MW-17R    | EPA 9315        | 437939   |                   |                  |
| 92526258014 | BB04080 MW-18     | EPA 9315        | 437939   |                   |                  |
| 92526258015 | BB04081 MW-12V    | EPA 9315        | 437939   |                   |                  |
| 92526258016 | BB04082 MW-12     | EPA 9315        | 437939   |                   |                  |
| 92526258017 | BB04083 FB-1      | EPA 9315        | 437939   |                   |                  |
| 92526258018 | BB04158 MW-5      | EPA 9315        | 437939   |                   |                  |
| 92526258019 | BB04159 MW-10     | EPA 9315        | 437939   |                   |                  |
| 92526258020 | BB04160 MW-20     | EPA 9315        | 437939   |                   |                  |
| 92526258021 | BB04161 FB-2      | EPA 9315        | 438036   |                   |                  |
| 92526258022 | BB04162 MW-11     | EPA 9315        | 438036   |                   |                  |
| 92526258023 | BB04163 MW-19     | EPA 9315        | 438036   |                   |                  |
| 92526258024 | BB04164 MW-19 DUP | EPA 9315        | 438036   |                   |                  |
| 92526258025 | BB04165 EB-1      | EPA 9315        | 438036   |                   |                  |
| 92526258001 | BB04035 MW-6      | EPA 9320        | 437954   |                   |                  |
| 92526258002 | BB04035 MW-6 MS   | EPA 9320        | 437954   |                   |                  |
| 92526258003 | BB04035 MW-6 MSD  | EPA 9320        | 437954   |                   |                  |
| 92526258004 | BB04036 MW-7      | EPA 9320        | 437954   |                   |                  |
| 92526258005 | BB04037 MW-8      | EPA 9320        | 437954   |                   |                  |
| 92526258006 | BB04074 MW-13     | EPA 9320        | 437954   |                   |                  |
| 92526258007 | BB04075 MW-14     | EPA 9320        | 437954   |                   |                  |
| 92526258008 | BB04075 MW-14 MS  | EPA 9320        | 437954   |                   |                  |
| 92526258009 | BB04075 MW-14 MSD | EPA 9320        | 437954   |                   |                  |
| 92526258010 | BB04076 MW-15     | EPA 9320        | 437954   |                   |                  |
| 92526258011 | BB04077 MW-16     | EPA 9320        | 437954   |                   |                  |
| 92526258012 | BB04078 MW-16 DUP | EPA 9320        | 437954   |                   |                  |
| 92526258013 | BB04079 MW-17R    | EPA 9320        | 437954   |                   |                  |
| 92526258014 | BB04080 MW-18     | EPA 9320        | 437954   |                   |                  |
| 92526258015 | BB04081 MW-12V    | EPA 9320        | 437954   |                   |                  |
| 92526258016 | BB04082 MW-12     | EPA 9320        | 437954   |                   |                  |
| 92526258017 | BB04083 FB-1      | EPA 9320        | 437954   |                   |                  |
| 92526258018 | BB04158 MW-5      | EPA 9320        | 437954   |                   |                  |
| 92526258019 | BB04159 MW-10     | EPA 9320        | 437954   |                   |                  |
| 92526258020 | BB04160 MW-20     | EPA 9320        | 437954   |                   |                  |
| 92526258021 | BB04161 FB-2      | EPA 9320        | 437961   |                   |                  |
| 92526258022 | BB04162 MW-11     | EPA 9320        | 437961   |                   |                  |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS LANDFILL WMWGORLF\_1309  
Pace Project No.: 92526258

| Lab ID      | Sample ID         | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------------|--------------------------|----------|-------------------|------------------|
| 92526258023 | BB04163 MW-19     | EPA 9320                 | 437961   |                   |                  |
| 92526258024 | BB04164 MW-19 DUP | EPA 9320                 | 437961   |                   |                  |
| 92526258025 | BB04165 EB-1      | EPA 9320                 | 437961   |                   |                  |
| 92526258001 | BB04035 MW-6      | Total Radium Calculation | 441637   |                   |                  |
| 92526258004 | BB04036 MW-7      | Total Radium Calculation | 441637   |                   |                  |
| 92526258005 | BB04037 MW-8      | Total Radium Calculation | 441637   |                   |                  |
| 92526258006 | BB04074 MW-13     | Total Radium Calculation | 441637   |                   |                  |
| 92526258007 | BB04075 MW-14     | Total Radium Calculation | 441637   |                   |                  |
| 92526258010 | BB04076 MW-15     | Total Radium Calculation | 441637   |                   |                  |
| 92526258011 | BB04077 MW-16     | Total Radium Calculation | 441637   |                   |                  |
| 92526258012 | BB04078 MW-16 DUP | Total Radium Calculation | 441637   |                   |                  |
| 92526258013 | BB04079 MW-17R    | Total Radium Calculation | 441637   |                   |                  |
| 92526258014 | BB04080 MW-18     | Total Radium Calculation | 441637   |                   |                  |
| 92526258015 | BB04081 MW-12V    | Total Radium Calculation | 441637   |                   |                  |
| 92526258016 | BB04082 MW-12     | Total Radium Calculation | 441637   |                   |                  |
| 92526258017 | BB04083 FB-1      | Total Radium Calculation | 441637   |                   |                  |
| 92526258018 | BB04158 MW-5      | Total Radium Calculation | 441637   |                   |                  |
| 92526258019 | BB04159 MW-10     | Total Radium Calculation | 441656   |                   |                  |
| 92526258020 | BB04160 MW-20     | Total Radium Calculation | 441656   |                   |                  |
| 92526258021 | BB04161 FB-2      | Total Radium Calculation | 441779   |                   |                  |
| 92526258022 | BB04162 MW-11     | Total Radium Calculation | 441779   |                   |                  |
| 92526258023 | BB04163 MW-19     | Total Radium Calculation | 441779   |                   |                  |
| 92526258024 | BB04164 MW-19 DUP | Total Radium Calculation | 441779   |                   |                  |
| 92526258025 | BB04165 EB-1      | Total Radium Calculation | 441779   |                   |                  |

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Client Name: Alabama Power Company

WO#: **92526258**



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 9551 0669 9520

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Thermometer Used: N/A    Type of Ice: Wet Blue None

Cooler Temperature Observed Temp: N/A °C    Correction Factor: \_\_\_\_\_ °C    Final Temp: \_\_\_\_\_ °C  
 Temp should be above freezing to 6°C

| Comments:  | Yes                                 | No                                  | N/A                                 | pH paper Lot#               | Date and Initials of person examining contents: |   |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------|---|---|
|  |                                     |                                     |                                     | <u>10D1101</u>              | <u>MIC</u>                                      |   |
| Chain of Custody Present:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 1.                          |   |   |
| Chain of Custody Filled Out:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 2.                          |   |   |
| Chain of Custody Relinquished:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 3.                          |   |   |
| Sampler Name & Signature on COC:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 4.                          | <u>NO signature on COC</u>                      |   |
| Sample Labels match COC:<br>-Includes date/time/ID      Matrix: <u>WT</u>  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 5.                          |   |   |
| Samples Arrived within Hold Time:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 6.                          |   |   |
| Short Hold Time Analysis (<72hr remaining):  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 7.                          |   |   |
| Rush Turn Around Time Requested:   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 8.                          |   |   |
| Sufficient Volume:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 9.                          |   |   |
| Correct Containers Used:<br>-Pace Containers Used:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 10.                         |   |   |
| Containers Intact:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 11.                         |   |   |
| Orthophosphate field filtered  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 12.                         |   |   |
| Hex Cr Aqueous sample field filtered   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 13.                         |   |   |
| Organic Samples checked for dechlorination:  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 14.                         |   |   |
| Filtered volume received for Dissolved tests   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 15.                         |   |   |
| All containers have been checked for preservation.<br>exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon,<br>Non-aqueous matrix | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 16.                         |   |   |
| All containers meet method preservation requirements.  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | Initial when completed      | <u>MIC</u>                                      | Date/time of preservation                         |
|  |                                     |                                     |                                     | Lot # of added preservative |   |   |
| Headspace in VOA Vials (>6mm):   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 17.                         |   |   |
| Trip Blank Present:  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 18.                         |   |   |
| Trip Blank Custody Seals Present   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                             |   |   |
| Rad Samples Screened < 0.5 mrem/hr   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | Initial when completed:     | <u>MIC</u>                                      | Date: <u>3-8-02</u> Survey Meter SN: <u>15-63</u> |

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

## CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**

**Required Client Information:**

Company: Alabama Power Company  
 Address: 744 Highway 87 GSC Bldg #8  
 Calera, AL 35040  
 Email To: lbmickit@southemco.com  
 Phone: 205-684-6197 Fax  
 Requested Due Date: 28 days

**Section B**

**Required Project Information:**

Report To: Laura Mickitt  
 Copy To: Brooke Caton & Renee Jermigan  
 Purchase Order #: APC57570-0001  
 Project Name: Gorgas Landfill  
 Project Number: WVMWGORLIF 1309

**Section C**

**Invoice Information:**

Attention: Laura Mickitt  
 Company Name: Alabama Power Co.  
 Address: 744 Highway 87 GSC Bldg #8  
 Page Quote: CCR  
 Page Project Manager: Kevin Herring  
 Page Profile #

| ITEM # | SAMPLE ID<br>One Character per box.<br>(A-Z, 0-9 /, -, )<br>Sample IDs must be unique | MATRIX<br>Drinking Water<br>Water<br>Waste Water<br>Product<br>Sew/Solid<br>Oil<br>Wipe<br>Other<br>Tissue | CODE<br>DW<br>WT<br>WW<br>P<br>SL<br>VLP<br>VF<br>OT<br>TS | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED       |               | SAMPLE TEMP AT COLLECTION |      | # OF CONTAINERS | Preservatives |       |      |     |      |         |          | Analyses Test | Requested Analytes Filtered (Y/N) | Residual Chlorine (Y/N) | SAMPLE CONDITIONS |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------|---|--|--|---------------------------------------|-----------------------------|-----------------|---------------|---------------------------|------|-----------------|---------------|-------|------|-----|------|---------|----------|---------------|-----------------------------------|-------------------------|-------------------|----------|----------|------------------|-----------------------------|-----------|-----------------------|-----------------------------|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|        |   |  |  |                                       |                             | START DATE TIME | END DATE TIME | DATE                      | TIME |                 | Unpreserved   | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol |               |                                   |                         | Other             | EPA 9315 | EPA 9320 | Total Radium Sum | Matrix Spike/Matrix Spike D | TEMP In C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1      | BB04035   |  | MM-6   | GM/G                                  | GM/G                        | 2/23/2021 10:45 |               | 3                         | X    | X               | X             | X     | X    | X   | X    | X       | X        | X             |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2      | BB04036   |  | MM-7   | GM/G                                  | GM/G                        | 2/23/2021 11:35 |               | 1                         | X    | X               | X             | X     | X    | X   | X    | X       | X        | X             |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3      | BB04037   |  | MM-8   | GM/G                                  | GM/G                        | 2/23/2021 12:35 |               | 1                         | X    | X               | X             | X     | X    | X   | X    | X       | X        | X             |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4      |   |  |  |                                       |                             |                 |               |                           |      |                 |               |       |      |     |      |         |          |               |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5      |   |  |  |                                       |                             |                 |               |                           |      |                 |               |       |      |     |      |         |          |               |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6      |   |  |  |                                       |                             |                 |               |                           |      |                 |               |       |      |     |      |         |          |               |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7      |   |  |  |                                       |                             |                 |               |                           |      |                 |               |       |      |     |      |         |          |               |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8      |   |  |  |                                       |                             |                 |               |                           |      |                 |               |       |      |     |      |         |          |               |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9      |   |  |  |                                       |                             |                 |               |                           |      |                 |               |       |      |     |      |         |          |               |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10     |   |  |  |                                       |                             |                 |               |                           |      |                 |               |       |      |     |      |         |          |               |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11     |   |  |  |                                       |                             |                 |               |                           |      |                 |               |       |      |     |      |         |          |               |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12     |   |  |  |                                       |                             |                 |               |                           |      |                 |               |       |      |     |      |         |          |               |                                   |                         |                   |          |          |                  |                             |           |                       |                             |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

RELINQUISHED BY / AFFILIATION: Laura Mickitt/ APC GTL

DATE: 2/23/2021

TIME: 13:55

ACCEPTED BY / AFFILIATION: *Manuella L. Boyd*

DATE: 3/8/2021

TIME: 9:00

TEMP In C: 16.14

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): N

Samples Intact (Y/N): Y

AMPLER NAME AND SIGNATURE: \_\_\_\_\_

PRINT Name of SAMPLER: \_\_\_\_\_

SIGNATURE of SAMPLER: \_\_\_\_\_

DATE Signed: \_\_\_\_\_

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

|  |  |
|--|--|
| <b>Company:</b> Alabama Power Company<br><b>Address:</b> 744 Highway 87 GSC Bldg #3<br>Calera, AL 35040<br><b>Email To:</b> lmidtki@southernco.com<br><b>Phone:</b> 205-664-6197 <b>Fax:</b> _____<br><b>Requested Due Date:</b> 28 days | <b>Report To:</b> Laura Midtkiff<br><b>Copy To:</b> Brooke Catton & Renee Jernigan<br><b>Purchase Order #:</b> APC57570-0001<br><b>Project Name:</b> Gorgas Landfill<br><b>Project Number:</b> WNMVGRLE-1309 |
| <b>Company Name:</b> Alabama Power Co.<br><b>Address:</b> 744 Highway 87 GSC Bldg #3<br><b>Phone:</b> _____ <b>Fax:</b> _____<br><b>Project Manager:</b> Kevin Herring   | <b>Attention:</b> Laura Midtkiff<br><b>Address:</b> _____<br><b>Phone:</b> _____ <b>Fax:</b> _____<br><b>Project Manager:</b> Kevin Herring  |

| ITEM # | SAMPLE ID<br>(One Character per box - A-Z, 0-9 /, -)<br>Sample IDs must be unique | MATRIX    |    |    |    | COLLECTED |           |       |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |       |      |     |      |         |          |       | Analyses Test | Requester Analysts Filtered (Y/N) | Residual Chlorine (Y/N) |  |  |  |  |
|--------|---|-----------|----|----|----|-----------|-----------|-------|------|---------------------------|-----------------|---------------|-------|------|-----|------|---------|----------|-------|---------------|-----------------------------------|-------------------------|--|--|--|--|
|        |   | DW        | SW | WW | SL | START     | TIME      | DATE  | TIME |                           |                 | Unpreserved   | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol | Other |               |                                   |                         |  |  |  |  |
|        |   | WW        | WP | WP | WP | DATE      | TIME      | DATE  | TIME |                           |                 |               |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 1      | BBO4074   | MW-13     |    |    |    |           | 2/23/2021 | 8:33  |      |                           |                 | 1             |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 2      | BBO4075   | MW-14     |    |    |    |           | 2/23/2021 | 9:45  |      |                           |                 | 3             |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 3      | BBO4076   | MW-15     |    |    |    |           | 2/23/2021 | 10:45 |      |                           |                 | 1             |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 4      | BBO4077   | MW-16     |    |    |    |           | 2/23/2021 | 11:40 |      |                           |                 | 1             |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 5      | BBO4078   | MW-16 DUP |    |    |    |           | 2/23/2021 | 11:40 |      |                           |                 | 1             |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 6      | BBO4079   | MW-17R    |    |    |    |           | 2/23/2021 | 12:53 |      |                           |                 | 1             |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 7      | BBO4080   | MW-18     |    |    |    |           | 2/23/2021 | 14:00 |      |                           |                 | 1             |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 8      | BBO4091   | MW-12V    |    |    |    |           | 2/24/2021 | 8:38  |      |                           |                 | 1             |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 9      | BBO4082   | MW-12     |    |    |    |           | 2/24/2021 | 9:48  |      |                           |                 | 1             |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 10     | BBO4083   | FB-1      |    |    |    |           | 2/24/2021 | 10:20 |      |                           |                 | 1             |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 11     |   |           |    |    |    |           |           |       |      |                           |                 |               |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |
| 12     |   |           |    |    |    |           |           |       |      |                           |                 |               |       |      |     |      |         |          |       |               |                                   |                         |  |  |  |  |

| REQUISITIONED BY / AFFILIATION | DATE      | TIME  | ACCEPTED BY / AFFILIATION | DATE     | TIME | SAMPLE CONDITIONS |                       |  |  |
|--------------------------------|-----------|-------|---------------------------|----------|------|-------------------|-----------------------|--|--|
|                                |           |       |                           |          |      | TEMP In C         | Received on Ice (Y/N) |  |  |
| Laura Midtkiff APC GTL         | 2/26/2021 | 13:55 | <i>Marius &amp; Craig</i> | 5-8-2021 | 9:00 |                   |                       |  |  |

|                                   |              |
|-----------------------------------|--------------|
| <b>SAMPLER NAME AND SIGNATURE</b> |              |
| PRINT Name of SAMPLER:            | DATE Signed: |
| SIGNATURE of SAMPLER:             |              |



## CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information:     **Section B** Required Project Information:     **Section C** Invoice Information:     Page : 3    Of 3

|   |  |                                     |
|---|--|-------------------------------------|
| Company: Alabama Power Company                          | Report To: Laura Midkiff               | Attention: Laura Midkiff            |
| Address: 744 Highway 87 GSC Bldg #8<br>Calera, AL 35040 | Copy To: Brooke Caton & Renee Jernigan | Company Name: Alabama Power Co.     |
| Email To: lmidkiff@southemco.com                        | Purchase Order #: APC57570-0001        | Address: 744 Highway 87 GSC Bldg #8 |
| Phone: 205-664-6197    Fax: [blank]                     | Project Name: Gorgas Landfill          | Page Quote: CCR                     |
| Requested Due Date: 28 days                             | Project Number: WWWWGORLFL1309         | Page Project Manager: Kevin Herring |
|   |  | Page Profile #: [blank]             |

| ITEM # | SAMPLE ID<br><small>One Character per box.<br/>(A-Z, 0-9 /, -)</small><br>Sample Ids must be unique | MATRIX         |      | COLLECTED   |       |      |     | SAMPLE TEMP AT COLLECTION |         | PRESERVATIVES   |               |          |          |                  |                             | ANALYSES TEST |     |  |  | Residual Chlorine (Y/N) | RECEIVED ON ICE (Y/N) | CUSTODY SEALED COOLER (Y/N) | SAMPLES INTACT (Y/N) |  |  |  |
|--------|---|----------------|------|-------------|-------|------|-----|---------------------------|---------|-----------------|---------------|----------|----------|------------------|-----------------------------|---------------|-----|--|--|-------------------------|-----------------------|-----------------------------|----------------------|--|--|--|
|        |   | Drinking Water | DW   | START       | DATE  | TIME | END | DATE                      | TIME    | # OF CONTAINERS | Analyses Test |          |          |                  |                             |               | Y/N |  |  |                         |                       |                             |                      |  |  |  |
|        |   | Water          | WT   | Unpreserved | H2SO4 | HNO3 | HCl | NaOH                      | Na2S2O3 | Methanol        | Other         | EPA 9315 | EPA 9320 | Total Radium Sum | Matrix Spike/Matrix Spike D |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 1      | BB04158   | MMW-5          | GW-G | 22/3/2021   | 11:58 |      |     | 1                         | X       |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 2      | BB04159   | MMW-10         | GW-G | 22/3/2021   | 13:40 |      |     | 1                         | X       |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 3      | BB04160   | MMW-20         | GW-G | 22/3/2021   | 14:50 |      |     | 1                         | X       |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 4      | BB04161   | FB-2           | GW-G | 22/2/2021   | 15:10 |      |     | 1                         | X       |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 5      | BB04162   | MMW-11         | GW-G | 22/2/2021   | 10:13 |      |     | 1                         | X       |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 6      | BB04163   | MMW-19         | GW-G | 22/2/2021   | 12:40 |      |     | 1                         | X       |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 7      | BB04164   | MMW-19 DUP     | GW-G | 22/2/2021   | 12:40 |      |     | 1                         | X       |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 8      | BB04165   | EB-1           | GW-G | 22/2/2021   | 13:30 |      |     | 1                         | X       |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 9      |   |                |      |             |       |      |     |                           |         |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 10     |   |                |      |             |       |      |     |                           |         |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 11     |   |                |      |             |       |      |     |                           |         |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |
| 12     |   |                |      |             |       |      |     |                           |         |                 |               |          |          |                  |                             |               |     |  |  |                         |                       |                             |                      |  |  |  |

**ADDITIONAL COMMENTS**  
Laura Midkiff APC GTL

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**REINQUISHED BY / AFFILIATION**: DATE: 2/28/2021 TIME: 1355  
*Monica J Camp*

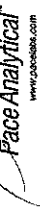
**ACCEPTED BY / AFFILIATION**: DATE: [blank] TIME: [blank]  
*RK2021 QUD*

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: DATE Signed: [blank]

SIGNATURE of SAMPLER: [blank]

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
 Analyst: CLA  
 Date: 3/12/2021  
 Worklist: 59196  
 Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2114111 |
| MB concentration:                   | 0.202   |
| M/B Counting Uncertainty:           | 0.270   |
| MB MDC:                             | 0.582   |
| MB Numerical Performance Indicator: | 1.46    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |          |
|---|----------|
| LCSD (Y or N)?                                | Y        |
| Count Date:                                   | 4/2/2021 |
| Spike I.D.:                                   | 19-033   |
| Decay Corrected Spike Concentration (pCi/mL): | 24.039   |
| Volume Used (mL):                             | 0.10     |
| Aliquot Volume (L, g, F):                     | 0.205    |
| Target Conc. (pCi/L, g, F):                   | 11.921   |
| Uncertainty (Calculated):                     | 0.143    |
| Result (pCi/L, g, F):                         | 13.284   |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 2.11     |
| Numerical Performance Indicator:              | 111.44%  |
| Percent Recovery:                             | N/A      |
| Status vs Numerical Indicator:                | Pass     |
| Upper % Recovery Limits:                      | 125%     |
| Lower % Recovery Limits:                      | 75%      |

| Duplicate Sample Assessment                                 |           |
|---|-----------|
| Sample I.D.:  | LCSS59196 |
| Duplicate Sample I.D.:                                      | LCSD59196 |
| Sample Result (pCi/L, g, F):                                | 13.284    |
| Sample Duplicate Result (pCi/L, g, F):                      | 1.259     |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 13.008    |
| Are sample and/or duplicate results below RL?               | NO        |
| Duplicate Numerical Performance Indicator:                  | 0.306     |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:   | 0.30%     |
| Duplicate Status vs Numerical Indicator:                    | N/A       |
| Duplicate Status vs RPD:                                    | Pass      |
| % RPD Limit:  | 25%       |

| Sample Matrix Spike Control Assessment                  |             |
|---|-------------|
| Sample Collection Date:                                 | MS/MSD 1    |
| Sample I.D.   | 92526258001 |
| Sample MS I.D.  | 92526258002 |
| Sample MSD I.D.   | 92526258003 |
| Spike I.D.:   | 19-033      |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):    | 24.040      |
| Spike Volume Used in MS (mL):                           | 0.20        |
| Spike Volume Used in MSD (mL):                          | 0.20        |
| MS Aliquot (L, g, F):                                   | 0.203       |
| MS Target Conc. (pCi/L, g, F):                          | 23.660      |
| MSD Aliquot (L, g, F):                                  | 0.206       |
| MSD Target Conc. (pCi/L, g, F):                         | 23.341      |
| MS Spike Uncertainty (calculated):                      | 0.284       |
| MSD Spike Uncertainty (calculated):                     | 0.288       |
| Sample Result:  | 0.262       |
| Sample Result Counting Uncertainty (pCi/L, g, F):       | 0.267       |
| Sample Matrix Spike Result:                             | 25.055      |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F): | 1.721       |
| Sample Matrix Spike Duplicate Result:                   | 25.579      |
| MS Numerical Performance Indicator:                     | 1.731       |
| MSD Numerical Performance Indicator:                    | 1.259       |
| MS Percent Recovery:                                    | 104.79%     |
| MSD Percent Recovery:                                   | 108.46%     |
| MS Status vs Numerical Indicator:                       | N/A         |
| MSD Status vs Numerical Indicator:                      | N/A         |
| MS Status vs Recovery:                                  | Pass        |
| MSD Status vs Recovery:                                 | Pass        |
| MS/MSD Upper % Recovery Limits:                         | 125%        |
| MS/MSD Lower % Recovery Limits:                         | 75%         |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |             |
|---|-------------|
| Sample I.D.   | MS/MSD 2    |
| Sample MS I.D.  | 92526258007 |
| Sample MSD I.D.   | 92526258008 |
| Sample Matrix Spike Result:                                       | 25.055      |
| Sample Matrix Spike Duplicate Result:                             | 25.026      |
| Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):           | 1.721       |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): | 1.652       |
| Duplicate Numerical Performance Indicator:                        | 1.683       |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           | -0.420      |
| MS/MSD Duplicate Status vs Numerical Indicator:                   | 3.45%       |
| MS/MSD Duplicate Status vs RPD:                                   | N/A         |
| % RPD Limit:  | 25%         |

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

Comments:

LA04/2/21

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: CLA  
Date: 3/12/2021  
Worklist: 59242  
Matrix: DW

|                                     |              |
|-------------------------------------|--------------|
| MB Sample ID                        | 2114421      |
| MB Concentration:                   | 0.660        |
| MB Counting Uncertainty:            | 0.325        |
| MB MDC:                             | 0.509        |
| MB Numerical Performance Indicator: | 3.98         |
| MB Status vs Numerical Indicator:   | N/A          |
| MB Status vs. MDC:                  | See Comment* |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |           |
|---|----------------|-----------|
|   | LCSD59242      | LCSD59242 |
| Count Date:                                   | 4/2/2021       | 4/2/2021  |
| Spike I.D.:                                   | 19-033         | 19-033    |
| Decay Corrected Spike Concentration (pCi/mL): | 24.039         | 24.039    |
| Volume Used (mL):                             | 0.10           | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.202          | 0.207     |
| Target Conc. (pCi/L, g, F):                   | 11.912         | 11.602    |
| Uncertainty (Calculated):                     | 0.143          | 0.139     |
| Result (pCi/L, g, F):                         | 11.069         | 11.497    |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 1.142          | 1.099     |
| Numerical Performance Indicator:              | -1.43          | -0.18     |
| Percent Recovery:                             | 92.93%         | 99.10%    |
| Status vs Numerical Indicator:                | N/A            | N/A       |
| Status vs Recovery:                           | Pass           | Pass      |
| Upper % Recovery Limits:                      | 125%           | 125%      |
| Lower % Recovery Limits:                      | 75%            | 75%       |

| Duplicate Sample Assessment                                 | LCSD (Y or N)? | Y         |
|---|----------------|-----------|
| Sample I.D.:  | LCSD59242      | LCSD59242 |
| Duplicate Sample I.D.:                                      | LCSD59242      | 4/2/2021  |
| Sample Result (pCi/L, g, F):                                | 11.069         | 19-033    |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 1.142          | 24.039    |
| Sample Duplicate Result (pCi/L, g, F):                      | 11.497         | 0.10      |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 1.099          | 0.207     |
| Are sample and/or duplicate results below RL?               | NO             | 11.602    |
| Duplicate Numerical Performance Indicator:                  | -0.530         | 0.139     |
| Duplicate Percent Recoveries (Duplicate RPD):               | 6.43%          | 11.497    |
| Duplicate Status vs Numerical Indicator:                    | N/A            | 1.099     |
| Duplicate Status vs RPD:                                    | Pass           | -0.18     |
| % RPD Limit:  | 25%            | 99.10%    |

| Sample Matrix Spike Control Assessment                                   | MIS/MSD 1 | MIS/MSD 2 |
|--|-----------|-----------|
| Sample Collection Date:  |           |           |
| Sample I.D.:   |           |           |
| Sample MS I.D.:  |           |           |
| Sample MSD I.D.:   |           |           |
| Spike I.D.:  |           |           |
| MIS/MSD Decay Corrected Spike Concentration (pCi/mL):                    |           |           |
| Spike Volume Used in MS (mL):  |           |           |
| Spike Volume Used in MSD (mL):   |           |           |
| MS Aliquot (L, g, F):  |           |           |
| MS Target Conc. (pCi/L, g, F):   |           |           |
| MSD Aliquot (L, g, F):   |           |           |
| MSD Target Conc. (pCi/L, g, F):  |           |           |
| MS Spike Uncertainty (calculated):                                       |           |           |
| MSD Spike Uncertainty (calculated):                                      |           |           |
| Sample Result:   |           |           |
| Sample Result Counting Uncertainty (pCi/L, g, F):                        |           |           |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):                  |           |           |
| Sample Matrix Spike Duplicate Result:                                    |           |           |
| Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |           |           |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):        |           |           |
| MS Numerical Performance Indicator:                                      |           |           |
| MSD Numerical Performance Indicator:                                     |           |           |
| MS Percent Recovery:   |           |           |
| MSD Percent Recovery:  |           |           |
| MS Status vs Numerical Indicator:  |           |           |
| MSD Status vs Numerical Indicator:                                       |           |           |
| MS Status vs Recovery:   |           |           |
| MSD Status vs Recovery:  |           |           |
| MIS/MSD Upper % Recovery Limits:   |           |           |
| MIS/MSD Lower % Recovery Limits:   |           |           |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment                    |
|--|
| Sample I.D.:   |
| Sample MS I.D.:  |
| Sample MSD I.D.:   |
| Sample Matrix Spike Result:  |
| Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           |
| Sample Matrix Spike Duplicate Result:                                    |
| Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): |
| Duplicate Numerical Performance Indicator:                               |
| Duplicate Percent Recoveries (MS/MSD Duplicate RPD):                     |
| Duplicate Status vs Numerical Indicator:                                 |
| Duplicate Status vs RPD:   |
| % RPD Limit:   |

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

Comments:

\*The method blank result is below the reporting limit for this analysis and is acceptable.

LA 4/15/21

# Quality Control Sample Performance Assessment



Test: Ra-228  
 Analyst: VAL  
 Date: 3/16/2021  
 Worklist: 59206  
 Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2114137 |
| MB Concentration:                   | 0.108   |
| MB 2 Sigma CSU:                     | 0.317   |
| MB MDC:                             | 0.711   |
| MB Numerical Performance Indicator: | 0.67    |
| MB Status vs Numerical Indicator:   | Pass    |
| MB Status vs MDC:                   | Pass    |

| Laboratory Control Sample Assessment          |           |
|---|-----------|
| Count Date:                                   | 3/31/2021 |
| Spike I.D.:                                   | LC569206  |
| Decay Corrected Spike Concentration (pCi/ml): | 38.256    |
| Volume Used (ml):                             | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.831     |
| Target Conc. (pCi/L, g, F):                   | 4.606     |
| Uncertainty (Calculated):                     | 0.226     |
| Result (pCi/L, g, F):                         | 5.169     |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 1.136     |
| Numerical Performance Indicator:              | 0.95      |
| Percent Recovery:                             | 112.23%   |
| Status vs Numerical Indicator:                | N/A       |
| Status vs Recovery:                           | Pass      |
| Upper % Recovery Limits:                      | 135%      |
| Lower % Recovery Limits:                      | 60%       |

| Duplicate Sample Assessment                        |  |
|--|--|
| Sample I.D.:                                       | Sample I.D.:                                       |
| Duplicate Sample I.D.:                             | Duplicate Sample I.D.:                             |
| Sample Result 2 Sigma CSU (pCi/L, g, F):           | Sample Result 2 Sigma CSU (pCi/L, g, F):           |
| Sample Duplicate Result (pCi/L, g, F):             | Sample Duplicate Result (pCi/L, g, F):             |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): | Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): |
| Ave sample and/or duplicate results below RL?      | Ave sample and/or duplicate results below RL?      |
| Duplicate Numerical Performance Indicator:         | Duplicate Numerical Performance Indicator:         |
| Duplicate RPD:                                     | Duplicate RPD:                                     |
| Duplicate Status vs Numerical Indicator:           | Duplicate Status vs Numerical Indicator:           |
| Duplicate Status vs RPD:                           | Duplicate Status vs RPD:                           |
| % RPD Limit:                                       | % RPD Limit:                                       |

| Sample Matrix Spike Control Assessment                   |             |
|--|-------------|
| Sample Collection Date:                                  | 2/23/2021   |
| Sample I.D.:   | 92526258001 |
| Sample MS I.D.:  | 92526258002 |
| Sample MSD I.D.:   | 92526258003 |
| Spike I.D.:  | 21-003      |
| MS/MSD Decay Corrected Spike Concentration (pCi/ml):     | 38.713      |
| Spike Volume Used in MS (ml):                            | 0.20        |
| Spike Volume Used in MSD (ml):                           | 0.20        |
| MS Aliquot (L, g, F):                                    | 0.806       |
| MS Target Conc. (pCi/L, g, F):                           | 9.604       |
| MSD Aliquot (L, g, F):                                   | 0.812       |
| MSD Target Conc. (pCi/L, g, F):                          | 9.536       |
| MS Spike Uncertainty (calculated):                       | 0.471       |
| MSD Spike Uncertainty (calculated):                      | 0.467       |
| Sample Result:   | 0.892       |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                 | 0.404       |
| Sample Matrix Spike Result:                              | 8.860       |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           | 1.768       |
| Sample Matrix Spike Duplicate Result:                    | 10.755      |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 2.116       |
| MS Numerical Performance Indicator:                      | -1.711      |
| MSD Numerical Performance Indicator:                     | 0.291       |
| MS Percent Recovery:                                     | 82.97%      |
| MSD Percent Recovery:                                    | 103.43%     |
| Status vs Numerical Indicator:                           | Pass        |
| Status vs Numerical Indicator:                           | Pass        |
| Status vs Recovery:                                      | Pass        |
| Status vs Recovery:                                      | Pass        |
| MS/MSD Upper % Recovery Limits:                          | 135%        |
| MS/MSD Lower % Recovery Limits:                          | 60%         |

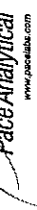
| Matrix Spike/Matrix Spike Duplicate Sample Assessment    |             |
|--|-------------|
| Sample I.D.:   | 92526258001 |
| Sample MS I.D.:  | 92526258002 |
| Sample MSD I.D.:   | 92526258003 |
| Sample Matrix Spike Result:                              | 8.860       |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           | 1.768       |
| Sample Matrix Spike Duplicate Result:                    | 10.755      |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 2.116       |
| Duplicate Numerical Performance Indicator:               | -1.346      |
| Duplicate Numerical Performance Indicator:               | -1.169      |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:  | 21.95%      |
| MS/MSD Duplicate Status vs Numerical Indicator:          | Pass        |
| MS/MSD Duplicate Status vs RPD:                          | Pass        |
| % RPD Limit:   | 36%         |

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

Comments:

*Qual 121*

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: VAL  
Date: 3/15/2021  
Worklist: 59213  
Matrix: WT

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2114144 |
| MB concentration:                   | 0.271   |
| MB 2 Sigma CSU:                     | 0.377   |
| MB MDC:                             | 0.808   |
| MB Numerical Performance Indicator: | 1.41    |
| MB Status vs Numerical Indicator:   | Pass    |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |           |
|---|----------------|-----------|
|   | LCSD59213      | LCSD59213 |
| Count Date:                                   | 3/22/2021      | 3/22/2021 |
| Spike I.D.:                                   | 20-030         | 20-030    |
| Decay Corrected Spike Concentration (pCi/mL): | 36.085         | 36.085    |
| Volume Used (mL):                             | 0.10           | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.806          | 0.824     |
| Target Conc. (pCi/L, g, F):                   | 4.484          | 4.377     |
| Uncertainty (Calculated):                     | 0.220          | 0.214     |
| Result (pCi/L, g, F):                         | 4.955          | 4.740     |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 1.134          | 1.103     |
| Numerical Performance Indicator:              | 0.80           | 0.63      |
| Percent Recovery:                             | 110.50%        | 108.28%   |
| Status vs Numerical Indicator:                | N/A            | N/A       |
| Status vs Recovery:                           | Pass           | Pass      |
| Upper % Recovery Limits:                      | 135%           | 135%      |
| Lower % Recovery Limits:                      | 60%            | 60%       |

| Duplicate Sample Assessment                               | LCSD (Y or N)? | Y         |
|---|----------------|-----------|
| Sample I.D.:  | LCSD59213      | 3/22/2021 |
| Duplicate Sample I.D.:                                    | LCSD59213      | 3/22/2021 |
| Sample Result (pCi/L, g, F):                              | 4.955          | 20-030    |
| Sample Duplicate Result (pCi/L, g, F):                    | 1.134          | 0.10      |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):        | 4.740          | 0.824     |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):        | 1.103          | 4.377     |
| Are sample and/or duplicate results below RL?             | NO             | 0.214     |
| Duplicate Numerical Performance Indicator:                | 0.266          | 4.740     |
| (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: | 2.03%          | 1.103     |
| Duplicate Status vs Numerical Indicator:                  | Pass           | 1.103     |
| Duplicate Status vs RPD:                                  | Pass           | 1.103     |
| % RPD Limit:  | 36%            | 1.103     |

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

Comments:

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| Sample Matrix Spike Control Assessment                   | MS/MSD 1 | MS/MSD 2 |
|--|----------|----------|
| Sample Collection Date:                                  |          |          |
| Sample I.D.:   |          |          |
| Sample MS I.D.:  |          |          |
| Sample MSD I.D.:   |          |          |
| Spike I.D.:  |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):     |          |          |
| Spike Volume Used in MS (mL):                            |          |          |
| Spike Volume Used in MSD (mL):                           |          |          |
| MS Aliquot (L, g, F):                                    |          |          |
| MS Target Conc. (pCi/L, g, F):                           |          |          |
| MSD Aliquot (L, g, F):                                   |          |          |
| MSD Target Conc. (pCi/L, g, F):                          |          |          |
| MS Spike Uncertainty (calculated):                       |          |          |
| MSD Spike Uncertainty (calculated):                      |          |          |
| Sample Result:   |          |          |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                 |          |          |
| Sample Matrix Spike Result:                              |          |          |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           |          |          |
| Sample Matrix Spike Duplicate Result:                    |          |          |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): |          |          |
| MS Numerical Performance Indicator:                      |          |          |
| MSD Numerical Performance Indicator:                     |          |          |
| MS Percent Recovery:                                     |          |          |
| MSD Percent Recovery:                                    |          |          |
| MS Status vs Numerical Indicator:                        |          |          |
| MSD Status vs Numerical Indicator:                       |          |          |
| MS Status vs Recovery:                                   |          |          |
| MSD Status vs Recovery:                                  |          |          |
| MS/MSD Upper % Recovery Limits:                          |          |          |
| MS/MSD Lower % Recovery Limits:                          |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment           |
|---|
| Sample I.D.:  |
| Sample MS I.D.:   |
| Sample MSD I.D.:  |
| Sample Matrix Spike Result:                                     |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):                  |
| Sample Matrix Spike Duplicate Result:                           |
| Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): |
| Duplicate Numerical Performance Indicator:                      |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:         |
| MS/MSD Duplicate Status vs Numerical Indicator:                 |
| MS/MSD Duplicate Status vs RPD:                                 |
| % RPD Limit:  |

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**Alabama Power Company  
Plant Gorgas**

| <b>WELL ID</b> | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|----------------|---------------------|-------------------------------|--------------|-------------|
| MW-1           | 2/22/2021 10:24     | Conductivity                  | 2346.35      | uS/cm       |
| MW-1           | 2/22/2021 10:24     | DO                            | 1.16         | mg/L        |
| MW-1           | 2/22/2021 10:24     | Depth to Water Detail         | 92.76        | ft          |
| MW-1           | 2/22/2021 10:24     | Oxidation Reduction Potention | 154.15       | mv          |
| MW-1           | 2/22/2021 10:24     | pH                            | 5.01         | SU          |
| MW-1           | 2/22/2021 10:24     | Temperature                   | 18.91        | C           |
| MW-1           | 2/22/2021 10:24     | Turbidity                     | 1.02         | NTU         |
| MW-1           | 2/22/2021 10:29     | Conductivity                  | 2363.24      | uS/cm       |
| MW-1           | 2/22/2021 10:29     | DO                            | 1.09         | mg/L        |
| MW-1           | 2/22/2021 10:29     | Depth to Water Detail         | 92.96        | ft          |
| MW-1           | 2/22/2021 10:29     | Oxidation Reduction Potention | 167.13       | mv          |
| MW-1           | 2/22/2021 10:29     | pH                            | 5.02         | SU          |
| MW-1           | 2/22/2021 10:29     | Temperature                   | 18.92        | C           |
| MW-1           | 2/22/2021 10:29     | Turbidity                     | 0.51         | NTU         |
| MW-1           | 2/22/2021 10:34     | Conductivity                  | 2365.14      | uS/cm       |
| MW-1           | 2/22/2021 10:34     | DO                            | 0.89         | mg/L        |
| MW-1           | 2/22/2021 10:34     | Depth to Water Detail         | 93.06        | ft          |
| MW-1           | 2/22/2021 10:34     | Oxidation Reduction Potention | 182.76       | mv          |
| MW-1           | 2/22/2021 10:34     | pH                            | 5.04         | SU          |
| MW-1           | 2/22/2021 10:34     | Temperature                   | 18.94        | C           |
| MW-1           | 2/22/2021 10:34     | Turbidity                     | 0.46         | NTU         |
| MW-1           | 2/22/2021 10:39     | Conductivity                  | 2365.94      | uS/cm       |
| MW-1           | 2/22/2021 10:39     | DO                            | 0.83         | mg/L        |
| MW-1           | 2/22/2021 10:39     | Depth to Water Detail         | 93.06        | ft          |
| MW-1           | 2/22/2021 10:39     | Oxidation Reduction Potention | 191.62       | mv          |
| MW-1           | 2/22/2021 10:39     | pH                            | 5.06         | SU          |
| MW-1           | 2/22/2021 10:39     | Temperature                   | 18.96        | C           |
| MW-1           | 2/22/2021 10:39     | Turbidity                     | 0.28         | NTU         |
| MW-1           | 2/22/2021 10:44     | Conductivity                  | 2369.76      | uS/cm       |
| MW-1           | 2/22/2021 10:44     | DO                            | 0.81         | mg/L        |
| MW-1           | 2/22/2021 10:44     | Depth to Water Detail         | 93.06        | ft          |
| MW-1           | 2/22/2021 10:44     | Oxidation Reduction Potention | 201.77       | mv          |
| MW-1           | 2/22/2021 10:44     | pH                            | 5.06         | SU          |
| MW-1           | 2/22/2021 10:44     | Temperature                   | 19.04        | C           |
| MW-1           | 2/22/2021 10:44     | Turbidity                     | 0.4          | NTU         |

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| <b>WELL ID</b> | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|----------------|---------------------|-------------------------------|--------------|-------------|
| MW-2           | 2/22/2021 11:29     | Conductivity                  | 1939.56      | uS/cm       |
| MW-2           | 2/22/2021 11:29     | DO                            | 0.19         | mg/L        |
| MW-2           | 2/22/2021 11:29     | Depth to Water Detail         | 83.67        | ft          |
| MW-2           | 2/22/2021 11:29     | Oxidation Reduction Potention | 103.6        | mv          |
| MW-2           | 2/22/2021 11:29     | pH                            | 5.96         | SU          |
| MW-2           | 2/22/2021 11:29     | Temperature                   | 18.62        | C           |
| MW-2           | 2/22/2021 11:29     | Turbidity                     | 7.81         | NTU         |
| MW-2           | 2/22/2021 11:34     | Conductivity                  | 1939.67      | uS/cm       |
| MW-2           | 2/22/2021 11:34     | DO                            | 0.17         | mg/L        |
| MW-2           | 2/22/2021 11:34     | Depth to Water Detail         | 83.67        | ft          |
| MW-2           | 2/22/2021 11:34     | Oxidation Reduction Potention | 89.47        | mv          |
| MW-2           | 2/22/2021 11:34     | pH                            | 5.99         | SU          |
| MW-2           | 2/22/2021 11:34     | Temperature                   | 18.76        | C           |
| MW-2           | 2/22/2021 11:34     | Turbidity                     | 2.96         | NTU         |
| MW-2           | 2/22/2021 11:39     | Conductivity                  | 1941.57      | uS/cm       |
| MW-2           | 2/22/2021 11:39     | DO                            | 0.17         | mg/L        |
| MW-2           | 2/22/2021 11:39     | Depth to Water Detail         | 83.67        | ft          |
| MW-2           | 2/22/2021 11:39     | Oxidation Reduction Potention | 82.21        | mv          |
| MW-2           | 2/22/2021 11:39     | pH                            | 6.05         | SU          |
| MW-2           | 2/22/2021 11:39     | Temperature                   | 18.71        | C           |
| MW-2           | 2/22/2021 11:39     | Turbidity                     | 2.02         | NTU         |
| MW-2           | 2/22/2021 11:44     | Conductivity                  | 1939.81      | uS/cm       |
| MW-2           | 2/22/2021 11:44     | DO                            | 0.17         | mg/L        |
| MW-2           | 2/22/2021 11:44     | Depth to Water Detail         | 83.67        | ft          |
| MW-2           | 2/22/2021 11:44     | Oxidation Reduction Potention | 86.94        | mv          |
| MW-2           | 2/22/2021 11:44     | pH                            | 6.1          | SU          |
| MW-2           | 2/22/2021 11:44     | Temperature                   | 18.7         | C           |
| MW-2           | 2/22/2021 11:44     | Turbidity                     | 1.49         | NTU         |

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| <b>WELL ID</b> | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|----------------|---------------------|-------------------------------|--------------|-------------|
| MW-3           | 2/22/2021 12:29     | Conductivity                  | 3231.87      | uS/cm       |
| MW-3           | 2/22/2021 12:29     | DO                            | 7.83         | mg/L        |
| MW-3           | 2/22/2021 12:29     | Depth to Water Detail         | 106.14       | ft          |
| MW-3           | 2/22/2021 12:29     | Oxidation Reduction Potention | 152.47       | mv          |
| MW-3           | 2/22/2021 12:29     | pH                            | 5            | SU          |
| MW-3           | 2/22/2021 12:29     | Temperature                   | 19.62        | C           |
| MW-3           | 2/22/2021 12:29     | Turbidity                     | 3.46         | NTU         |
| MW-3           | 2/22/2021 12:34     | Conductivity                  | 4206.45      | uS/cm       |
| MW-3           | 2/22/2021 12:34     | DO                            | 7.2          | mg/L        |
| MW-3           | 2/22/2021 12:34     | Depth to Water Detail         | 106.16       | ft          |
| MW-3           | 2/22/2021 12:34     | Oxidation Reduction Potention | 158.51       | mv          |
| MW-3           | 2/22/2021 12:34     | pH                            | 5.35         | SU          |
| MW-3           | 2/22/2021 12:34     | Temperature                   | 19.66        | C           |
| MW-3           | 2/22/2021 12:34     | Turbidity                     | 8.06         | NTU         |
| MW-3           | 2/22/2021 12:39     | Conductivity                  | 4437.9       | uS/cm       |
| MW-3           | 2/22/2021 12:39     | DO                            | 7.05         | mg/L        |
| MW-3           | 2/22/2021 12:39     | Depth to Water Detail         | 106.21       | ft          |
| MW-3           | 2/22/2021 12:39     | Oxidation Reduction Potention | 158.91       | mv          |
| MW-3           | 2/22/2021 12:39     | pH                            | 5.52         | SU          |
| MW-3           | 2/22/2021 12:39     | Temperature                   | 19.94        | C           |
| MW-3           | 2/22/2021 12:39     | Turbidity                     | 6.8          | NTU         |
| MW-3           | 2/22/2021 12:44     | Conductivity                  | 4450.29      | uS/cm       |
| MW-3           | 2/22/2021 12:44     | DO                            | 6.95         | mg/L        |
| MW-3           | 2/22/2021 12:44     | Depth to Water Detail         | 106.23       | ft          |
| MW-3           | 2/22/2021 12:44     | Oxidation Reduction Potention | 160.86       | mv          |
| MW-3           | 2/22/2021 12:44     | pH                            | 5.56         | SU          |
| MW-3           | 2/22/2021 12:44     | Temperature                   | 19.61        | C           |
| MW-3           | 2/22/2021 12:44     | Turbidity                     | 6.17         | NTU         |
| MW-3           | 2/22/2021 12:49     | Conductivity                  | 4417.53      | uS/cm       |
| MW-3           | 2/22/2021 12:49     | DO                            | 6.92         | mg/L        |
| MW-3           | 2/22/2021 12:49     | Depth to Water Detail         | 106.24       | ft          |
| MW-3           | 2/22/2021 12:49     | Oxidation Reduction Potention | 163.37       | mv          |
| MW-3           | 2/22/2021 12:49     | pH                            | 5.59         | SU          |
| MW-3           | 2/22/2021 12:49     | Temperature                   | 19.81        | C           |
| MW-3           | 2/22/2021 12:49     | Turbidity                     | 2.88         | NTU         |



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| WELL ID | READING TIME    | DESCRIPTION                   | VALUE   | UNIT  |
|---------|-----------------|-------------------------------|---------|-------|
| MW-4    | 2/22/2021 13:39 | Conductivity                  | 3379.93 | uS/cm |
| MW-4    | 2/22/2021 13:39 | DO                            | 1.76    | mg/L  |
| MW-4    | 2/22/2021 13:39 | Depth to Water Detail         | 115.84  | ft    |
| MW-4    | 2/22/2021 13:39 | Oxidation Reduction Potention | 153.42  | mv    |
| MW-4    | 2/22/2021 13:39 | pH                            | 6.06    | SU    |
| MW-4    | 2/22/2021 13:39 | Temperature                   | 19.91   | C     |
| MW-4    | 2/22/2021 13:39 | Turbidity                     | 5.31    | NTU   |
| MW-4    | 2/22/2021 13:44 | Conductivity                  | 3358.45 | uS/cm |
| MW-4    | 2/22/2021 13:44 | DO                            | 2.41    | mg/L  |
| MW-4    | 2/22/2021 13:44 | Depth to Water Detail         | 115.84  | ft    |
| MW-4    | 2/22/2021 13:44 | Oxidation Reduction Potention | 150.01  | mv    |
| MW-4    | 2/22/2021 13:44 | pH                            | 6.09    | SU    |
| MW-4    | 2/22/2021 13:44 | Temperature                   | 19.85   | C     |
| MW-4    | 2/22/2021 13:44 | Turbidity                     | 2.84    | NTU   |
| MW-4    | 2/22/2021 13:49 | Conductivity                  | 3349.61 | uS/cm |
| MW-4    | 2/22/2021 13:49 | DO                            | 3.14    | mg/L  |
| MW-4    | 2/22/2021 13:49 | Depth to Water Detail         | 115.84  | ft    |
| MW-4    | 2/22/2021 13:49 | Oxidation Reduction Potention | 149.42  | mv    |
| MW-4    | 2/22/2021 13:49 | pH                            | 6.13    | SU    |
| MW-4    | 2/22/2021 13:49 | Temperature                   | 19.9    | C     |
| MW-4    | 2/22/2021 13:49 | Turbidity                     | 1.83    | NTU   |
| MW-4    | 2/22/2021 13:54 | Conductivity                  | 3344.62 | uS/cm |
| MW-4    | 2/22/2021 13:54 | DO                            | 3.37    | mg/L  |
| MW-4    | 2/22/2021 13:54 | Depth to Water Detail         | 115.84  | ft    |
| MW-4    | 2/22/2021 13:54 | Oxidation Reduction Potention | 149.86  | mv    |
| MW-4    | 2/22/2021 13:54 | pH                            | 6.16    | SU    |
| MW-4    | 2/22/2021 13:54 | Temperature                   | 19.96   | C     |
| MW-4    | 2/22/2021 13:54 | Turbidity                     | 1.29    | NTU   |
| MW-4    | 2/22/2021 13:59 | Conductivity                  | 3341.45 | uS/cm |
| MW-4    | 2/22/2021 13:59 | DO                            | 3.52    | mg/L  |
| MW-4    | 2/22/2021 13:59 | Depth to Water Detail         | 115.84  | ft    |
| MW-4    | 2/22/2021 13:59 | Oxidation Reduction Potention | 151.68  | mv    |
| MW-4    | 2/22/2021 13:59 | pH                            | 6.18    | SU    |
| MW-4    | 2/22/2021 13:59 | Temperature                   | 19.91   | C     |
| MW-4    | 2/22/2021 13:59 | Turbidity                     | 1.46    | NTU   |
| MW-4    | 2/22/2021 14:04 | Conductivity                  | 3340.97 | uS/cm |
| MW-4    | 2/22/2021 14:04 | DO                            | 3.59    | mg/L  |
| MW-4    | 2/22/2021 14:04 | Depth to Water Detail         | 115.84  | ft    |
| MW-4    | 2/22/2021 14:04 | Oxidation Reduction Potention | 151.86  | mv    |
| MW-4    | 2/22/2021 14:04 | pH                            | 6.19    | SU    |
| MW-4    | 2/22/2021 14:04 | Temperature                   | 19.93   | C     |
| MW-4    | 2/22/2021 14:04 | Turbidity                     | 0.75    | NTU   |

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| WELL ID           | READING TIME   | DESCRIPTION                   | VALUE   | UNIT  |
|-------------------|----------------|-------------------------------|---------|-------|
| APCO-GS-CCB-MW-12 | 2/24/2021 9:25 | Conductivity                  | 3476.43 | uS/cm |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:25 | DO                            | 1.07    | mg/L  |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:25 | Depth to Water Detail         | 154.6   | ft    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:25 | Oxidation Reduction Potention | 11.36   | mv    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:25 | pH                            | 5.77    | SU    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:25 | Temperature                   | 20.2    | C     |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:25 | Turbidity                     | 15.3    | NTU   |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:30 | Conductivity                  | 3477.08 | uS/cm |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:30 | DO                            | 0.52    | mg/L  |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:30 | Depth to Water Detail         | 154.6   | ft    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:30 | Oxidation Reduction Potention | -5.36   | mv    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:30 | pH                            | 5.84    | SU    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:30 | Temperature                   | 20.25   | C     |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:30 | Turbidity                     | 10.2    | NTU   |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:35 | Conductivity                  | 3523.08 | uS/cm |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:35 | DO                            | 0.4     | mg/L  |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:35 | Depth to Water Detail         | 154.6   | ft    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:35 | Oxidation Reduction Potention | -6.14   | mv    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:35 | pH                            | 5.84    | SU    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:35 | Temperature                   | 20.32   | C     |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:35 | Turbidity                     | 7.26    | NTU   |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:40 | Conductivity                  | 3553.92 | uS/cm |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:40 | DO                            | 0.38    | mg/L  |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:40 | Depth to Water Detail         | 154.6   | ft    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:40 | Oxidation Reduction Potention | -5.02   | mv    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:40 | pH                            | 5.83    | SU    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:40 | Temperature                   | 20.18   | C     |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:40 | Turbidity                     | 3.99    | NTU   |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:45 | Conductivity                  | 3570.82 | uS/cm |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:45 | DO                            | 0.36    | mg/L  |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:45 | Depth to Water Detail         | 154.6   | ft    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:45 | Oxidation Reduction Potention | -4.11   | mv    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:45 | pH                            | 5.83    | SU    |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:45 | Temperature                   | 20.29   | C     |
| APCO-GS-CCB-MW-12 | 2/24/2021 9:45 | Turbidity                     | 3.19    | NTU   |

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| WELL ID            | READING TIME   | DESCRIPTION                   | VALUE   | UNIT  |
|--------------------|----------------|-------------------------------|---------|-------|
| APCO-GS-CCB-MW-12V | 2/24/2021 8:09 | Conductivity                  | 2607.38 | uS/cm |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:09 | DO                            | 0.77    | mg/L  |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:09 | Depth to Water Detail         | 155.69  | ft    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:09 | Oxidation Reduction Potention | -127.62 | mv    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:09 | pH                            | 6.79    | SU    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:09 | Temperature                   | 19.4    | C     |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:09 | Turbidity                     | 2.18    | NTU   |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:14 | Conductivity                  | 2604.15 | uS/cm |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:14 | DO                            | 0.43    | mg/L  |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:14 | Depth to Water Detail         | 155.96  | ft    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:14 | Oxidation Reduction Potention | -114.17 | mv    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:14 | pH                            | 6.79    | SU    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:14 | Temperature                   | 19.9    | C     |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:14 | Turbidity                     | 1.6     | NTU   |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:19 | Conductivity                  | 2603.58 | uS/cm |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:19 | DO                            | 0.37    | mg/L  |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:19 | Depth to Water Detail         | 156.29  | ft    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:19 | Oxidation Reduction Potention | -106.54 | mv    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:19 | pH                            | 6.81    | SU    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:19 | Temperature                   | 19.83   | C     |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:19 | Turbidity                     | 1.4     | NTU   |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:24 | Conductivity                  | 2605.02 | uS/cm |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:24 | DO                            | 0.38    | mg/L  |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:24 | Depth to Water Detail         | 156.47  | ft    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:24 | Oxidation Reduction Potention | -100.35 | mv    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:24 | pH                            | 6.82    | SU    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:24 | Temperature                   | 19.82   | C     |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:24 | Turbidity                     | 0.22    | NTU   |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:29 | Conductivity                  | 2604.51 | uS/cm |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:29 | DO                            | 0.41    | mg/L  |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:29 | Depth to Water Detail         | 156.61  | ft    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:29 | Oxidation Reduction Potention | -96.12  | mv    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:29 | pH                            | 6.83    | SU    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:29 | Temperature                   | 19.79   | C     |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:29 | Turbidity                     | 0.19    | NTU   |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:34 | Conductivity                  | 2603.6  | uS/cm |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:34 | DO                            | 0.45    | mg/L  |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:34 | Depth to Water Detail         | 156.74  | ft    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:34 | Oxidation Reduction Potention | -93.09  | mv    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:34 | pH                            | 6.83    | SU    |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:34 | Temperature                   | 20.02   | C     |
| APCO-GS-CCB-MW-12V | 2/24/2021 8:34 | Turbidity                     | 0.11    | NTU   |

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| <b>WELL ID</b>    | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|-------------------|---------------------|-------------------------------|--------------|-------------|
| APCO-GS-CCB-MW-13 | 2/23/2021 8:16      | Conductivity                  | 2437.29      | uS/cm       |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:16      | DO                            | 0.81         | mg/L        |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:16      | Depth to Water Detail         | 94.56        | ft          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:16      | Oxidation Reduction Potention | 171.95       | mv          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:16      | pH                            | 6.52         | SU          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:16      | Temperature                   | 17.71        | C           |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:16      | Turbidity                     | 0.25         | NTU         |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:21      | Conductivity                  | 2348.41      | uS/cm       |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:21      | DO                            | 0.37         | mg/L        |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:21      | Depth to Water Detail         | 94.56        | ft          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:21      | Oxidation Reduction Potention | 104.87       | mv          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:21      | pH                            | 6.54         | SU          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:21      | Temperature                   | 17.95        | C           |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:21      | Turbidity                     | 0.27         | NTU         |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:26      | Conductivity                  | 2297.82      | uS/cm       |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:26      | DO                            | 0.45         | mg/L        |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:26      | Depth to Water Detail         | 94.56        | ft          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:26      | Oxidation Reduction Potention | 78.54        | mv          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:26      | pH                            | 6.55         | SU          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:26      | Temperature                   | 17.65        | C           |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:26      | Turbidity                     | 0.2          | NTU         |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:31      | Conductivity                  | 2250.95      | uS/cm       |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:31      | DO                            | 0.54         | mg/L        |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:31      | Depth to Water Detail         | 94.56        | ft          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:31      | Oxidation Reduction Potention | 73.29        | mv          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:31      | pH                            | 6.55         | SU          |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:31      | Temperature                   | 17.67        | C           |
| APCO-GS-CCB-MW-13 | 2/23/2021 8:31      | Turbidity                     | 0.21         | NTU         |

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| WELL ID           | READING TIME   | DESCRIPTION                   | VALUE   | UNIT  |
|-------------------|----------------|-------------------------------|---------|-------|
| APCO-GS-CCB-MW-14 | 2/23/2021 9:17 | Conductivity                  | 3005.16 | uS/cm |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:17 | DO                            | 0.31    | mg/L  |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:17 | Depth to Water Detail         | 89.17   | ft    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:17 | Oxidation Reduction Potention | 25.02   | mv    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:17 | pH                            | 6.37    | SU    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:17 | Temperature                   | 18.2    | C     |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:17 | Turbidity                     | 2.9     | NTU   |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:22 | Conductivity                  | 2922.04 | uS/cm |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:22 | DO                            | 0.24    | mg/L  |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:22 | Depth to Water Detail         | 89.17   | ft    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:22 | Oxidation Reduction Potention | 22.11   | mv    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:22 | pH                            | 6.37    | SU    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:22 | Temperature                   | 18.22   | C     |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:22 | Turbidity                     | 5.17    | NTU   |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:27 | Conductivity                  | 3012.35 | uS/cm |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:27 | DO                            | 0.33    | mg/L  |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:27 | Depth to Water Detail         | 89.17   | ft    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:27 | Oxidation Reduction Potention | 20.64   | mv    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:27 | pH                            | 6.37    | SU    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:27 | Temperature                   | 18.35   | C     |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:27 | Turbidity                     | 106     | NTU   |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:32 | Conductivity                  | 2992.5  | uS/cm |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:32 | DO                            | 0.53    | mg/L  |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:32 | Depth to Water Detail         | 89.17   | ft    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:32 | Oxidation Reduction Potention | 20.02   | mv    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:32 | pH                            | 6.38    | SU    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:32 | Temperature                   | 18.28   | C     |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:32 | Turbidity                     | 20.1    | NTU   |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:37 | Conductivity                  | 2937.22 | uS/cm |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:37 | DO                            | 0.56    | mg/L  |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:37 | Depth to Water Detail         | 89.17   | ft    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:37 | Oxidation Reduction Potention | 21.67   | mv    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:37 | pH                            | 6.38    | SU    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:37 | Temperature                   | 18.35   | C     |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:37 | Turbidity                     | 4.35    | NTU   |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:42 | Conductivity                  | 2931.33 | uS/cm |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:42 | DO                            | 0.53    | mg/L  |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:42 | Depth to Water Detail         | 89.17   | ft    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:42 | Oxidation Reduction Potention | 23.26   | mv    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:42 | pH                            | 6.38    | SU    |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:42 | Temperature                   | 18.54   | C     |
| APCO-GS-CCB-MW-14 | 2/23/2021 9:42 | Turbidity                     | 3.95    | NTU   |

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| <b>WELL ID</b>    | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|-------------------|---------------------|-------------------------------|--------------|-------------|
| APCO-GS-CCB-MW-15 | 2/23/2021 10:27     | Conductivity                  | 2855.92      | uS/cm       |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:27     | DO                            | 0.3          | mg/L        |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:27     | Depth to Water Detail         | 67.49        | ft          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:27     | Oxidation Reduction Potention | 16.03        | mv          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:27     | pH                            | 6.05         | SU          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:27     | Temperature                   | 18.22        | C           |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:27     | Turbidity                     | 1.57         | NTU         |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:32     | Conductivity                  | 2832.76      | uS/cm       |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:32     | DO                            | 0.41         | mg/L        |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:32     | Depth to Water Detail         | 67.49        | ft          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:32     | Oxidation Reduction Potention | 18.69        | mv          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:32     | pH                            | 6.05         | SU          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:32     | Temperature                   | 18.26        | C           |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:32     | Turbidity                     | 3.13         | NTU         |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:37     | Conductivity                  | 2825.35      | uS/cm       |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:37     | DO                            | 0.34         | mg/L        |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:37     | Depth to Water Detail         | 67.49        | ft          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:37     | Oxidation Reduction Potention | 14.47        | mv          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:37     | pH                            | 6.06         | SU          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:37     | Temperature                   | 18.3         | C           |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:37     | Turbidity                     | 1.44         | NTU         |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:42     | Conductivity                  | 2816.88      | uS/cm       |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:42     | DO                            | 0.22         | mg/L        |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:42     | Depth to Water Detail         | 67.49        | ft          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:42     | Oxidation Reduction Potention | 11.45        | mv          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:42     | pH                            | 6.07         | SU          |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:42     | Temperature                   | 18.39        | C           |
| APCO-GS-CCB-MW-15 | 2/23/2021 10:42     | Turbidity                     | 1.68         | NTU         |

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| <b>WELL ID</b>    | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|-------------------|---------------------|-------------------------------|--------------|-------------|
| APCO-GS-CCB-MW-16 | 2/23/2021 11:22     | Conductivity                  | 2594.02      | uS/cm       |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:22     | DO                            | 0.21         | mg/L        |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:22     | Depth to Water Detail         | 90.16        | ft          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:22     | Oxidation Reduction Potention | -12.58       | mv          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:22     | pH                            | 6.47         | SU          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:22     | Temperature                   | 19.1         | C           |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:22     | Turbidity                     | 0.57         | NTU         |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:27     | Conductivity                  | 2549.67      | uS/cm       |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:27     | DO                            | 0.15         | mg/L        |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:27     | Depth to Water Detail         | 90.16        | ft          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:27     | Oxidation Reduction Potention | -9.12        | mv          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:27     | pH                            | 6.46         | SU          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:27     | Temperature                   | 19.08        | C           |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:27     | Turbidity                     | 0.54         | NTU         |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:32     | Conductivity                  | 2540.41      | uS/cm       |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:32     | DO                            | 0.13         | mg/L        |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:32     | Depth to Water Detail         | 90.16        | ft          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:32     | Oxidation Reduction Potention | -8.4         | mv          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:32     | pH                            | 6.47         | SU          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:32     | Temperature                   | 19.07        | C           |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:32     | Turbidity                     | 0.09         | NTU         |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:37     | Conductivity                  | 2563.12      | uS/cm       |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:37     | DO                            | 0.14         | mg/L        |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:37     | Depth to Water Detail         | 90.16        | ft          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:37     | Oxidation Reduction Potention | -7.23        | mv          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:37     | pH                            | 6.47         | SU          |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:37     | Temperature                   | 19.08        | C           |
| APCO-GS-CCB-MW-16 | 2/23/2021 11:37     | Turbidity                     | 0.08         | NTU         |

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| WELL ID            | READING TIME    | DESCRIPTION                   | VALUE   | UNIT  |
|--------------------|-----------------|-------------------------------|---------|-------|
| APCO-GS-CCB-MW-17R | 2/23/2021 12:31 | Conductivity                  | 3445.9  | uS/cm |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:31 | DO                            | 1.54    | mg/L  |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:31 | Depth to Water Detail         | 126.27  | ft    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:31 | Oxidation Reduction Potention | 33.22   | mv    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:31 | pH                            | 5.7     | SU    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:31 | Temperature                   | 21.29   | C     |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:31 | Turbidity                     | 1.92    | NTU   |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:36 | Conductivity                  | 3369.71 | uS/cm |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:36 | DO                            | 0.76    | mg/L  |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:36 | Depth to Water Detail         | 126.27  | ft    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:36 | Oxidation Reduction Potention | 39.38   | mv    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:36 | pH                            | 5.67    | SU    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:36 | Temperature                   | 21.08   | C     |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:36 | Turbidity                     | 1.7     | NTU   |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:41 | Conductivity                  | 3299.42 | uS/cm |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:41 | DO                            | 0.59    | mg/L  |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:41 | Depth to Water Detail         | 126.27  | ft    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:41 | Oxidation Reduction Potention | 36      | mv    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:41 | pH                            | 5.74    | SU    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:41 | Temperature                   | 21.16   | C     |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:41 | Turbidity                     | 0.53    | NTU   |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:46 | Conductivity                  | 3294.2  | uS/cm |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:46 | DO                            | 0.53    | mg/L  |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:46 | Depth to Water Detail         | 126.27  | ft    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:46 | Oxidation Reduction Potention | 30.3    | mv    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:46 | pH                            | 5.82    | SU    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:46 | Temperature                   | 21.19   | C     |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:46 | Turbidity                     | 0.46    | NTU   |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:51 | Conductivity                  | 3239.73 | uS/cm |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:51 | DO                            | 0.53    | mg/L  |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:51 | Depth to Water Detail         | 126.27  | ft    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:51 | Oxidation Reduction Potention | 24.3    | mv    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:51 | pH                            | 5.91    | SU    |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:51 | Temperature                   | 21.27   | C     |
| APCO-GS-CCB-MW-17R | 2/23/2021 12:51 | Turbidity                     | 0.47    | NTU   |



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| <b>WELL ID</b>    | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|-------------------|---------------------|-------------------------------|--------------|-------------|
| APCO-GS-CCB-MW-18 | 2/23/2021 13:43     | Conductivity                  | 2672.73      | uS/cm       |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:43     | DO                            | 4.98         | mg/L        |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:43     | Depth to Water Detail         | 111.22       | ft          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:43     | Oxidation Reduction Potention | 94.71        | mv          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:43     | pH                            | 6.47         | SU          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:43     | Temperature                   | 20.27        | C           |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:43     | Turbidity                     | 0.84         | NTU         |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:48     | Conductivity                  | 2628.04      | uS/cm       |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:48     | DO                            | 4.45         | mg/L        |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:48     | Depth to Water Detail         | 111.22       | ft          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:48     | Oxidation Reduction Potention | 102.9        | mv          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:48     | pH                            | 6.45         | SU          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:48     | Temperature                   | 20.03        | C           |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:48     | Turbidity                     | 0.81         | NTU         |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:53     | Conductivity                  | 2617.85      | uS/cm       |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:53     | DO                            | 4.32         | mg/L        |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:53     | Depth to Water Detail         | 111.22       | ft          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:53     | Oxidation Reduction Potention | 106.49       | mv          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:53     | pH                            | 6.46         | SU          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:53     | Temperature                   | 20.21        | C           |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:53     | Turbidity                     | 1.08         | NTU         |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:58     | Conductivity                  | 2615.49      | uS/cm       |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:58     | DO                            | 4.28         | mg/L        |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:58     | Depth to Water Detail         | 111.22       | ft          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:58     | Oxidation Reduction Potention | 110.4        | mv          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:58     | pH                            | 6.47         | SU          |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:58     | Temperature                   | 20.34        | C           |
| APCO-GS-CCB-MW-18 | 2/23/2021 13:58     | Turbidity                     | 1.01         | NTU         |

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| <b>WELL ID</b>   | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|------------------|---------------------|-------------------------------|--------------|-------------|
| APCO-GS-CCB-MW-5 | 2/23/2021 11:34     | Conductivity                  | 3690.45      | uS/cm       |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:34     | DO                            | 2.7          | mg/L        |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:34     | Depth to Water Detail         | 125.83       | ft          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:34     | Oxidation Reduction Potention | -30.08       | mv          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:34     | pH                            | 6.52         | SU          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:34     | Temperature                   | 19.86        | C           |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:34     | Turbidity                     | 3.06         | NTU         |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:39     | Conductivity                  | 3668.37      | uS/cm       |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:39     | DO                            | 1.23         | mg/L        |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:39     | Depth to Water Detail         | 125.89       | ft          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:39     | Oxidation Reduction Potention | -37.48       | mv          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:39     | pH                            | 6.45         | SU          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:39     | Temperature                   | 19.92        | C           |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:39     | Turbidity                     | 2.92         | NTU         |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:44     | Conductivity                  | 3661.12      | uS/cm       |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:44     | DO                            | 0.92         | mg/L        |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:44     | Depth to Water Detail         | 125.89       | ft          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:44     | Oxidation Reduction Potention | -37.49       | mv          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:44     | pH                            | 6.45         | SU          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:44     | Temperature                   | 19.96        | C           |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:44     | Turbidity                     | 3.4          | NTU         |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:49     | Conductivity                  | 3679.06      | uS/cm       |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:49     | DO                            | 0.82         | mg/L        |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:49     | Depth to Water Detail         | 125.89       | ft          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:49     | Oxidation Reduction Potention | -37.83       | mv          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:49     | pH                            | 6.46         | SU          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:49     | Temperature                   | 19.9         | C           |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:49     | Turbidity                     | 3.35         | NTU         |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:54     | Conductivity                  | 3701.43      | uS/cm       |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:54     | DO                            | 0.78         | mg/L        |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:54     | Depth to Water Detail         | 125.89       | ft          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:54     | Oxidation Reduction Potention | -34.6        | mv          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:54     | pH                            | 6.47         | SU          |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:54     | Temperature                   | 19.94        | C           |
| APCO-GS-CCB-MW-5 | 2/23/2021 11:54     | Turbidity                     | 2.58         | NTU         |

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| WELL ID           | READING TIME    | DESCRIPTION                   | VALUE   | UNIT  |
|-------------------|-----------------|-------------------------------|---------|-------|
| APCO-GS-CCB-MW-10 | 2/23/2021 13:12 | Conductivity                  | 1434.07 | uS/cm |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:12 | DO                            | 1.09    | mg/L  |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:12 | Depth to Water Detail         | 85.91   | ft    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:12 | Oxidation Reduction Potention | -26.39  | mv    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:12 | pH                            | 6.45    | SU    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:12 | Temperature                   | 19.47   | C     |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:12 | Turbidity                     | 21.7    | NTU   |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:17 | Conductivity                  | 1420.38 | uS/cm |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:17 | DO                            | 0.55    | mg/L  |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:17 | Depth to Water Detail         | 86.33   | ft    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:17 | Oxidation Reduction Potention | -36.13  | mv    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:17 | pH                            | 6.45    | SU    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:17 | Temperature                   | 19.52   | C     |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:17 | Turbidity                     | 16.1    | NTU   |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:22 | Conductivity                  | 1419.86 | uS/cm |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:22 | DO                            | 0.44    | mg/L  |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:22 | Depth to Water Detail         | 86.68   | ft    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:22 | Oxidation Reduction Potention | -38.67  | mv    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:22 | pH                            | 6.46    | SU    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:22 | Temperature                   | 19.56   | C     |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:22 | Turbidity                     | 13.6    | NTU   |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:27 | Conductivity                  | 1423.34 | uS/cm |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:27 | DO                            | 0.4     | mg/L  |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:27 | Depth to Water Detail         | 86.82   | ft    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:27 | Oxidation Reduction Potention | -37.75  | mv    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:27 | pH                            | 6.46    | SU    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:27 | Temperature                   | 19.6    | C     |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:27 | Turbidity                     | 11.5    | NTU   |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:32 | Conductivity                  | 1426.14 | uS/cm |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:32 | DO                            | 0.38    | mg/L  |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:32 | Depth to Water Detail         | 86.96   | ft    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:32 | Oxidation Reduction Potention | -36.83  | mv    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:32 | pH                            | 6.46    | SU    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:32 | Temperature                   | 19.52   | C     |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:32 | Turbidity                     | 8.86    | NTU   |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:37 | Conductivity                  | 1434.52 | uS/cm |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:37 | DO                            | 0.36    | mg/L  |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:37 | Depth to Water Detail         | 87.04   | ft    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:37 | Oxidation Reduction Potention | -36.83  | mv    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:37 | pH                            | 6.45    | SU    |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:37 | Temperature                   | 19.52   | C     |
| APCO-GS-CCB-MW-10 | 2/23/2021 13:37 | Turbidity                     | 6.45    | NTU   |

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| <b>WELL ID</b>    | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|-------------------|---------------------|-------------------------------|--------------|-------------|
| APCO-GS-CCB-MW-20 | 2/23/2021 14:31     | Conductivity                  | 2939.28      | uS/cm       |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:31     | DO                            | 0.53         | mg/L        |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:31     | Depth to Water Detail         | 20.36        | ft          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:31     | Oxidation Reduction Potention | -62.92       | mv          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:31     | pH                            | 6.73         | SU          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:31     | Temperature                   | 19.27        | C           |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:31     | Turbidity                     | 2.69         | NTU         |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:36     | Conductivity                  | 2935.23      | uS/cm       |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:36     | DO                            | 0.49         | mg/L        |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:36     | Depth to Water Detail         | 20.61        | ft          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:36     | Oxidation Reduction Potention | -63.63       | mv          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:36     | pH                            | 6.74         | SU          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:36     | Temperature                   | 19.27        | C           |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:36     | Turbidity                     | 1.52         | NTU         |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:41     | Conductivity                  | 2927.29      | uS/cm       |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:41     | DO                            | 0.5          | mg/L        |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:41     | Depth to Water Detail         | 20.71        | ft          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:41     | Oxidation Reduction Potention | -63.66       | mv          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:41     | pH                            | 6.74         | SU          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:41     | Temperature                   | 19.17        | C           |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:41     | Turbidity                     | 0.88         | NTU         |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:46     | Conductivity                  | 2908.99      | uS/cm       |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:46     | DO                            | 0.49         | mg/L        |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:46     | Depth to Water Detail         | 20.83        | ft          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:46     | Oxidation Reduction Potention | -63.31       | mv          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:46     | pH                            | 6.75         | SU          |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:46     | Temperature                   | 19.18        | C           |
| APCO-GS-CCB-MW-20 | 2/23/2021 14:46     | Turbidity                     | 0.7          | NTU         |

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| WELL ID           | READING TIME    | DESCRIPTION                   | VALUE   | UNIT  |
|-------------------|-----------------|-------------------------------|---------|-------|
| APCO-GS-CCB-MW-11 | 2/24/2021 9:45  | Conductivity                  | 2870.16 | uS/cm |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:45  | DO                            | 0.32    | mg/L  |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:45  | Depth to Water Detail         | 106.76  | ft    |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:45  | Oxidation Reduction Potention | -62.87  | mv    |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:45  | pH                            | 6.58    | SU    |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:45  | Temperature                   | 19.32   | C     |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:45  | Turbidity                     | 0.36    | NTU   |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:50  | Conductivity                  | 2872.56 | uS/cm |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:50  | DO                            | 0.29    | mg/L  |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:50  | Depth to Water Detail         | 108.65  | ft    |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:50  | Oxidation Reduction Potention | -67.58  | mv    |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:50  | pH                            | 6.62    | SU    |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:50  | Temperature                   | 19.32   | C     |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:50  | Turbidity                     | 0.25    | NTU   |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:55  | Conductivity                  | 2865.46 | uS/cm |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:55  | DO                            | 0.58    | mg/L  |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:55  | Depth to Water Detail         | 108.82  | ft    |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:55  | Oxidation Reduction Potention | -69.43  | mv    |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:55  | pH                            | 6.65    | SU    |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:55  | Temperature                   | 18.15   | C     |
| APCO-GS-CCB-MW-11 | 2/24/2021 9:55  | Turbidity                     | 0.25    | NTU   |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:00 | Conductivity                  | 2864.75 | uS/cm |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:00 | DO                            | 0.77    | mg/L  |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:00 | Depth to Water Detail         | 108.88  | ft    |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:00 | Oxidation Reduction Potention | -70.16  | mv    |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:00 | pH                            | 6.66    | SU    |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:00 | Temperature                   | 17.97   | C     |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:00 | Turbidity                     | 0.16    | NTU   |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:05 | Conductivity                  | 2850.53 | uS/cm |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:05 | DO                            | 0.81    | mg/L  |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:05 | Depth to Water Detail         | 109.02  | ft    |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:05 | Oxidation Reduction Potention | -71.59  | mv    |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:05 | pH                            | 6.66    | SU    |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:05 | Temperature                   | 18.17   | C     |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:05 | Turbidity                     | 0.17    | NTU   |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:10 | Conductivity                  | 2839.08 | uS/cm |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:10 | DO                            | 0.81    | mg/L  |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:10 | Depth to Water Detail         | 109.09  | ft    |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:10 | Oxidation Reduction Potention | -72.59  | mv    |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:10 | pH                            | 6.67    | SU    |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:10 | Temperature                   | 18.25   | C     |
| APCO-GS-CCB-MW-11 | 2/24/2021 10:10 | Turbidity                     | 0.59    | NTU   |

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| WELL ID           | READING TIME    | DESCRIPTION                   | VALUE   | UNIT  |
|-------------------|-----------------|-------------------------------|---------|-------|
| APCO-GS-CCB-MW-19 | 2/24/2021 11:56 | Conductivity                  | 3157.62 | uS/cm |
| APCO-GS-CCB-MW-19 | 2/24/2021 11:56 | DO                            | 1.66    | mg/L  |
| APCO-GS-CCB-MW-19 | 2/24/2021 11:56 | Depth to Water Detail         | 78.66   | ft    |
| APCO-GS-CCB-MW-19 | 2/24/2021 11:56 | Oxidation Reduction Potention | 18.23   | mv    |
| APCO-GS-CCB-MW-19 | 2/24/2021 11:56 | pH                            | 6.29    | SU    |
| APCO-GS-CCB-MW-19 | 2/24/2021 11:56 | Temperature                   | 20.34   | C     |
| APCO-GS-CCB-MW-19 | 2/24/2021 11:56 | Turbidity                     | 24.7    | NTU   |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:01 | Conductivity                  | 3153.43 | uS/cm |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:01 | DO                            | 1.94    | mg/L  |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:01 | Depth to Water Detail         | 78.66   | ft    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:01 | Oxidation Reduction Potention | 20.1    | mv    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:01 | pH                            | 6.3     | SU    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:01 | Temperature                   | 20.35   | C     |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:01 | Turbidity                     | 13.7    | NTU   |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:06 | Conductivity                  | 3158.95 | uS/cm |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:06 | DO                            | 1.81    | mg/L  |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:06 | Depth to Water Detail         | 78.66   | ft    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:06 | Oxidation Reduction Potention | 21.86   | mv    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:06 | pH                            | 6.28    | SU    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:06 | Temperature                   | 20.3    | C     |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:06 | Turbidity                     | 120     | NTU   |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:11 | Conductivity                  | 3165.28 | uS/cm |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:11 | DO                            | 1.96    | mg/L  |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:11 | Depth to Water Detail         | 78.66   | ft    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:11 | Oxidation Reduction Potention | 23.14   | mv    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:11 | pH                            | 6.28    | SU    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:11 | Temperature                   | 20.29   | C     |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:11 | Turbidity                     | 74.3    | NTU   |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:16 | Conductivity                  | 3204.62 | uS/cm |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:16 | DO                            | 2.03    | mg/L  |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:16 | Depth to Water Detail         | 78.66   | ft    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:16 | Oxidation Reduction Potention | 25.7    | mv    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:16 | pH                            | 6.27    | SU    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:16 | Temperature                   | 20.17   | C     |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:16 | Turbidity                     | 28      | NTU   |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:21 | Conductivity                  | 3177.6  | uS/cm |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:21 | DO                            | 1.73    | mg/L  |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:21 | Depth to Water Detail         | 78.66   | ft    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:21 | Oxidation Reduction Potention | 29.04   | mv    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:21 | pH                            | 6.27    | SU    |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:21 | Temperature                   | 20.24   | C     |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:21 | Turbidity                     | 13.4    | NTU   |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:26 | Conductivity                  | 3184.94 | uS/cm |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:26 | DO                            | 1.82    | mg/L  |

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| <b>WELL ID</b>    | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|-------------------|---------------------|-------------------------------|--------------|-------------|
| APCO-GS-CCB-MW-19 | 2/24/2021 12:26     | Depth to Water Detail         | 78.66        | ft          |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:26     | Oxidation Reduction Potention | 30.51        | mv          |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:26     | pH                            | 6.27         | SU          |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:26     | Temperature                   | 20.31        | C           |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:26     | Turbidity                     | 11.31        | NTU         |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:31     | Conductivity                  | 3184.04      | uS/cm       |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:31     | DO                            | 1.94         | mg/L        |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:31     | Depth to Water Detail         | 78.66        | ft          |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:31     | Oxidation Reduction Potention | 32.91        | mv          |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:31     | pH                            | 6.27         | SU          |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:31     | Temperature                   | 20.12        | C           |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:31     | Turbidity                     | 7.95         | NTU         |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:36     | Conductivity                  | 3183.22      | uS/cm       |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:36     | DO                            | 1.82         | mg/L        |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:36     | Depth to Water Detail         | 78.66        | ft          |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:36     | Oxidation Reduction Potention | 32.35        | mv          |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:36     | pH                            | 6.26         | SU          |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:36     | Temperature                   | 20.14        | C           |
| APCO-GS-CCB-MW-19 | 2/24/2021 12:36     | Turbidity                     | 5.12         | NTU         |

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| <b>WELL ID</b>   | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|------------------|---------------------|-------------------------------|--------------|-------------|
| APCO-GS-CCB-MW-6 | 2/23/2021 10:22     | Conductivity                  | 3217.23      | uS/cm       |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:22     | DO                            | 0.45         | mg/L        |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:22     | Depth to Water Detail         | 100.95       | ft          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:22     | Oxidation Reduction Potention | 115.76       | mv          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:22     | pH                            | 6.11         | SU          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:22     | Temperature                   | 19.97        | C           |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:22     | Turbidity                     | 18.3         | NTU         |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:27     | Conductivity                  | 3205.08      | uS/cm       |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:27     | DO                            | 0.35         | mg/L        |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:27     | Depth to Water Detail         | 101.1        | ft          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:27     | Oxidation Reduction Potention | 97.76        | mv          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:27     | pH                            | 6.13         | SU          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:27     | Temperature                   | 19.82        | C           |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:27     | Turbidity                     | 12.1         | NTU         |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:32     | Conductivity                  | 3187.96      | uS/cm       |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:32     | DO                            | 0.32         | mg/L        |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:32     | Depth to Water Detail         | 101.1        | ft          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:32     | Oxidation Reduction Potention | 85.35        | mv          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:32     | pH                            | 6.14         | SU          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:32     | Temperature                   | 19.91        | C           |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:32     | Turbidity                     | 6.32         | NTU         |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:37     | Conductivity                  | 3188.62      | uS/cm       |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:37     | DO                            | 0.31         | mg/L        |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:37     | Depth to Water Detail         | 101.1        | ft          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:37     | Oxidation Reduction Potention | 77.24        | mv          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:37     | pH                            | 6.14         | SU          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:37     | Temperature                   | 19.92        | C           |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:37     | Turbidity                     | 3.11         | NTU         |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:42     | Conductivity                  | 3176.73      | uS/cm       |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:42     | DO                            | 0.32         | mg/L        |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:42     | Depth to Water Detail         | 101.1        | ft          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:42     | Oxidation Reduction Potention | 70.5         | mv          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:42     | pH                            | 6.13         | SU          |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:42     | Temperature                   | 19.94        | C           |
| APCO-GS-CCB-MW-6 | 2/23/2021 10:42     | Turbidity                     | 2.5          | NTU         |



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| <b>WELL ID</b>   | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|------------------|---------------------|-------------------------------|--------------|-------------|
| APCO-GS-CCB-MW-7 | 2/23/2021 11:17     | Conductivity                  | 2651.24      | uS/cm       |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:17     | DO                            | 0.13         | mg/L        |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:17     | Depth to Water Detail         | 56.75        | ft          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:17     | Oxidation Reduction Potention | 67.48        | mv          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:17     | pH                            | 6.66         | SU          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:17     | Temperature                   | 18.9         | C           |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:17     | Turbidity                     | 1.55         | NTU         |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:22     | Conductivity                  | 2585.63      | uS/cm       |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:22     | DO                            | 0.1          | mg/L        |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:22     | Depth to Water Detail         | 56.75        | ft          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:22     | Oxidation Reduction Potention | 62.68        | mv          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:22     | pH                            | 6.68         | SU          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:22     | Temperature                   | 18.94        | C           |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:22     | Turbidity                     | 0.95         | NTU         |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:27     | Conductivity                  | 2545.57      | uS/cm       |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:27     | DO                            | 0.09         | mg/L        |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:27     | Depth to Water Detail         | 56.75        | ft          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:27     | Oxidation Reduction Potention | 58.74        | mv          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:27     | pH                            | 6.69         | SU          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:27     | Temperature                   | 18.9         | C           |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:27     | Turbidity                     | 0.53         | NTU         |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:32     | Conductivity                  | 2508.19      | uS/cm       |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:32     | DO                            | 0.09         | mg/L        |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:32     | Depth to Water Detail         | 56.75        | ft          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:32     | Oxidation Reduction Potention | 55.76        | mv          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:32     | pH                            | 6.7          | SU          |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:32     | Temperature                   | 18.98        | C           |
| APCO-GS-CCB-MW-7 | 2/23/2021 11:32     | Turbidity                     | 0.46         | NTU         |

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| <b>WELL ID</b>   | <b>READING TIME</b> | <b>DESCRIPTION</b>            | <b>VALUE</b> | <b>UNIT</b> |
|------------------|---------------------|-------------------------------|--------------|-------------|
| APCO-GS-CCB-MW-8 | 2/23/2021 12:06     | Conductivity                  | 2725.22      | uS/cm       |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:06     | DO                            | 1.28         | mg/L        |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:06     | Depth to Water Detail         | 64.35        | ft          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:06     | Oxidation Reduction Potention | 66.73        | mv          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:06     | pH                            | 6.74         | SU          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:06     | Temperature                   | 20.63        | C           |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:06     | Turbidity                     | 10.72        | NTU         |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:11     | Conductivity                  | 2725.5       | uS/cm       |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:11     | DO                            | 0.74         | mg/L        |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:11     | Depth to Water Detail         | 65.02        | ft          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:11     | Oxidation Reduction Potention | 62.12        | mv          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:11     | pH                            | 6.73         | SU          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:11     | Temperature                   | 20.7         | C           |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:11     | Turbidity                     | 9.16         | NTU         |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:16     | Conductivity                  | 2726.67      | uS/cm       |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:16     | DO                            | 0.6          | mg/L        |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:16     | Depth to Water Detail         | 65.28        | ft          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:16     | Oxidation Reduction Potention | 59.09        | mv          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:16     | pH                            | 6.73         | SU          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:16     | Temperature                   | 20.72        | C           |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:16     | Turbidity                     | 6.61         | NTU         |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:21     | Conductivity                  | 2709.44      | uS/cm       |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:21     | DO                            | 0.52         | mg/L        |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:21     | Depth to Water Detail         | 65.28        | ft          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:21     | Oxidation Reduction Potention | 56.51        | mv          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:21     | pH                            | 6.73         | SU          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:21     | Temperature                   | 20.82        | C           |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:21     | Turbidity                     | 4.35         | NTU         |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:26     | Conductivity                  | 2722.01      | uS/cm       |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:26     | DO                            | 0.48         | mg/L        |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:26     | Depth to Water Detail         | 65.4         | ft          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:26     | Oxidation Reduction Potention | 54.28        | mv          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:26     | pH                            | 6.73         | SU          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:26     | Temperature                   | 20.81        | C           |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:26     | Turbidity                     | 2.9          | NTU         |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:31     | Conductivity                  | 2732.18      | uS/cm       |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:31     | DO                            | 0.45         | mg/L        |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:31     | Depth to Water Detail         | 65.48        | ft          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:31     | Oxidation Reduction Potention | 52.49        | mv          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:31     | pH                            | 6.73         | SU          |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:31     | Temperature                   | 20.88        | C           |
| APCO-GS-CCB-MW-8 | 2/23/2021 12:31     | Turbidity                     | 3.03         | NTU         |

**2nd**  
**Semi-Annual**  
**Monitoring Event**

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

# *Analytical Report*



**Sample Group :** WMWGORPU\_1328

**Project/Site :** Gorgas Pooled Upgradient  
Parrish, AL 35580

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

**Attention :** Dustin Brooks & Greg Dyer

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

August 04, 2021

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2021. All results reported herein conform to the laboratory's most current Quality Assurance Manual. Results marked with an asterisk conform to the most current applicable TNI/NELAC requirements. Exceptions will be noted in the body of the report.

Laboratory certification ID: E571114  
Issued By: State of Florida, Department of Health  
Expiration: June 30, 2022

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

Sincerely,

Quality Control: **Laura Midkiff** Digitally signed by Laura Midkiff  
DN: cn=Laura Midkiff, o=Alabama Power  
Company, ou=Environmental Affairs,  
email=lmidkif@southernco.com, c=US  
Date: 2021.08.04 10:24:40 -05'00'

Supervision: **T. Durant Maske** Digitally signed by T. Durant Maske  
DN: cn=T. Durant Maske, o=Alabama  
Power Company, ou=Environmental  
Affairs, email=tdmaske@southernco.com,  
c=US  
Date: 2021.08.06 18:29:15 -05'00'



### REPORT OF LABORATORY ANALYSIS

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.



Total Metals ICP

Gorgas Pooled Upgradient

WMWGORPU\_1328

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB12485          | 703422          | WMWGORPU_1328     |
| BB12486          | 703422          | WMWGORPU_1328     |
| BB12487          | 703422          | WMWGORPU_1328     |
| BB12488          | 703422          | WMWGORPU_1328     |
| BB12489          | 703422          | WMWGORPU_1328     |
| BB12490          | 703422          | WMWGORPU_1328     |
| BB12491          | 703422          | WMWGORPU_1328     |

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

#### General Quality Control Procedures:

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

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

| <u>Sample ID</u> | <u>Analyte</u>      | <u>Dilution Factor</u> |
|------------------|---------------------|------------------------|
| BB12485          | Calcium & Magnesium | 10.15                  |
| BB12486          | Calcium & Magnesium | 10.15                  |
| BB12487          | Calcium & Magnesium | 10.15                  |
| BB12488          | Calcium & Sodium    | 10.15                  |
| BB12489          | Calcium             | 10.15                  |
| BB12488          | Magnesium           | 101.5                  |
| BB12489          | Magnesium           | 101.5                  |

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

Dissolved Metals ICP

Gorgas Pooled Upgradient

WMWGORPU\_1328

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB12485          | 703488          | WMWGORPU_1328     |
| BB12486          | 703488          | WMWGORPU_1328     |
| BB12487          | 703488          | WMWGORPU_1328     |
| BB12488          | 703488          | WMWGORPU_1328     |
| BB12489          | 703488          | WMWGORPU_1328     |

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

#### General Quality Control Procedures:

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



### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for precision were met.
7. All samples were analyzed without a dilution factor.
  8. The raw data results are shown with dilution factors included.

Total Metals ICPMS

Gorgas Pooled Upgradient

WMWGORPU\_1328

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB12485          | 703415          | WMWGORPU_1328     |
| BB12486          | 703415          | WMWGORPU_1328     |
| BB12487          | 703415          | WMWGORPU_1328     |
| BB12488          | 703415          | WMWGORPU_1328     |
| BB12489          | 703415          | WMWGORPU_1328     |
| BB12490          | 703415          | WMWGORPU_1328     |
| BB12491          | 703415          | WMWGORPU_1328     |

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

#### General Quality Control Procedures:

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

## Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution Factor</u> |
|------------------|----------------|------------------------|
| BB12485          | Manganese      | 10.15                  |
| BB12486          | Manganese      | 10.15                  |
| BB12487          | Manganese      | 5.075                  |

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

## Case Narrative

Dissolved Metals ICPMS

Gorgas Pooled Upgradient

WMWGORPU\_1328

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB12485          | 703029          | WMWGORPU_1328     |
| BB12486          | 703029          | WMWGORPU_1328     |
| BB12487          | 703029          | WMWGORPU_1328     |
| BB12488          | 703029          | WMWGORPU_1328     |
| BB12489          | 703029          | WMWGORPU_1328     |

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

### General Quality Control Procedures:

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

Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution Factor</u> |
|------------------|----------------|------------------------|
| BB12485          | Manganese      | 10.15                  |
| BB12486          | Manganese      | 10.15                  |
| BB12487          | Manganese      | 10.15                  |

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

Mercury

Gorgas Pooled Upgradient

WMWGORPU\_1328

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB12485          | 702684          | WMWGORPU_1328     |
| BB12486          | 702684          | WMWGORPU_1328     |
| BB12487          | 702684          | WMWGORPU_1328     |
| BB12488          | 702684          | WMWGORPU_1328     |
| BB12489          | 702684          | WMWGORPU_1328     |
| BB12490          | 702684          | WMWGORPU_1328     |
| BB12491          | 702684          | WMWGORPU_1328     |

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

#### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.
7. All samples were analyzed without a dilution.
  8. The raw data results are shown with dilution factors included.

TDS

Gorgas Pooled Upgradient

WMWGORPU\_1328

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB12485          | 702701          | WMWGORPU_1328     |
| BB12486          | 702701          | WMWGORPU_1328     |
| BB12487          | 702701          | WMWGORPU_1328     |
| BB12488          | 702701          | WMWGORPU_1328     |
| BB12489          | 702701          | WMWGORPU_1328     |
| BB12490          | 702701          | WMWGORPU_1328     |
| BB12491          | 702701          | WMWGORPU_1328     |

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

#### General Quality Control Procedures:

- A Method Blank was analyzed with each batch. All criteria were met.
- All final weights of samples, standards, and blanks agreed within 0.5mg of the previous weight.
- A sample duplicate was analyzed with each batch. RPD/2 was less than 5%.
- A laboratory control sample was analyzed with each batch. All criteria were met.
- Samples were between 2.5mg and 200mg residue.
- All samples with residue <2.5mg had the maximum volume of 150mL filtered. Affected samples are as follows:
  - BB12490
  - BB12491



## Anions

### Gorgas Pooled Upgradient

#### WMWGORPU\_1328

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

| <u>Sample ID</u> | <u>Batch ID</u>        | <u>Project ID</u> |
|------------------|------------------------|-------------------|
| BB12485          | 702708, 702964, 702707 | WMWGORPU_1328     |
| BB12486          | 702708, 702964, 702707 | WMWGORPU_1328     |
| BB12487          | 702708, 702964, 702707 | WMWGORPU_1328     |
| BB12488          | 702708, 702964, 702707 | WMWGORPU_1328     |
| BB12489          | 702708, 702964, 702707 | WMWGORPU_1328     |
| BB12490          | 702708, 702964, 702707 | WMWGORPU_1328     |
| BB12491          | 702708, 702964, 702707 | WMWGORPU_1328     |

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

#### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike was analyzed with each batch. Acceptance criteria for accuracy were met.
  - A sample duplicate was analyzed with each batch. Acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution Factor</u> |
|------------------|----------------|------------------------|
| BB12485          | Sulfate        | 50                     |
| BB12486          | Sulfate        | 50                     |
| BB12487          | Sulfate        | 32                     |
| BB12488          | Sulfate        | 100                    |
| BB12489          | Sulfate        | 100                    |

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

Alkalinity

Gorgas Pooled Upgradient

WMWGORPU\_1328

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB12485          | 703193 & 703194 | WMWGORPU_1328     |
| BB12486          | 703193 & 703194 | WMWGORPU_1328     |
| BB12487          | 703193 & 703194 | WMWGORPU_1328     |
| BB12488          | 703193 & 703194 | WMWGORPU_1328     |
| BB12489          | 703193 & 703194 | WMWGORPU_1328     |

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

#### General Quality Control Procedures:

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

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-1

**Location Code:** WMWGORPU

**Collected:** 7/12/21 10:45

**Customer ID:**

**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12485

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 12:22 | 7/22/21 16:15       |          | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                    | 7/21/21 12:22 | 7/23/21 11:15       |          | 10.15 | 149                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 12:22 | 7/22/21 16:15       |          | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| * Lithium, Total                    | 7/21/21 12:22 | 7/22/21 16:15       |          | 1.015 | 0.0266                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 12:22 | 7/23/21 11:15       |          | 10.15 | 283                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/21/21 12:22 | 7/22/21 16:15       |          | 1.015 | 38.4                                | mg/L  | 0.03045  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/27/21 09:49 | 7/27/21 10:57       |          | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | 0.000363                            | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | 0.00991                             | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | 0.00193                             | mg/L  | 0.000068 | 0.000203   |   |
| * Chromium, Total                   | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | 0.000487                            | mg/L  | 0.000203 | 0.001015   | J |
| * Cobalt, Total                     | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | 0.0556                              | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Potassium, Total                  | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | 7.30                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/15/21 15:15 | 7/22/21 10:52       |          | 10.15 | 10.2                                | mg/L  | 0.000680 | 0.00203    |   |
| * Selenium, Total                   | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | 0.00280                             | mg/L  | 0.000508 | 0.001015   |   |
| * Thallium, Total                   | 7/15/21 15:15 | 7/16/21 15:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/16/21 08:37 | 7/20/21 14:17       |          | 10.15 | 10.7                                | mg/L  | 0.000680 | 0.00203    |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: CRB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/14/21 10:02 | 7/14/21 13:43       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/21/21 09:10 | 7/21/21 09:40       |          | 1     | 22.0                                | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/14/21 12:18 | 7/15/21 13:41       |          | 1     | 2210                                | mg/L  |          | 125        |   |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-1

**Location Code:** WMWGORPU

**Collected:** 7/12/21 10:45

**Customer ID:**

**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12485

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/21/21 09:10 | 7/21/21 09:40       |          | 1  | 22.0    | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/21/21 09:10 | 7/21/21 09:40       |          | 1  | 0.00    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500CI E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/14/21 11:57 | 7/14/21 11:57       |          | 1  | 2.19    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/15/21 10:17 | 7/15/21 10:17       |          | 1  | 0.125   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/14/21 10:33 | 7/14/21 10:33       |          | 50 | 1560    | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/12/21 10:41 | 7/12/21 10:41       |          |    | 2271.93 | uS/cm |       |     | FA |
| pH   | 7/12/21 10:41 | 7/12/21 10:41       |          |    | 5.13    | SU    |       |     | FA |
| Temperature                                  | 7/12/21 10:41 | 7/12/21 10:41       |          |    | 19.83   | C     |       |     | FA |
| Turbidity                                    | 7/12/21 10:41 | 7/12/21 10:41       |          |    | 0.22    | NTU   |       |     | FA |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Batch QC Summary

**Customer Account:** WMWGORPU  
**Sample Date:** 7/12/21 10:45  
**Customer ID:**  
**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient - MW-1

**Laboratory ID Number:** BB12485

| Sample  | Analysis               | Units | MB         | MB       |       | MS      | MSD     | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       |            | Limit    | Spike |         |         | Standard | Limit              | Rec  | Limit       |       |       |
| BB12491 | Molybdenum, Total      | mg/L  | 0.0000261  | 0.000147 | 0.100 | 0.0984  | 0.103   | 0.100    | 0.0850 to 0.115    | 98.4 | 70.0 to 130 | 4.57  | 20.0  |
| BB12491 | Mercury, Total by CVAA | mg/L  | 5.390E-05  | 0.000500 | 0.004 | 0.00402 | 0.00398 | 0.00396  | 0.00340 to 0.00460 | 100  | 70.0 to 130 | 1.00  | 20.0  |
| BB12491 | Beryllium, Total       | mg/L  | 0.0000533  | 0.000880 | 0.100 | 0.103   | 0.102   | 0.101    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 0.976 | 20.0  |
| BB12491 | Sodium, Total          | mg/L  | 0.00119    | 0.0660   | 5.00  | 4.95    | 4.92    | 4.98     | 4.25 to 5.75       | 99.0 | 70.0 to 130 | 0.608 | 20.0  |
| BB12491 | Cobalt, Total          | mg/L  | -0.0000691 | 0.000147 | 0.100 | 0.0949  | 0.0984  | 0.0969   | 0.0850 to 0.115    | 94.9 | 70.0 to 130 | 3.62  | 20.0  |
| BB12491 | Manganese, Total       | mg/L  | -0.000003  | 0.000147 | 0.100 | 0.101   | 0.104   | 0.103    | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Lithium, Total         | mg/L  | -8.650E-05 | 0.0154   | 0.200 | 0.197   | 0.195   | 0.199    | 0.170 to 0.230     | 98.5 | 70.0 to 130 | 1.02  | 20.0  |
| BB12491 | Lead, Total            | mg/L  | 0.0000018  | 0.000147 | 0.100 | 0.113   | 0.113   | 0.107    | 0.0850 to 0.115    | 113  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Boron, Total           | mg/L  | 0.000567   | 0.0650   | 1.00  | 0.980   | 0.977   | 0.995    | 0.850 to 1.15      | 98.0 | 70.0 to 130 | 0.307 | 20.0  |
| BB12491 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0930  | 0.0983  | 0.0943   | 0.0850 to 0.115    | 93.0 | 70.0 to 130 | 5.54  | 20.0  |
| BB12491 | Selenium, Total        | mg/L  | -0.0000651 | 0.00100  | 0.100 | 0.102   | 0.105   | 0.104    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 2.90  | 20.0  |
| BB12489 | Iron, Dissolved        | mg/L  | -0.000219  | 0.0176   | 0.2   | 0.193   | 0.189   | 0.197    | 0.170 to 0.230     | 96.5 | 70.0 to 130 | 2.09  | 20.0  |
| BB12491 | Barium, Total          | mg/L  | -0.0000459 | 0.000200 | 0.100 | 0.101   | 0.104   | 0.0999   | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Calcium, Total         | mg/L  | 0.00896    | 0.152    | 5.00  | 5.03    | 5.02    | 5.05     | 4.25 to 5.75       | 101  | 70.0 to 130 | 0.199 | 20.0  |
| BB12491 | Iron, Total            | mg/L  | 2.630E-05  | 0.0176   | 0.2   | 0.199   | 0.198   | 0.201    | 0.170 to 0.230     | 99.5 | 70.0 to 130 | 0.504 | 20.0  |
| BB12491 | Potassium, Total       | mg/L  | 0.00426    | 0.367    | 10.0  | 9.90    | 10.2    | 10.2     | 8.50 to 11.5       | 99.0 | 70.0 to 130 | 2.99  | 20.0  |
| BB12491 | Magnesium, Total       | mg/L  | -0.00929   | 0.0462   | 5.00  | 5.00    | 5.00    | 5.01     | 4.25 to 5.75       | 100  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Chromium, Total        | mg/L  | 0.0000775  | 0.000440 | 0.100 | 0.0977  | 0.101   | 0.0999   | 0.0850 to 0.115    | 97.7 | 70.0 to 130 | 3.32  | 20.0  |
| BB12491 | Thallium, Total        | mg/L  | -0.000124  | 0.000147 | 0.100 | 0.115   | 0.115   | 0.112    | 0.0850 to 0.115    | 115  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Arsenic, Total         | mg/L  | 0.0000344  | 0.000147 | 0.100 | 0.107   | 0.104   | 0.105    | 0.0850 to 0.115    | 107  | 70.0 to 130 | 2.84  | 20.0  |
| BB12491 | Antimony, Total        | mg/L  | 0.000134   | 0.00100  | 0.100 | 0.0966  | 0.0989  | 0.0960   | 0.0850 to 0.115    | 96.6 | 70.0 to 130 | 2.35  | 20.0  |
| BB12489 | Manganese, Dissolved   | mg/L  | -0.0000252 | 0.000147 | 0.100 | 0.0976  | 0.100   | 0.0996   | 0.0850 to 0.115    | 97.4 | 70.0 to 130 | 2.43  | 20.0  |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

## Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 7/12/21 10:45

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient - MW-1

**Laboratory ID Number:** BB12485

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|-----|-------------|-------|------------|
| BB12491 | Fluoride                   | mg/L  | 0.0195  | 0.100    | 2.50  | 2.58 | 0.0245           | 2.55     | 2.25 to 2.75   | 103 | 80.0 to 120 | 0.00  | 20.0       |
| BB12491 | Sulfate                    | mg/L  | -0.557  | 1.00     | 20.0  | 20.0 | -0.380           | 19.4     | 18.0 to 22.0   | 100 | 80.0 to 120 | 0.00  | 20.0       |
| BB12491 | Chloride                   | mg/L  | -0.0691 | 1.00     | 10.0  | 11.3 | 0.232            | 10.0     | 9.00 to 11.0   | 113 | 80.0 to 120 | 0.00  | 20.0       |
| BB12489 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 192              | 53.9     | 45.0 to 55.0   |     |             | 1.04  | 10.0       |
| BB12489 | Solids, Dissolved          | mg/L  | -4.00   | 25.0     |       |      | 3040             | 47.0     | 40.0 to 60.0   |     |             | 0.662 | 5.00       |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-1 DUP

**Location Code:** WMWGORPU  
**Collected:** 7/12/21 10:45  
**Customer ID:**  
**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12486

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |  |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|--|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |  |
| * Boron, Total                      | 7/21/21 12:22 | 7/22/21 16:19       |          | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |  |
| * Calcium, Total                    | 7/21/21 12:22 | 7/23/21 11:18       |          | 10.15 | 152                                 | mg/L  | 0.70035  | 4.06       |   |  |
| * Iron, Total                       | 7/21/21 12:22 | 7/22/21 16:19       |          | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |  |
| * Lithium, Total                    | 7/21/21 12:22 | 7/22/21 16:19       |          | 1.015 | 0.0267                              | mg/L  | 0.007105 | 0.01999956 |   |  |
| * Magnesium, Total                  | 7/21/21 12:22 | 7/23/21 11:18       |          | 10.15 | 290                                 | mg/L  | 0.21315  | 4.06       |   |  |
| * Sodium, Total                     | 7/21/21 12:22 | 7/22/21 16:19       |          | 1.015 | 38.6                                | mg/L  | 0.03045  | 0.406      |   |  |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |  |
| * Iron, Dissolved                   | 7/27/21 09:49 | 7/27/21 11:01       |          | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |  |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |  |
| * Antimony, Total                   | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |  |
| * Arsenic, Total                    | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | 0.000300                            | mg/L  | 0.000068 | 0.000203   |   |  |
| * Barium, Total                     | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | 0.00984                             | mg/L  | 0.000102 | 0.000203   |   |  |
| * Beryllium, Total                  | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |  |
| * Cadmium, Total                    | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | 0.00185                             | mg/L  | 0.000068 | 0.000203   |   |  |
| * Chromium, Total                   | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | 0.000389                            | mg/L  | 0.000203 | 0.001015   | J |  |
| * Cobalt, Total                     | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | 0.0549                              | mg/L  | 0.000068 | 0.000203   |   |  |
| * Lead, Total                       | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |  |
| * Molybdenum, Total                 | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |  |
| * Potassium, Total                  | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | 7.25                                | mg/L  | 0.169505 | 0.5075     |   |  |
| * Manganese, Total                  | 7/15/21 15:15 | 7/22/21 10:55       |          | 10.15 | 10.1                                | mg/L  | 0.000680 | 0.00203    |   |  |
| * Selenium, Total                   | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | 0.00245                             | mg/L  | 0.000508 | 0.001015   |   |  |
| * Thallium, Total                   | 7/15/21 15:15 | 7/16/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |  |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |  |
| * Manganese, Dissolved              | 7/16/21 08:37 | 7/20/21 14:20       |          | 10.15 | 9.90                                | mg/L  | 0.000680 | 0.00203    |   |  |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: CRB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |  |
| * Mercury, Total by CVAA            | 7/14/21 10:02 | 7/14/21 13:46       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |  |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |  |
| Alkalinity, Total as CaCO3          | 7/21/21 09:10 | 7/21/21 09:40       |          | 1     | 24.2                                | mg/L  |          | 0.1        |   |  |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |  |
| * Solids, Dissolved                 | 7/14/21 12:18 | 7/15/21 13:41       |          | 1     | 2210                                | mg/L  |          | 125        |   |  |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021



# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-1 DUP

**Location Code:** WMWGORPU  
**Collected:** 7/12/21 10:45  
**Customer ID:**  
**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12486

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/21/21 09:10 | 7/21/21 09:40       |          | 1  | 24.2    | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/21/21 09:10 | 7/21/21 09:40       |          | 1  | 0.00    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500CI E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/14/21 11:58 | 7/14/21 11:58       |          | 1  | 2.25    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/15/21 10:18 | 7/15/21 10:18       |          | 1  | 0.112   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/14/21 10:34 | 7/14/21 10:34       |          | 50 | 1500    | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/12/21 10:41 | 7/12/21 10:41       |          |    | 2271.93 | uS/cm |       |     | FA |
| pH   | 7/12/21 10:41 | 7/12/21 10:41       |          |    | 5.13    | SU    |       |     | FA |
| Temperature                                  | 7/12/21 10:41 | 7/12/21 10:41       |          |    | 19.83   | C     |       |     | FA |
| Turbidity                                    | 7/12/21 10:41 | 7/12/21 10:41       |          |    | 0.22    | NTU   |       |     | FA |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 7/12/21 10:45

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient - MW-1 DUP

**Laboratory ID Number:** BB12486

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec  | Limit       |       |       |
| BB12491 | Molybdenum, Total      | mg/L  | 0.0000261  | 0.000147 | 0.100 | 0.0984  | 0.103   | 0.100    | 0.0850 to 0.115    | 98.4 | 70.0 to 130 | 4.57  | 20.0  |
| BB12491 | Mercury, Total by CVAA | mg/L  | 5.390E-05  | 0.000500 | 0.004 | 0.00402 | 0.00398 | 0.00396  | 0.00340 to 0.00460 | 100  | 70.0 to 130 | 1.00  | 20.0  |
| BB12491 | Beryllium, Total       | mg/L  | 0.0000533  | 0.000880 | 0.100 | 0.103   | 0.102   | 0.101    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 0.976 | 20.0  |
| BB12491 | Sodium, Total          | mg/L  | 0.00119    | 0.0660   | 5.00  | 4.95    | 4.92    | 4.98     | 4.25 to 5.75       | 99.0 | 70.0 to 130 | 0.608 | 20.0  |
| BB12491 | Lithium, Total         | mg/L  | -8.650E-05 | 0.0154   | 0.200 | 0.197   | 0.195   | 0.199    | 0.170 to 0.230     | 98.5 | 70.0 to 130 | 1.02  | 20.0  |
| BB12491 | Lead, Total            | mg/L  | 0.0000018  | 0.000147 | 0.100 | 0.113   | 0.113   | 0.107    | 0.0850 to 0.115    | 113  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Cobalt, Total          | mg/L  | -0.0000691 | 0.000147 | 0.100 | 0.0949  | 0.0984  | 0.0969   | 0.0850 to 0.115    | 94.9 | 70.0 to 130 | 3.62  | 20.0  |
| BB12491 | Manganese, Total       | mg/L  | -0.000003  | 0.000147 | 0.100 | 0.101   | 0.104   | 0.103    | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Iron, Total            | mg/L  | 2.630E-05  | 0.0176   | 0.2   | 0.199   | 0.198   | 0.201    | 0.170 to 0.230     | 99.5 | 70.0 to 130 | 0.504 | 20.0  |
| BB12491 | Potassium, Total       | mg/L  | 0.00426    | 0.367    | 10.0  | 9.90    | 10.2    | 10.2     | 8.50 to 11.5       | 99.0 | 70.0 to 130 | 2.99  | 20.0  |
| BB12491 | Boron, Total           | mg/L  | 0.000567   | 0.0650   | 1.00  | 0.980   | 0.977   | 0.995    | 0.850 to 1.15      | 98.0 | 70.0 to 130 | 0.307 | 20.0  |
| BB12491 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0930  | 0.0983  | 0.0943   | 0.0850 to 0.115    | 93.0 | 70.0 to 130 | 5.54  | 20.0  |
| BB12491 | Magnesium, Total       | mg/L  | -0.00929   | 0.0462   | 5.00  | 5.00    | 5.00    | 5.01     | 4.25 to 5.75       | 100  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Chromium, Total        | mg/L  | 0.0000775  | 0.000440 | 0.100 | 0.0977  | 0.101   | 0.0999   | 0.0850 to 0.115    | 97.7 | 70.0 to 130 | 3.32  | 20.0  |
| BB12491 | Thallium, Total        | mg/L  | -0.000124  | 0.000147 | 0.100 | 0.115   | 0.115   | 0.112    | 0.0850 to 0.115    | 115  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Arsenic, Total         | mg/L  | 0.0000344  | 0.000147 | 0.100 | 0.107   | 0.104   | 0.105    | 0.0850 to 0.115    | 107  | 70.0 to 130 | 2.84  | 20.0  |
| BB12491 | Antimony, Total        | mg/L  | 0.000134   | 0.00100  | 0.100 | 0.0966  | 0.0989  | 0.0960   | 0.0850 to 0.115    | 96.6 | 70.0 to 130 | 2.35  | 20.0  |
| BB12489 | Manganese, Dissolved   | mg/L  | -0.0000252 | 0.000147 | 0.100 | 0.0976  | 0.100   | 0.0996   | 0.0850 to 0.115    | 97.4 | 70.0 to 130 | 2.43  | 20.0  |
| BB12491 | Selenium, Total        | mg/L  | -0.0000651 | 0.00100  | 0.100 | 0.102   | 0.105   | 0.104    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 2.90  | 20.0  |
| BB12489 | Iron, Dissolved        | mg/L  | -0.000219  | 0.0176   | 0.2   | 0.193   | 0.189   | 0.197    | 0.170 to 0.230     | 96.5 | 70.0 to 130 | 2.09  | 20.0  |
| BB12491 | Barium, Total          | mg/L  | -0.0000459 | 0.000200 | 0.100 | 0.101   | 0.104   | 0.0999   | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Calcium, Total         | mg/L  | 0.00896    | 0.152    | 5.00  | 5.03    | 5.02    | 5.05     | 4.25 to 5.75       | 101  | 70.0 to 130 | 0.199 | 20.0  |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

## Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 7/12/21 10:45

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient - MW-1 DUP

**Laboratory ID Number:** BB12486

| Sample  | Analysis                   | Units | MB      | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec | Limit       | Prec  | Prec<br>Limit |
|---------|----------------------------|-------|---------|-------------|-------|------|---------------------|----------|-------------------|-----|-------------|-------|---------------|
| BB12489 | Solids, Dissolved          | mg/L  | -4.00   | 25.0        |       |      | 3040                | 47.0     | 40.0 to 60.0      |     |             | 0.662 | 5.00          |
| BB12491 | Fluoride                   | mg/L  | 0.0195  | 0.100       | 2.50  | 2.58 | 0.0245              | 2.55     | 2.25 to 2.75      | 103 | 80.0 to 120 | 0.00  | 20.0          |
| BB12491 | Sulfate                    | mg/L  | -0.557  | 1.00        | 20.0  | 20.0 | -0.380              | 19.4     | 18.0 to 22.0      | 100 | 80.0 to 120 | 0.00  | 20.0          |
| BB12491 | Chloride                   | mg/L  | -0.0691 | 1.00        | 10.0  | 11.3 | 0.232               | 10.0     | 9.00 to 11.0      | 113 | 80.0 to 120 | 0.00  | 20.0          |
| BB12489 | Alkalinity, Total as CaCO3 | mg/L  |         |             |       |      | 192                 | 53.9     | 45.0 to 55.0      |     |             | 1.04  | 10.0          |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-2

**Location Code:** WMWGORPU  
**Collected:** 7/12/21 11:48  
**Customer ID:**  
**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12487

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 12:22 | 7/22/21 16:22       |          | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                    | 7/21/21 12:22 | 7/23/21 11:22       |          | 10.15 | 159                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 12:22 | 7/22/21 16:22       |          | 1.015 | 1.34                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/21/21 12:22 | 7/22/21 16:22       |          | 1.015 | 0.0495                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 12:22 | 7/23/21 11:22       |          | 10.15 | 174                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/21/21 12:22 | 7/22/21 16:22       |          | 1.015 | 20.9                                | mg/L  | 0.03045  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/27/21 09:49 | 7/27/21 11:04       |          | 1.015 | 1.15                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | 0.000364                            | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | 0.0130                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | 0.0000827                           | mg/L  | 0.000068 | 0.000203   | J |
| * Chromium, Total                   | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | 0.000251                            | mg/L  | 0.000203 | 0.001015   | J |
| * Cobalt, Total                     | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | 0.0155                              | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Potassium, Total                  | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | 5.86                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/15/21 15:15 | 7/22/21 10:59       |          | 5.075 | 4.80                                | mg/L  | 0.000340 | 0.001015   |   |
| * Selenium, Total                   | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/15/21 15:15 | 7/16/21 15:25       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/16/21 08:37 | 7/20/21 14:24       |          | 10.15 | 4.49                                | mg/L  | 0.000680 | 0.00203    |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: CRB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/14/21 10:02 | 7/14/21 13:48       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/21/21 09:10 | 7/21/21 09:40       |          | 1     | 346                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/14/21 12:18 | 7/15/21 13:41       |          | 1     | 1390                                | mg/L  |          | 75.8       |   |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-2

**Location Code:** WMWGORPU

**Collected:** 7/12/21 11:48

**Customer ID:**

**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12487

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/21/21 09:10 | 7/21/21 09:40       |          | 1  | 346     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/21/21 09:10 | 7/21/21 09:40       |          | 1  | 0.07    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/14/21 11:59 | 7/14/21 11:59       |          | 1  | 2.36    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/15/21 10:19 | 7/15/21 10:19       |          | 1  | 0.196   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/14/21 10:36 | 7/14/21 10:36       |          | 32 | 763     | mg/L  | 16.00 | 32  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/12/21 11:45 | 7/12/21 11:45       |          |    | 1676.05 | uS/cm |       |     | FA |
| pH   | 7/12/21 11:45 | 7/12/21 11:45       |          |    | 6.16    | SU    |       |     | FA |
| Temperature                                  | 7/12/21 11:45 | 7/12/21 11:45       |          |    | 19.38   | C     |       |     | FA |
| Turbidity                                    | 7/12/21 11:45 | 7/12/21 11:45       |          |    | 1.43    | NTU   |       |     | FA |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 7/12/21 11:48

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient - MW-2

**Laboratory ID Number:** BB12487

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec  | Limit       |       |       |
| BB12491 | Lithium, Total         | mg/L  | -8.650E-05 | 0.0154   | 0.200 | 0.197   | 0.195   | 0.199    | 0.170 to 0.230     | 98.5 | 70.0 to 130 | 1.02  | 20.0  |
| BB12491 | Lead, Total            | mg/L  | 0.0000018  | 0.000147 | 0.100 | 0.113   | 0.113   | 0.107    | 0.0850 to 0.115    | 113  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Molybdenum, Total      | mg/L  | 0.0000261  | 0.000147 | 0.100 | 0.0984  | 0.103   | 0.100    | 0.0850 to 0.115    | 98.4 | 70.0 to 130 | 4.57  | 20.0  |
| BB12491 | Mercury, Total by CVAA | mg/L  | 5.390E-05  | 0.000500 | 0.004 | 0.00402 | 0.00398 | 0.00396  | 0.00340 to 0.00460 | 100  | 70.0 to 130 | 1.00  | 20.0  |
| BB12491 | Beryllium, Total       | mg/L  | 0.0000533  | 0.000880 | 0.100 | 0.103   | 0.102   | 0.101    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 0.976 | 20.0  |
| BB12491 | Sodium, Total          | mg/L  | 0.00119    | 0.0660   | 5.00  | 4.95    | 4.92    | 4.98     | 4.25 to 5.75       | 99.0 | 70.0 to 130 | 0.608 | 20.0  |
| BB12491 | Iron, Total            | mg/L  | 2.630E-05  | 0.0176   | 0.2   | 0.199   | 0.198   | 0.201    | 0.170 to 0.230     | 99.5 | 70.0 to 130 | 0.504 | 20.0  |
| BB12491 | Potassium, Total       | mg/L  | 0.00426    | 0.367    | 10.0  | 9.90    | 10.2    | 10.2     | 8.50 to 11.5       | 99.0 | 70.0 to 130 | 2.99  | 20.0  |
| BB12491 | Boron, Total           | mg/L  | 0.000567   | 0.0650   | 1.00  | 0.980   | 0.977   | 0.995    | 0.850 to 1.15      | 98.0 | 70.0 to 130 | 0.307 | 20.0  |
| BB12491 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0930  | 0.0983  | 0.0943   | 0.0850 to 0.115    | 93.0 | 70.0 to 130 | 5.54  | 20.0  |
| BB12491 | Cobalt, Total          | mg/L  | -0.0000691 | 0.000147 | 0.100 | 0.0949  | 0.0984  | 0.0969   | 0.0850 to 0.115    | 94.9 | 70.0 to 130 | 3.62  | 20.0  |
| BB12491 | Manganese, Total       | mg/L  | -0.000003  | 0.000147 | 0.100 | 0.101   | 0.104   | 0.103    | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Selenium, Total        | mg/L  | -0.0000651 | 0.00100  | 0.100 | 0.102   | 0.105   | 0.104    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 2.90  | 20.0  |
| BB12489 | Iron, Dissolved        | mg/L  | -0.000219  | 0.0176   | 0.2   | 0.193   | 0.189   | 0.197    | 0.170 to 0.230     | 96.5 | 70.0 to 130 | 2.09  | 20.0  |
| BB12491 | Barium, Total          | mg/L  | -0.0000459 | 0.000200 | 0.100 | 0.101   | 0.104   | 0.0999   | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Calcium, Total         | mg/L  | 0.00896    | 0.152    | 5.00  | 5.03    | 5.02    | 5.05     | 4.25 to 5.75       | 101  | 70.0 to 130 | 0.199 | 20.0  |
| BB12491 | Magnesium, Total       | mg/L  | -0.00929   | 0.0462   | 5.00  | 5.00    | 5.00    | 5.01     | 4.25 to 5.75       | 100  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Chromium, Total        | mg/L  | 0.0000775  | 0.000440 | 0.100 | 0.0977  | 0.101   | 0.0999   | 0.0850 to 0.115    | 97.7 | 70.0 to 130 | 3.32  | 20.0  |
| BB12491 | Thallium, Total        | mg/L  | -0.000124  | 0.000147 | 0.100 | 0.115   | 0.115   | 0.112    | 0.0850 to 0.115    | 115  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Arsenic, Total         | mg/L  | 0.0000344  | 0.000147 | 0.100 | 0.107   | 0.104   | 0.105    | 0.0850 to 0.115    | 107  | 70.0 to 130 | 2.84  | 20.0  |
| BB12491 | Antimony, Total        | mg/L  | 0.000134   | 0.00100  | 0.100 | 0.0966  | 0.0989  | 0.0960   | 0.0850 to 0.115    | 96.6 | 70.0 to 130 | 2.35  | 20.0  |
| BB12489 | Manganese, Dissolved   | mg/L  | -0.0000252 | 0.000147 | 0.100 | 0.0976  | 0.100   | 0.0996   | 0.0850 to 0.115    | 97.4 | 70.0 to 130 | 2.43  | 20.0  |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

## Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 7/12/21 11:48

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient - MW-2

**Laboratory ID Number:** BB12487

| Sample  | Analysis                   | Units | MB      | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec | Limit       | Prec  | Prec<br>Limit |
|---------|----------------------------|-------|---------|-------------|-------|------|---------------------|----------|-------------------|-----|-------------|-------|---------------|
| BB12489 | Solids, Dissolved          | mg/L  | -4.00   | 25.0        |       |      | 3040                | 47.0     | 40.0 to 60.0      |     |             | 0.662 | 5.00          |
| BB12491 | Fluoride                   | mg/L  | 0.0195  | 0.100       | 2.50  | 2.58 | 0.0245              | 2.55     | 2.25 to 2.75      | 103 | 80.0 to 120 | 0.00  | 20.0          |
| BB12491 | Sulfate                    | mg/L  | -0.557  | 1.00        | 20.0  | 20.0 | -0.380              | 19.4     | 18.0 to 22.0      | 100 | 80.0 to 120 | 0.00  | 20.0          |
| BB12491 | Chloride                   | mg/L  | -0.0691 | 1.00        | 10.0  | 11.3 | 0.232               | 10.0     | 9.00 to 11.0      | 113 | 80.0 to 120 | 0.00  | 20.0          |
| BB12489 | Alkalinity, Total as CaCO3 | mg/L  |         |             |       |      | 192                 | 53.9     | 45.0 to 55.0      |     |             | 1.04  | 10.0          |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-3

**Location Code:** WMWGORPU

**Collected:** 7/12/21 12:53

**Customer ID:**

**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12488

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 12:22 | 7/22/21 16:25       |          | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                    | 7/21/21 12:22 | 7/23/21 11:25       |          | 10.15 | 252                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 12:22 | 7/22/21 16:25       |          | 1.015 | 0.269                               | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/21/21 12:22 | 7/22/21 16:25       |          | 1.015 | 0.0808                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 12:22 | 7/23/21 11:32       |          | 101.5 | 471                                 | mg/L  | 2.1315   | 40.6       |   |
| * Sodium, Total                     | 7/21/21 12:22 | 7/23/21 11:25       |          | 10.15 | 42.5                                | mg/L  | 0.3045   | 4.06       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/27/21 09:49 | 7/27/21 11:08       |          | 1.015 | 0.104                               | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | 0.000376                            | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | 0.00857                             | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | 0.000937                            | mg/L  | 0.000068 | 0.000203   |   |
| * Chromium, Total                   | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | 0.000307                            | mg/L  | 0.000203 | 0.001015   | J |
| * Cobalt, Total                     | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | 0.00567                             | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | 0.0000842                           | mg/L  | 0.000068 | 0.000203   | J |
| * Molybdenum, Total                 | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Potassium, Total                  | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | 6.90                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | 0.160                               | mg/L  | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | 0.0133                              | mg/L  | 0.000508 | 0.001015   |   |
| * Thallium, Total                   | 7/15/21 15:15 | 7/16/21 15:29       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/16/21 08:37 | 7/16/21 14:45       |          | 1.015 | 0.374                               | mg/L  | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: CRB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/14/21 10:02 | 7/14/21 13:50       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/21/21 09:10 | 7/21/21 09:40       |          | 1     | 49.4                                | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/14/21 12:18 | 7/15/21 13:41       |          | 1     | 3510                                | mg/L  |          | 178.6      |   |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021



# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-3

**Location Code:** WMWGORPU  
**Collected:** 7/12/21 12:53  
**Customer ID:**  
**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12488

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/21/21 09:10 | 7/21/21 09:40       |          | 1   | 49.4    | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/21/21 09:10 | 7/21/21 09:40       |          | 1   | 0.00    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 7/14/21 12:01 | 7/14/21 12:01       |          | 1   | 2.13    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 7/15/21 10:20 | 7/15/21 10:20       |          | 1   | 0.287   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 7/14/21 10:37 | 7/14/21 10:37       |          | 100 | 2380    | mg/L  | 50.00 | 100 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 7/12/21 12:49 | 7/12/21 12:49       |          |     | 3288.64 | uS/cm |       |     | FA |
| pH   | 7/12/21 12:49 | 7/12/21 12:49       |          |     | 5.86    | SU    |       |     | FA |
| Temperature                                  | 7/12/21 12:49 | 7/12/21 12:49       |          |     | 25.58   | C     |       |     | FA |
| Turbidity                                    | 7/12/21 12:49 | 7/12/21 12:49       |          |     | 1.31    | NTU   |       |     | FA |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Batch QC Summary

**Customer Account:** WMWGORPU  
**Sample Date:** 7/12/21 12:53  
**Customer ID:**  
**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient - MW-3

**Laboratory ID Number:** BB12488

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec  | Limit       |       |       |
| BB12491 | Lithium, Total         | mg/L  | -8.650E-05 | 0.0154   | 0.200 | 0.197   | 0.195   | 0.199    | 0.170 to 0.230     | 98.5 | 70.0 to 130 | 1.02  | 20.0  |
| BB12491 | Lead, Total            | mg/L  | 0.0000018  | 0.000147 | 0.100 | 0.113   | 0.113   | 0.107    | 0.0850 to 0.115    | 113  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Molybdenum, Total      | mg/L  | 0.0000261  | 0.000147 | 0.100 | 0.0984  | 0.103   | 0.100    | 0.0850 to 0.115    | 98.4 | 70.0 to 130 | 4.57  | 20.0  |
| BB12491 | Mercury, Total by CVAA | mg/L  | 5.390E-05  | 0.000500 | 0.004 | 0.00402 | 0.00398 | 0.00396  | 0.00340 to 0.00460 | 100  | 70.0 to 130 | 1.00  | 20.0  |
| BB12491 | Beryllium, Total       | mg/L  | 0.0000533  | 0.000880 | 0.100 | 0.103   | 0.102   | 0.101    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 0.976 | 20.0  |
| BB12491 | Sodium, Total          | mg/L  | 0.00119    | 0.0660   | 5.00  | 4.95    | 4.92    | 4.98     | 4.25 to 5.75       | 99.0 | 70.0 to 130 | 0.608 | 20.0  |
| BB12491 | Cobalt, Total          | mg/L  | -0.0000691 | 0.000147 | 0.100 | 0.0949  | 0.0984  | 0.0969   | 0.0850 to 0.115    | 94.9 | 70.0 to 130 | 3.62  | 20.0  |
| BB12491 | Manganese, Total       | mg/L  | -0.000003  | 0.000147 | 0.100 | 0.101   | 0.104   | 0.103    | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Iron, Total            | mg/L  | 2.630E-05  | 0.0176   | 0.2   | 0.199   | 0.198   | 0.201    | 0.170 to 0.230     | 99.5 | 70.0 to 130 | 0.504 | 20.0  |
| BB12491 | Potassium, Total       | mg/L  | 0.00426    | 0.367    | 10.0  | 9.90    | 10.2    | 10.2     | 8.50 to 11.5       | 99.0 | 70.0 to 130 | 2.99  | 20.0  |
| BB12491 | Boron, Total           | mg/L  | 0.000567   | 0.0650   | 1.00  | 0.980   | 0.977   | 0.995    | 0.850 to 1.15      | 98.0 | 70.0 to 130 | 0.307 | 20.0  |
| BB12491 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0930  | 0.0983  | 0.0943   | 0.0850 to 0.115    | 93.0 | 70.0 to 130 | 5.54  | 20.0  |
| BB12491 | Selenium, Total        | mg/L  | -0.0000651 | 0.00100  | 0.100 | 0.102   | 0.105   | 0.104    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 2.90  | 20.0  |
| BB12489 | Iron, Dissolved        | mg/L  | -0.000219  | 0.0176   | 0.2   | 0.193   | 0.189   | 0.197    | 0.170 to 0.230     | 96.5 | 70.0 to 130 | 2.09  | 20.0  |
| BB12491 | Barium, Total          | mg/L  | -0.0000459 | 0.000200 | 0.100 | 0.101   | 0.104   | 0.0999   | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Calcium, Total         | mg/L  | 0.00896    | 0.152    | 5.00  | 5.03    | 5.02    | 5.05     | 4.25 to 5.75       | 101  | 70.0 to 130 | 0.199 | 20.0  |
| BB12491 | Magnesium, Total       | mg/L  | -0.00929   | 0.0462   | 5.00  | 5.00    | 5.00    | 5.01     | 4.25 to 5.75       | 100  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Chromium, Total        | mg/L  | 0.0000775  | 0.000440 | 0.100 | 0.0977  | 0.101   | 0.0999   | 0.0850 to 0.115    | 97.7 | 70.0 to 130 | 3.32  | 20.0  |
| BB12491 | Thallium, Total        | mg/L  | -0.000124  | 0.000147 | 0.100 | 0.115   | 0.115   | 0.112    | 0.0850 to 0.115    | 115  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Arsenic, Total         | mg/L  | 0.0000344  | 0.000147 | 0.100 | 0.107   | 0.104   | 0.105    | 0.0850 to 0.115    | 107  | 70.0 to 130 | 2.84  | 20.0  |
| BB12491 | Antimony, Total        | mg/L  | 0.000134   | 0.00100  | 0.100 | 0.0966  | 0.0989  | 0.0960   | 0.0850 to 0.115    | 96.6 | 70.0 to 130 | 2.35  | 20.0  |
| BB12489 | Manganese, Dissolved   | mg/L  | -0.0000252 | 0.000147 | 0.100 | 0.0976  | 0.100   | 0.0996   | 0.0850 to 0.115    | 97.4 | 70.0 to 130 | 2.43  | 20.0  |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

## Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 7/12/21 12:53

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient - MW-3

**Laboratory ID Number:** BB12488

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|-----|-------------|-------|------------|
| BB12491 | Fluoride                   | mg/L  | 0.0195  | 0.100    | 2.50  | 2.58 | 0.0245           | 2.55     | 2.25 to 2.75   | 103 | 80.0 to 120 | 0.00  | 20.0       |
| BB12489 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 192              | 53.9     | 45.0 to 55.0   |     |             | 1.04  | 10.0       |
| BB12489 | Solids, Dissolved          | mg/L  | -4.00   | 25.0     |       |      | 3040             | 47.0     | 40.0 to 60.0   |     |             | 0.662 | 5.00       |
| BB12491 | Sulfate                    | mg/L  | -0.557  | 1.00     | 20.0  | 20.0 | -0.380           | 19.4     | 18.0 to 22.0   | 100 | 80.0 to 120 | 0.00  | 20.0       |
| BB12491 | Chloride                   | mg/L  | -0.0691 | 1.00     | 10.0  | 11.3 | 0.232            | 10.0     | 9.00 to 11.0   | 113 | 80.0 to 120 | 0.00  | 20.0       |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-4

**Location Code:** WMWGORPU

**Collected:** 7/12/21 14:35

**Customer ID:**

**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12489

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 12:22 | 7/22/21 16:29       |          | 1.015 | 0.0411                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/21/21 12:22 | 7/23/21 11:29       |          | 10.15 | 242                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 12:22 | 7/22/21 16:29       |          | 1.015 | 0.0132                              | mg/L  | 0.008120 | 0.0406     | J |
| * Lithium, Total                    | 7/21/21 12:22 | 7/22/21 16:29       |          | 1.015 | 0.0533                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 12:22 | 7/23/21 11:35       |          | 101.5 | 389                                 | mg/L  | 2.1315   | 40.6       |   |
| * Sodium, Total                     | 7/21/21 12:22 | 7/22/21 16:29       |          | 1.015 | 36.6                                | mg/L  | 0.03045  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/27/21 09:49 | 7/27/21 11:11       |          | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | 0.000116                            | mg/L  | 0.000068 | 0.000203   | J |
| * Barium, Total                     | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | 0.0108                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | 0.0000819                           | mg/L  | 0.000068 | 0.000203   | J |
| * Chromium, Total                   | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | 0.000302                            | mg/L  | 0.000203 | 0.001015   | J |
| * Cobalt, Total                     | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                       | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | 0.000138                            | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                  | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | 7.65                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | 0.000607                            | mg/L  | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | 0.00155                             | mg/L  | 0.000508 | 0.001015   |   |
| * Thallium, Total                   | 7/15/21 15:15 | 7/16/21 15:32       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/16/21 08:37 | 7/16/21 14:49       |          | 1.015 | 0.000225                            | mg/L  | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: CRB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/14/21 10:02 | 7/14/21 13:53       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/21/21 09:10 | 7/21/21 09:40       |          | 1     | 194                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/14/21 12:18 | 7/15/21 13:41       |          | 1     | 3000                                | mg/L  |          | 147.1      |   |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient - MW-4

**Location Code:** WMWGORPU  
**Collected:** 7/12/21 14:35  
**Customer ID:**  
**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12489

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/21/21 09:10 | 7/21/21 09:40       |          | 1   | 194     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/21/21 09:10 | 7/21/21 09:40       |          | 1   | 0.06    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500CI E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 7/14/21 12:02 | 7/14/21 12:02       |          | 1   | 1.56    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 7/15/21 10:22 | 7/15/21 10:22       |          | 1   | 0.350   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 7/14/21 10:38 | 7/14/21 10:38       |          | 100 | 1930    | mg/L  | 50.00 | 100 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 7/12/21 14:31 | 7/12/21 14:31       |          |     | 2977.13 | uS/cm |       |     | FA |
| pH   | 7/12/21 14:31 | 7/12/21 14:31       |          |     | 6.06    | SU    |       |     | FA |
| Temperature                                  | 7/12/21 14:31 | 7/12/21 14:31       |          |     | 21.22   | C     |       |     | FA |
| Turbidity                                    | 7/12/21 14:31 | 7/12/21 14:31       |          |     | 0.66    | NTU   |       |     | FA |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Batch QC Summary

**Customer Account:** WMWGORPU  
**Sample Date:** 7/12/21 14:35  
**Customer ID:**  
**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient - MW-4

**Laboratory ID Number:** BB12489

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec  | Limit       |       |       |
| BB12491 | Molybdenum, Total      | mg/L  | 0.0000261  | 0.000147 | 0.100 | 0.0984  | 0.103   | 0.100    | 0.0850 to 0.115    | 98.4 | 70.0 to 130 | 4.57  | 20.0  |
| BB12491 | Mercury, Total by CVAA | mg/L  | 5.390E-05  | 0.000500 | 0.004 | 0.00402 | 0.00398 | 0.00396  | 0.00340 to 0.00460 | 100  | 70.0 to 130 | 1.00  | 20.0  |
| BB12491 | Beryllium, Total       | mg/L  | 0.0000533  | 0.000880 | 0.100 | 0.103   | 0.102   | 0.101    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 0.976 | 20.0  |
| BB12491 | Sodium, Total          | mg/L  | 0.00119    | 0.0660   | 5.00  | 4.95    | 4.92    | 4.98     | 4.25 to 5.75       | 99.0 | 70.0 to 130 | 0.608 | 20.0  |
| BB12491 | Iron, Total            | mg/L  | 2.630E-05  | 0.0176   | 0.2   | 0.199   | 0.198   | 0.201    | 0.170 to 0.230     | 99.5 | 70.0 to 130 | 0.504 | 20.0  |
| BB12491 | Potassium, Total       | mg/L  | 0.00426    | 0.367    | 10.0  | 9.90    | 10.2    | 10.2     | 8.50 to 11.5       | 99.0 | 70.0 to 130 | 2.99  | 20.0  |
| BB12491 | Cobalt, Total          | mg/L  | -0.0000691 | 0.000147 | 0.100 | 0.0949  | 0.0984  | 0.0969   | 0.0850 to 0.115    | 94.9 | 70.0 to 130 | 3.62  | 20.0  |
| BB12491 | Manganese, Total       | mg/L  | -0.000003  | 0.000147 | 0.100 | 0.101   | 0.104   | 0.103    | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Selenium, Total        | mg/L  | -0.0000651 | 0.00100  | 0.100 | 0.102   | 0.105   | 0.104    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 2.90  | 20.0  |
| BB12489 | Iron, Dissolved        | mg/L  | -0.000219  | 0.0176   | 0.2   | 0.193   | 0.189   | 0.197    | 0.170 to 0.230     | 96.5 | 70.0 to 130 | 2.09  | 20.0  |
| BB12491 | Barium, Total          | mg/L  | -0.0000459 | 0.000200 | 0.100 | 0.101   | 0.104   | 0.0999   | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Calcium, Total         | mg/L  | 0.00896    | 0.152    | 5.00  | 5.03    | 5.02    | 5.05     | 4.25 to 5.75       | 101  | 70.0 to 130 | 0.199 | 20.0  |
| BB12491 | Magnesium, Total       | mg/L  | -0.00929   | 0.0462   | 5.00  | 5.00    | 5.00    | 5.01     | 4.25 to 5.75       | 100  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Chromium, Total        | mg/L  | 0.0000775  | 0.000440 | 0.100 | 0.0977  | 0.101   | 0.0999   | 0.0850 to 0.115    | 97.7 | 70.0 to 130 | 3.32  | 20.0  |
| BB12491 | Thallium, Total        | mg/L  | -0.000124  | 0.000147 | 0.100 | 0.115   | 0.115   | 0.112    | 0.0850 to 0.115    | 115  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Arsenic, Total         | mg/L  | 0.0000344  | 0.000147 | 0.100 | 0.107   | 0.104   | 0.105    | 0.0850 to 0.115    | 107  | 70.0 to 130 | 2.84  | 20.0  |
| BB12491 | Antimony, Total        | mg/L  | 0.000134   | 0.00100  | 0.100 | 0.0966  | 0.0989  | 0.0960   | 0.0850 to 0.115    | 96.6 | 70.0 to 130 | 2.35  | 20.0  |
| BB12489 | Manganese, Dissolved   | mg/L  | -0.0000252 | 0.000147 | 0.100 | 0.0976  | 0.100   | 0.0996   | 0.0850 to 0.115    | 97.4 | 70.0 to 130 | 2.43  | 20.0  |
| BB12491 | Lithium, Total         | mg/L  | -8.650E-05 | 0.0154   | 0.200 | 0.197   | 0.195   | 0.199    | 0.170 to 0.230     | 98.5 | 70.0 to 130 | 1.02  | 20.0  |
| BB12491 | Lead, Total            | mg/L  | 0.0000018  | 0.000147 | 0.100 | 0.113   | 0.113   | 0.107    | 0.0850 to 0.115    | 113  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Boron, Total           | mg/L  | 0.000567   | 0.0650   | 1.00  | 0.980   | 0.977   | 0.995    | 0.850 to 1.15      | 98.0 | 70.0 to 130 | 0.307 | 20.0  |
| BB12491 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0930  | 0.0983  | 0.0943   | 0.0850 to 0.115    | 93.0 | 70.0 to 130 | 5.54  | 20.0  |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

## Batch QC Summary

**Customer Account:** WMWGORPU

**Sample Date:** 7/12/21 14:35

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient - MW-4

**Laboratory ID Number:** BB12489

| Sample  | Analysis                   | Units | MB      | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec | Limit       | Prec  | Prec<br>Limit |
|---------|----------------------------|-------|---------|-------------|-------|------|---------------------|----------|-------------------|-----|-------------|-------|---------------|
| BB12489 | Solids, Dissolved          | mg/L  | -4.00   | 25.0        |       |      | 3040                | 47.0     | 40.0 to 60.0      |     |             | 0.662 | 5.00          |
| BB12491 | Fluoride                   | mg/L  | 0.0195  | 0.100       | 2.50  | 2.58 | 0.0245              | 2.55     | 2.25 to 2.75      | 103 | 80.0 to 120 | 0.00  | 20.0          |
| BB12491 | Sulfate                    | mg/L  | -0.557  | 1.00        | 20.0  | 20.0 | -0.380              | 19.4     | 18.0 to 22.0      | 100 | 80.0 to 120 | 0.00  | 20.0          |
| BB12491 | Chloride                   | mg/L  | -0.0691 | 1.00        | 10.0  | 11.3 | 0.232               | 10.0     | 9.00 to 11.0      | 113 | 80.0 to 120 | 0.00  | 20.0          |
| BB12489 | Alkalinity, Total as CaCO3 | mg/L  |         |             |       |      | 192                 | 53.9     | 45.0 to 55.0      |     |             | 1.04  | 10.0          |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 8/2/2021

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient Equipment Blank-1

**Location Code:** WMWGORPUEB  
**Collected:** 7/12/21 15:00  
**Customer ID:**  
**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12490

| Name                                       | Prepared      | Analyzed      | Vio Spec            | DF    | Results                             | Units | MDL      | RL         | Q |
|--|---------------|---------------|---------------------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b>        |               |               | <b>Analyst: ABB</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                             | 7/21/21 12:22 | 7/22/21 16:32 |                     | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                           | 7/21/21 12:22 | 7/22/21 16:32 |                     | 1.015 | Not Detected                        | mg/L  | 0.070035 | 0.406      | U |
| * Iron, Total                              | 7/21/21 12:22 | 7/22/21 16:32 |                     | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| * Lithium, Total                           | 7/21/21 12:22 | 7/22/21 16:32 |                     | 1.015 | Not Detected                        | mg/L  | 0.007105 | 0.01999956 | U |
| * Magnesium, Total                         | 7/21/21 12:22 | 7/22/21 16:32 |                     | 1.015 | Not Detected                        | mg/L  | 0.021315 | 0.406      | U |
| * Sodium, Total                            | 7/21/21 12:22 | 7/22/21 16:32 |                     | 1.015 | Not Detected                        | mg/L  | 0.03045  | 0.406      | U |
| <b>Analytical Method: EPA 200.8</b>        |               |               | <b>Analyst: DLJ</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                          | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                           | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Barium, Total                            | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000102 | 0.000203   | U |
| * Beryllium, Total                         | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                           | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                          | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                            | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                              | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                        | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Manganese, Total                         | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Potassium, Total                         | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.169505 | 0.5075     | U |
| * Selenium, Total                          | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                          | 7/15/21 15:15 | 7/16/21 15:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 245.1</b>        |               |               | <b>Analyst: CRB</b> |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA                   | 7/14/21 10:02 | 7/14/21 13:55 |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2540C</b>         |               |               | <b>Analyst: CNJ</b> |       |                                     |       |          |            |   |
| * Solids, Dissolved                        | 7/14/21 12:18 | 7/15/21 13:41 |                     | 1     | Not Detected                        | mg/L  |          | 25         | U |
| <b>Analytical Method: SM4500CI E</b>       |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Chloride                                 | 7/14/21 12:03 | 7/14/21 12:03 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |
| <b>Analytical Method: SM4500F G 2017</b>   |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Fluoride                                 | 7/15/21 10:23 | 7/15/21 10:23 |                     | 1     | Not Detected                        | mg/L  | 0.06     | 0.1        | U |
| <b>Analytical Method: SM4500SO4 E 2011</b> |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Sulfate                                  | 7/14/21 10:39 | 7/14/21 10:39 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |

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

**Comments:**



# Batch QC Summary

**Customer Account:** WMWGORPUEB

**Sample Date:** 7/12/21 15:00

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient Equipment Blank-1

**Laboratory ID Number:** BB12490

| Sample  | Analysis               | Units | MB         | MB       |       |         |         | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       |            | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec  | Limit       |       |       |
| BB12491 | Lithium, Total         | mg/L  | -8.650E-05 | 0.0154   | 0.200 | 0.197   | 0.195   | 0.199    | 0.170 to 0.230     | 98.5 | 70.0 to 130 | 1.02  | 20.0  |
| BB12491 | Lead, Total            | mg/L  | 0.0000018  | 0.000147 | 0.100 | 0.113   | 0.113   | 0.107    | 0.0850 to 0.115    | 113  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Beryllium, Total       | mg/L  | 0.0000533  | 0.000880 | 0.100 | 0.103   | 0.102   | 0.101    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 0.976 | 20.0  |
| BB12491 | Sodium, Total          | mg/L  | 0.00119    | 0.0660   | 5.00  | 4.95    | 4.92    | 4.98     | 4.25 to 5.75       | 99.0 | 70.0 to 130 | 0.608 | 20.0  |
| BB12491 | Selenium, Total        | mg/L  | -0.0000651 | 0.00100  | 0.100 | 0.102   | 0.105   | 0.104    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 2.90  | 20.0  |
| BB12491 | Barium, Total          | mg/L  | -0.0000459 | 0.000200 | 0.100 | 0.101   | 0.104   | 0.0999   | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Calcium, Total         | mg/L  | 0.00896    | 0.152    | 5.00  | 5.03    | 5.02    | 5.05     | 4.25 to 5.75       | 101  | 70.0 to 130 | 0.199 | 20.0  |
| BB12491 | Cobalt, Total          | mg/L  | -0.0000691 | 0.000147 | 0.100 | 0.0949  | 0.0984  | 0.0969   | 0.0850 to 0.115    | 94.9 | 70.0 to 130 | 3.62  | 20.0  |
| BB12491 | Manganese, Total       | mg/L  | -0.000003  | 0.000147 | 0.100 | 0.101   | 0.104   | 0.103    | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Boron, Total           | mg/L  | 0.000567   | 0.0650   | 1.00  | 0.980   | 0.977   | 0.995    | 0.850 to 1.15      | 98.0 | 70.0 to 130 | 0.307 | 20.0  |
| BB12491 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0930  | 0.0983  | 0.0943   | 0.0850 to 0.115    | 93.0 | 70.0 to 130 | 5.54  | 20.0  |
| BB12491 | Molybdenum, Total      | mg/L  | 0.0000261  | 0.000147 | 0.100 | 0.0984  | 0.103   | 0.100    | 0.0850 to 0.115    | 98.4 | 70.0 to 130 | 4.57  | 20.0  |
| BB12491 | Mercury, Total by CVAA | mg/L  | 5.390E-05  | 0.000500 | 0.004 | 0.00402 | 0.00398 | 0.00396  | 0.00340 to 0.00460 | 100  | 70.0 to 130 | 1.00  | 20.0  |
| BB12491 | Iron, Total            | mg/L  | 2.630E-05  | 0.0176   | 0.2   | 0.199   | 0.198   | 0.201    | 0.170 to 0.230     | 99.5 | 70.0 to 130 | 0.504 | 20.0  |
| BB12491 | Potassium, Total       | mg/L  | 0.00426    | 0.367    | 10.0  | 9.90    | 10.2    | 10.2     | 8.50 to 11.5       | 99.0 | 70.0 to 130 | 2.99  | 20.0  |
| BB12491 | Magnesium, Total       | mg/L  | -0.00929   | 0.0462   | 5.00  | 5.00    | 5.00    | 5.01     | 4.25 to 5.75       | 100  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Chromium, Total        | mg/L  | 0.0000775  | 0.000440 | 0.100 | 0.0977  | 0.101   | 0.0999   | 0.0850 to 0.115    | 97.7 | 70.0 to 130 | 3.32  | 20.0  |
| BB12491 | Thallium, Total        | mg/L  | -0.000124  | 0.000147 | 0.100 | 0.115   | 0.115   | 0.112    | 0.0850 to 0.115    | 115  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Arsenic, Total         | mg/L  | 0.0000344  | 0.000147 | 0.100 | 0.107   | 0.104   | 0.105    | 0.0850 to 0.115    | 107  | 70.0 to 130 | 2.84  | 20.0  |
| BB12491 | Antimony, Total        | mg/L  | 0.000134   | 0.00100  | 0.100 | 0.0966  | 0.0989  | 0.0960   | 0.0850 to 0.115    | 96.6 | 70.0 to 130 | 2.35  | 20.0  |

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGORPUEB

**Sample Date:** 7/12/21 15:00

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient Equipment Blank-1

**Laboratory ID Number:** BB12490

| Sample  | Analysis          | Units | MB      | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec | Rec<br>Limit | Prec  | Prec<br>Limit |
|---------|-------------------|-------|---------|-------------|-------|------|---------------------|----------|-------------------|-----|--------------|-------|---------------|
| BB12491 | Fluoride          | mg/L  | 0.0195  | 0.100       | 2.50  | 2.58 | 0.0245              | 2.55     | 2.25 to 2.75      | 103 | 80.0 to 120  | 0.00  | 20.0          |
| BB12489 | Solids, Dissolved | mg/L  | -4.00   | 25.0        |       |      | 3040                | 47.0     | 40.0 to 60.0      |     |              | 0.662 | 5.00          |
| BB12491 | Sulfate           | mg/L  | -0.557  | 1.00        | 20.0  | 20.0 | -0.380              | 19.4     | 18.0 to 22.0      | 100 | 80.0 to 120  | 0.00  | 20.0          |
| BB12491 | Chloride          | mg/L  | -0.0691 | 1.00        | 10.0  | 11.3 | 0.232               | 10.0     | 9.00 to 11.0      | 113 | 80.0 to 120  | 0.00  | 20.0          |

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**Comments:**

# Certificate Of Analysis

**Description:** Gorgas Pooled Upgradient Field Blank-1

**Location Code:** WMWGORPUFB  
**Collected:** 7/12/21 15:10  
**Customer ID:**  
**Submittal Date:** 7/13/21 09:15

**Laboratory ID Number:** BB12491

| Name                                       | Prepared      | Analyzed      | Vio Spec            | DF    | Results                             | Units | MDL      | RL         | Q |
|--|---------------|---------------|---------------------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b>        |               |               | <b>Analyst: ABB</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                             | 7/21/21 12:22 | 7/22/21 16:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                           | 7/21/21 12:22 | 7/22/21 16:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.070035 | 0.406      | U |
| * Iron, Total                              | 7/21/21 12:22 | 7/22/21 16:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| * Lithium, Total                           | 7/21/21 12:22 | 7/22/21 16:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.007105 | 0.01999956 | U |
| * Magnesium, Total                         | 7/21/21 12:22 | 7/22/21 16:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.021315 | 0.406      | U |
| * Sodium, Total                            | 7/21/21 12:22 | 7/22/21 16:36 |                     | 1.015 | Not Detected                        | mg/L  | 0.03045  | 0.406      | U |
| <b>Analytical Method: EPA 200.8</b>        |               |               | <b>Analyst: DLJ</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                          | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                           | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Barium, Total                            | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000102 | 0.000203   | U |
| * Beryllium, Total                         | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                           | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                          | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                            | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                              | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                        | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Manganese, Total                         | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Potassium, Total                         | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.169505 | 0.5075     | U |
| * Selenium, Total                          | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                          | 7/15/21 15:15 | 7/16/21 15:40 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 245.1</b>        |               |               | <b>Analyst: CRB</b> |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA                   | 7/14/21 10:02 | 7/14/21 13:57 |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2540C</b>         |               |               | <b>Analyst: CNJ</b> |       |                                     |       |          |            |   |
| * Solids, Dissolved                        | 7/14/21 12:18 | 7/15/21 13:41 |                     | 1     | Not Detected                        | mg/L  |          | 25         | U |
| <b>Analytical Method: SM4500CI E</b>       |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Chloride                                 | 7/14/21 12:04 | 7/14/21 12:04 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |
| <b>Analytical Method: SM4500F G 2017</b>   |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Fluoride                                 | 7/15/21 10:24 | 7/15/21 10:24 |                     | 1     | Not Detected                        | mg/L  | 0.06     | 0.1        | U |
| <b>Analytical Method: SM4500SO4 E 2011</b> |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Sulfate                                  | 7/14/21 10:41 | 7/14/21 10:41 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORPUFB

**Sample Date:** 7/12/21 15:10

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient Field Blank-1

**Laboratory ID Number:** BB12491

| Sample  | Analysis               | Units | MB         | MB       |       |         |         | Standard |                    | Rec  |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|------|-------------|-------|-------|
|         |                        |       |            | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec  | Limit       |       |       |
| BB12491 | Molybdenum, Total      | mg/L  | 0.0000261  | 0.000147 | 0.100 | 0.0984  | 0.103   | 0.100    | 0.0850 to 0.115    | 98.4 | 70.0 to 130 | 4.57  | 20.0  |
| BB12491 | Mercury, Total by CVAA | mg/L  | 5.390E-05  | 0.000500 | 0.004 | 0.00402 | 0.00398 | 0.00396  | 0.00340 to 0.00460 | 100  | 70.0 to 130 | 1.00  | 20.0  |
| BB12491 | Lithium, Total         | mg/L  | -8.650E-05 | 0.0154   | 0.200 | 0.197   | 0.195   | 0.199    | 0.170 to 0.230     | 98.5 | 70.0 to 130 | 1.02  | 20.0  |
| BB12491 | Lead, Total            | mg/L  | 0.0000018  | 0.000147 | 0.100 | 0.113   | 0.113   | 0.107    | 0.0850 to 0.115    | 113  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Cobalt, Total          | mg/L  | -0.0000691 | 0.000147 | 0.100 | 0.0949  | 0.0984  | 0.0969   | 0.0850 to 0.115    | 94.9 | 70.0 to 130 | 3.62  | 20.0  |
| BB12491 | Manganese, Total       | mg/L  | -0.000003  | 0.000147 | 0.100 | 0.101   | 0.104   | 0.103    | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Boron, Total           | mg/L  | 0.000567   | 0.0650   | 1.00  | 0.980   | 0.977   | 0.995    | 0.850 to 1.15      | 98.0 | 70.0 to 130 | 0.307 | 20.0  |
| BB12491 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0930  | 0.0983  | 0.0943   | 0.0850 to 0.115    | 93.0 | 70.0 to 130 | 5.54  | 20.0  |
| BB12491 | Beryllium, Total       | mg/L  | 0.0000533  | 0.000880 | 0.100 | 0.103   | 0.102   | 0.101    | 0.0850 to 0.115    | 103  | 70.0 to 130 | 0.976 | 20.0  |
| BB12491 | Sodium, Total          | mg/L  | 0.00119    | 0.0660   | 5.00  | 4.95    | 4.92    | 4.98     | 4.25 to 5.75       | 99.0 | 70.0 to 130 | 0.608 | 20.0  |
| BB12491 | Iron, Total            | mg/L  | 2.630E-05  | 0.0176   | 0.2   | 0.199   | 0.198   | 0.201    | 0.170 to 0.230     | 99.5 | 70.0 to 130 | 0.504 | 20.0  |
| BB12491 | Potassium, Total       | mg/L  | 0.00426    | 0.367    | 10.0  | 9.90    | 10.2    | 10.2     | 8.50 to 11.5       | 99.0 | 70.0 to 130 | 2.99  | 20.0  |
| BB12491 | Selenium, Total        | mg/L  | -0.0000651 | 0.00100  | 0.100 | 0.102   | 0.105   | 0.104    | 0.0850 to 0.115    | 102  | 70.0 to 130 | 2.90  | 20.0  |
| BB12491 | Barium, Total          | mg/L  | -0.0000459 | 0.000200 | 0.100 | 0.101   | 0.104   | 0.0999   | 0.0850 to 0.115    | 101  | 70.0 to 130 | 2.93  | 20.0  |
| BB12491 | Calcium, Total         | mg/L  | 0.00896    | 0.152    | 5.00  | 5.03    | 5.02    | 5.05     | 4.25 to 5.75       | 101  | 70.0 to 130 | 0.199 | 20.0  |
| BB12491 | Magnesium, Total       | mg/L  | -0.00929   | 0.0462   | 5.00  | 5.00    | 5.00    | 5.01     | 4.25 to 5.75       | 100  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Chromium, Total        | mg/L  | 0.0000775  | 0.000440 | 0.100 | 0.0977  | 0.101   | 0.0999   | 0.0850 to 0.115    | 97.7 | 70.0 to 130 | 3.32  | 20.0  |
| BB12491 | Thallium, Total        | mg/L  | -0.000124  | 0.000147 | 0.100 | 0.115   | 0.115   | 0.112    | 0.0850 to 0.115    | 115  | 70.0 to 130 | 0.00  | 20.0  |
| BB12491 | Arsenic, Total         | mg/L  | 0.0000344  | 0.000147 | 0.100 | 0.107   | 0.104   | 0.105    | 0.0850 to 0.115    | 107  | 70.0 to 130 | 2.84  | 20.0  |
| BB12491 | Antimony, Total        | mg/L  | 0.000134   | 0.00100  | 0.100 | 0.0966  | 0.0989  | 0.0960   | 0.0850 to 0.115    | 96.6 | 70.0 to 130 | 2.35  | 20.0  |

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGORPUFB

**Sample Date:** 7/12/21 15:10

**Customer ID:**

**Delivery Date:** 7/13/21 09:15

**Description:** Gorgas Pooled Upgradient Field Blank-1

**Laboratory ID Number:** BB12491

| Sample  | Analysis          | Units | MB      | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec | Limit       | Prec  | Limit |
|---------|-------------------|-------|---------|-------------|-------|------|---------------------|----------|-------------------|-----|-------------|-------|-------|
| BB12489 | Solids, Dissolved | mg/L  | -4.00   | 25.0        |       |      | 3040                | 47.0     | 40.0 to 60.0      |     |             | 0.662 | 5.00  |
| BB12491 | Sulfate           | mg/L  | -0.557  | 1.00        | 20.0  | 20.0 | -0.380              | 19.4     | 18.0 to 22.0      | 100 | 80.0 to 120 | 0.00  | 20.0  |
| BB12491 | Chloride          | mg/L  | -0.0691 | 1.00        | 10.0  | 11.3 | 0.232               | 10.0     | 9.00 to 11.0      | 113 | 80.0 to 120 | 0.00  | 20.0  |
| BB12491 | Fluoride          | mg/L  | 0.0195  | 0.100       | 2.50  | 2.58 | 0.0245              | 2.55     | 2.25 to 2.75      | 103 | 80.0 to 120 | 0.00  | 20.0  |

---

**Comments:**

# 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. Refer to APC Field Case Narrative. |
| J         | Reported value is an estimate because concentration is less than reporting limit.        |
| U         | Compound was analyzed, but not detected.   |



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

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

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

Comments

| Sample # | Date       | Time  | Bottle Count | Description      | Lab Filter | Lab Id  |
|----------|------------|-------|--------------|------------------|------------|---------|
| MW-1     | 07/12/2021 | 10:45 | 6            | Groundwater      |            | BB12485 |
| MW-1 Dup | 07/12/2021 | 10:45 | 6            | Sample Duplicate |            | BB12486 |
| MW-2     | 07/12/2021 | 11:48 | 6            | Groundwater      |            | BB12487 |
| MW-3     | 07/12/2021 | 12:53 | 6            | Groundwater      |            | BB12488 |
| MW-4     | 07/12/2021 | 14:35 | 6            | Groundwater      |            | BB12489 |
| EB-1     | 07/12/2021 | 15:00 | 4            | Equipment Blank  |            | BB12490 |
| FB-1     | 07/12/2021 | 15:10 | 4            | Field Blank      |            | BB12491 |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |

|                 |                      |                  |
|-----------------|----------------------|------------------|
| Relinquished By | Received By          | Date/Time        |
| <i>HAB</i>      | <i>Laura M. Dyer</i> | 07/13/2021 08:33 |
|                 |                      |                  |
|                 |                      |                  |

|              |                |
|--------------|----------------|
| SmarTroll ID | 7586-41443-5-2 |
| Turbidity ID | 3901-20009-2-1 |
| Sample Event | 1328           |

All metals and radiological bottles have pH < 2

|                |                 |
|----------------|-----------------|
| Cooler Temp    | 0.2 degrees C   |
| Thermometer ID | 5408-27568-2-2  |
| pH Strip ID    | 8206-45805-10-9 |



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

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

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

Comments Rad MS/MSD collected @ MW-2

| Sample # | Date       | Time  | Bottle Count | Description      | Lab Filter | Lab Id  |
|----------|------------|-------|--------------|------------------|------------|---------|
| MW-1     | 07/12/2021 | 10:45 | 1            | Groundwater      |            | BB12492 |
| MW-1 Dup | 07/12/2021 | 10:45 | 1            | Sample Duplicate |            | BB12493 |
| MW-2     | 07/12/2021 | 11:48 | 3            | Groundwater      |            | BB12494 |
| MW-3     | 07/12/2021 | 12:53 | 1            | Groundwater      |            | BB12495 |
| MW-4     | 07/12/2021 | 14:35 | 1            | Groundwater      |            | BB12496 |
| EB-1     | 07/12/2021 | 15:00 | 1            | Equipment Blank  |            | BB12497 |
| FB-1     | 07/12/2021 | 15:10 | 1            | Field Blank      |            | BB12498 |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |

|                 |             |                  |
|-----------------|-------------|------------------|
| Relinquished By | Received By | Date/Time        |
|                 |             | 07/13/2021 08:33 |
|                 |             |                  |
|                 |             |                  |

|              |                |
|--------------|----------------|
| SmarTroll ID | 7586-41443-5-2 |
| Turbidity ID | 3901-20009-2-1 |
| Sample Event | 1328           |

All metals and radiological bottles have pH < 2

|                |                 |
|----------------|-----------------|
| Cooler Temp    | N/A             |
| Thermometer ID | N/A             |
| pH Strip ID    | 8206-45805-10-9 |

Bottles/Pre-Preserved Bottles are provided by the GTL



August 19, 2021

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

RE: Project: GORGAS POOLED WMWGORPU\_1328  
Pace Project No.: 92549918

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on July 15, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: GORGAS POOLED WMWGORPU\_1328  
Pace Project No.: 92549918

---

### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Florida: Cert E871149 SEKS WET  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

| Lab ID      | Sample ID        | Matrix | Date Collected | Date Received  |
|-------------|------------------|--------|----------------|----------------|
| 92549918001 | BB12492 MW-1     | Water  | 07/12/21 10:45 | 07/15/21 09:20 |
| 92549918002 | BB12493 MW-1 DUP | Water  | 07/12/21 10:45 | 07/15/21 09:20 |
| 92549918003 | BB12494 MW-2     | Water  | 07/12/21 11:48 | 07/15/21 09:20 |
| 92549918004 | BB12494 MW-2 MS  | Water  | 07/12/21 11:48 | 07/15/21 09:20 |
| 92549918005 | BB12494 MW-2 MSD | Water  | 07/12/21 11:48 | 07/15/21 09:20 |
| 92549918006 | BB12495 MW-3     | Water  | 07/12/21 12:53 | 07/15/21 09:20 |
| 92549918007 | BB12496 MW-4     | Water  | 07/12/21 14:35 | 07/15/21 09:20 |
| 92549918008 | BB12497 EB-1     | Water  | 07/12/21 15:00 | 07/15/21 09:20 |
| 92549918009 | BB12498 FB-1     | Water  | 07/12/21 15:10 | 07/15/21 09:20 |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GORGAS POOLED WMWGORPU\_1328  
Pace Project No.: 92549918

| Lab ID      | Sample ID        | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|------------------|--------------------------|----------|-------------------|------------|
| 92549918001 | BB12492 MW-1     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |                  | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                  | Total Radium Calculation | RMK      | 1                 | PASI-PA    |
| 92549918002 | BB12493 MW-1 DUP | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |                  | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                  | Total Radium Calculation | RMK      | 1                 | PASI-PA    |
| 92549918003 | BB12494 MW-2     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |                  | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                  | Total Radium Calculation | RMK      | 1                 | PASI-PA    |
| 92549918004 | BB12494 MW-2 MS  | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |                  | EPA 9320                 | JC2      | 1                 | PASI-PA    |
| 92549918005 | BB12494 MW-2 MSD | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |                  | EPA 9320                 | JC2      | 1                 | PASI-PA    |
| 92549918006 | BB12495 MW-3     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |                  | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                  | Total Radium Calculation | RMK      | 1                 | PASI-PA    |
| 92549918007 | BB12496 MW-4     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |                  | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                  | Total Radium Calculation | RMK      | 1                 | PASI-PA    |
| 92549918008 | BB12497 EB-1     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |                  | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                  | Total Radium Calculation | RMK      | 1                 | PASI-PA    |
| 92549918009 | BB12498 FB-1     | EPA 9315                 | LAL      | 1                 | PASI-PA    |
|             |                  | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                  | Total Radium Calculation | RMK      | 1                 | PASI-PA    |

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

---

**Method:** EPA 9315

**Description:** 9315 Total Radium

**Client:** Alabama Power

**Date:** August 19, 2021

**General Information:**

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

**Hold Time:**

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

**Method Blank:**

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

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

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

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

---

**Method:** EPA 9320

**Description:** 9320 Radium 228

**Client:** Alabama Power

**Date:** August 19, 2021

**General Information:**

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

**Hold Time:**

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

**Method Blank:**

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

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

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

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

---

**Method:** Total Radium Calculation

**Description:** Total Radium 228+226

**Client:** Alabama Power

**Date:** August 19, 2021

**General Information:**

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

**Hold Time:**

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

**Method Blank:**

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

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

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

**Additional Comments:**

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

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

**Sample: BB12492 MW-1**      **Lab ID: 92549918001**      Collected: 07/12/21 10:45      Received: 07/15/21 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.112U ± 0.166 (0.354)</b><br><b>C:89% T:NA</b>  | pCi/L | 08/13/21 08:32 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.364U ± 0.366 (0.751)</b><br><b>C:66% T:83%</b> | pCi/L | 08/03/21 14:37 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.476U ± 0.532 (1.11)</b>                        | pCi/L | 08/16/21 16:15 | 7440-14-4  |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

**Sample: BB12493 MW-1 DUP**      **Lab ID: 92549918002**      Collected: 07/12/21 10:45      Received: 07/15/21 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                            | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>-0.0928U ± 0.150 (0.490)</b><br><b>C:90% T:NA</b> | pCi/L | 08/13/21 08:32 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.767 ± 0.411 (0.721)</b><br><b>C:68% T:85%</b>   | pCi/L | 08/03/21 14:37 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.767U ± 0.561 (1.21)</b>                         | pCi/L | 08/16/21 16:15 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

**Sample: BB12494 MW-2**      **Lab ID: 92549918003**      Collected: 07/12/21 11:48      Received: 07/15/21 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                              | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.155U ± 0.210 (0.445)</b><br><b>C:85% T:NA</b>     | pCi/L | 08/13/21 08:32 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>-0.00397U ± 0.356 (0.828)</b><br><b>C:72% T:82%</b> | pCi/L | 08/03/21 14:38 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.155U ± 0.566 (1.27)</b>                           | pCi/L | 08/16/21 16:15 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

**Sample: BB12494 MW-2 MS**      **Lab ID: 92549918004**      Collected: 07/12/21 11:48      Received: 07/15/21 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters | Method                                | Act ± Unc (MDC) Carr Trac                        | Units | Analyzed       | CAS No.    | Qual |
|------------|---------------------------------------|--|-------|----------------|------------|------|
|            | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226 | EPA 9315                              | <b>85.72 %REC ± NA (NA)</b><br><b>C:NA T:NA</b>  | pCi/L | 08/13/21 08:32 | 13982-63-3 |      |
|            | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228 | EPA 9320                              | <b>104.17 %REC ± NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 08/03/21 14:38 | 15262-20-1 |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

**Sample: BB12494 MW-2 MSD**      **Lab ID: 92549918005**      Collected: 07/12/21 11:48      Received: 07/15/21 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method   | Act ± Unc (MDC) Carr Trac   | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|----------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |          |   |       |                |            |      |
| Radium-226                            | EPA 9315 | <b>87.19 %REC 1.70 RPD ±</b><br><b>NA (NA)</b><br><b>C:NA T:NA</b>  | pCi/L | 08/13/21 08:32 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |          |   |       |                |            |      |
| Radium-228                            | EPA 9320 | <b>108.02 %REC 3.63 RPD ±</b><br><b>NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 08/03/21 14:38 | 15262-20-1 |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

**Sample: BB12495 MW-3**      **Lab ID: 92549918006**      Collected: 07/12/21 12:53      Received: 07/15/21 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                              | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>-0.000304U ± 0.176 (0.482)</b><br><b>C:89% T:NA</b> | pCi/L | 08/13/21 08:32 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.114U ± 0.333 (0.750)</b><br><b>C:65% T:84%</b>    | pCi/L | 08/03/21 14:38 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.114U ± 0.509 (1.23)</b>                           | pCi/L | 08/16/21 16:15 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

**Sample: BB12496 MW-4**      **Lab ID: 92549918007**      Collected: 07/12/21 14:35      Received: 07/15/21 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.107U ± 0.176 (0.390)</b><br><b>C:95% T:NA</b>  | pCi/L | 08/13/21 08:32 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.194U ± 0.358 (0.784)</b><br><b>C:72% T:84%</b> | pCi/L | 08/03/21 14:38 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.301U ± 0.534 (1.17)</b>                        | pCi/L | 08/16/21 16:15 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

**Sample: BB12497 EB-1**      **Lab ID: 92549918008**      Collected: 07/12/21 15:00      Received: 07/15/21 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0598U ± 0.171 (0.423)</b><br><b>C:83% T:NA</b> | pCi/L | 08/13/21 08:32 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.269U ± 0.375 (0.805)</b><br><b>C:69% T:86%</b> | pCi/L | 08/03/21 14:38 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.329U ± 0.546 (1.23)</b>                        | pCi/L | 08/16/21 16:15 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

**Sample: BB12498 FB-1**      **Lab ID: 92549918009**      Collected: 07/12/21 15:10      Received: 07/15/21 09:20      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                            | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>-0.0401U ± 0.143 (0.443)</b><br><b>C:85% T:NA</b> | pCi/L | 08/13/21 08:32 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.101U ± 0.314 (0.709)</b><br><b>C:67% T:88%</b>  | pCi/L | 08/03/21 14:38 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.101U ± 0.457 (1.15)</b>                         | pCi/L | 08/16/21 16:15 | 7440-14-4  |      |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328  
Pace Project No.: 92549918

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|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 457856   | Analysis Method:      | EPA 9320                              |
| QC Batch Method: | EPA 9320 | Analysis Description: | 9320 Radium 228                       |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92549918001, 92549918002, 92549918003, 92549918004, 92549918005, 92549918006, 92549918007, 92549918008, 92549918009

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METHOD BLANK: 2210350 Matrix: Water

Associated Lab Samples: 92549918001, 92549918002, 92549918003, 92549918004, 92549918005, 92549918006, 92549918007, 92549918008, 92549918009

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.186 ± 0.369 (0.813) C:71% T:80% | pCi/L | 08/03/21 14:39 |            |

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

QC Batch: 457316

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92549918001, 92549918002, 92549918003, 92549918004, 92549918005, 92549918006, 92549918007, 92549918008, 92549918009

METHOD BLANK: 2207826

Matrix: Water

Associated Lab Samples: 92549918001, 92549918002, 92549918003, 92549918004, 92549918005, 92549918006, 92549918007, 92549918008, 92549918009

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | 0.0608 ± 0.218 (0.537) C:89% T:NA | pCi/L | 08/13/21 08:32 |            |

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

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## QUALIFIERS

Project: GORGAS POOLED WMWGORPU\_1328

Pace Project No.: 92549918

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS POOLED WMWGORPU\_1328  
Pace Project No.: 92549918

| Lab ID      | Sample ID        | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------------|--------------------------|----------|-------------------|------------------|
| 92549918001 | BB12492 MW-1     | EPA 9315                 | 457316   |                   |                  |
| 92549918002 | BB12493 MW-1 DUP | EPA 9315                 | 457316   |                   |                  |
| 92549918003 | BB12494 MW-2     | EPA 9315                 | 457316   |                   |                  |
| 92549918004 | BB12494 MW-2 MS  | EPA 9315                 | 457316   |                   |                  |
| 92549918005 | BB12494 MW-2 MSD | EPA 9315                 | 457316   |                   |                  |
| 92549918006 | BB12495 MW-3     | EPA 9315                 | 457316   |                   |                  |
| 92549918007 | BB12496 MW-4     | EPA 9315                 | 457316   |                   |                  |
| 92549918008 | BB12497 EB-1     | EPA 9315                 | 457316   |                   |                  |
| 92549918009 | BB12498 FB-1     | EPA 9315                 | 457316   |                   |                  |
| 92549918001 | BB12492 MW-1     | EPA 9320                 | 457856   |                   |                  |
| 92549918002 | BB12493 MW-1 DUP | EPA 9320                 | 457856   |                   |                  |
| 92549918003 | BB12494 MW-2     | EPA 9320                 | 457856   |                   |                  |
| 92549918004 | BB12494 MW-2 MS  | EPA 9320                 | 457856   |                   |                  |
| 92549918005 | BB12494 MW-2 MSD | EPA 9320                 | 457856   |                   |                  |
| 92549918006 | BB12495 MW-3     | EPA 9320                 | 457856   |                   |                  |
| 92549918007 | BB12496 MW-4     | EPA 9320                 | 457856   |                   |                  |
| 92549918008 | BB12497 EB-1     | EPA 9320                 | 457856   |                   |                  |
| 92549918009 | BB12498 FB-1     | EPA 9320                 | 457856   |                   |                  |
| 92549918001 | BB12492 MW-1     | Total Radium Calculation | 460439   |                   |                  |
| 92549918002 | BB12493 MW-1 DUP | Total Radium Calculation | 460439   |                   |                  |
| 92549918003 | BB12494 MW-2     | Total Radium Calculation | 460439   |                   |                  |
| 92549918006 | BB12495 MW-3     | Total Radium Calculation | 460439   |                   |                  |
| 92549918007 | BB12496 MW-4     | Total Radium Calculation | 460439   |                   |                  |
| 92549918008 | BB12497 EB-1     | Total Radium Calculation | 460439   |                   |                  |
| 92549918009 | BB12498 FB-1     | Total Radium Calculation | 460439   |                   |                  |

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WO#: 92549918



92549918

LIMS Login



Client Name: Alabama Power

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 5140 3411 5909

Custody Seal on Cooler/Box Present:  yes  no    Seals Intact:  yes  no

Thermometer Used \_\_\_\_\_ Type of Ice: Wet Blue None

Cooler Temperature \_\_\_\_\_ Observed Temp \_\_\_\_\_ °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

| Comments:   | pH paper Lot#                       |                                     |                                     | Date and Initials of person examining contents: <u>RM 7-15-21</u> |
|---|-------------------------------------|-------------------------------------|-------------------------------------|---|
|   | Yes                                 | No                                  | N/A                                 |   |
| Chain of Custody Present:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 1.  |
| Chain of Custody Filled Out:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 2.  |
| Chain of Custody Relinquished:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 3.  |
| Sampler Name & Signature on COC:  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 4.  |
| Sample Labels match COC:<br>-Includes date/time/ID      Matrix: <u>WT</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 5.  |
| Samples Arrived within Hold Time:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 6.  |
| Short Hold Time Analysis (<72hr remaining):                               | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 7.  |
| Rush Turn Around Time Requested:  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 8.  |
| Sufficient Volume:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 9.  |
| Correct Containers Used:<br>-Pace Containers Used:                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 10.   |
| Containers Intact:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 11.   |
| Orthophosphate field filtered   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 12.   |
| Hex Cr Aqueous sample field filtered                                      | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 13.   |
| Organic Samples checked for dechlorination:                               | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 14.   |
| Filtered volume received for Dissolved tests                              | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 15.   |
| All containers have been checked for preservation.                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 16.   |
| exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix |                                     |                                     |                                     | <u>PHC2</u>   |
| All containers meet method preservation requirements.                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | Initial when completed: <u>RM</u> Date/time of preservallon       |
|   |                                     |                                     |                                     | Lot # of added preservative                                       |
| Headspace in VOA Vials (>6mm):  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 17.   |
| Trip Blank Present:   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 18.   |
| Trip Blank Custody Seals Present  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |   |
| Rad Samples Screened < 0.5 mrem/hr  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | Initial when completed: <u>RM</u> Date:      Survey Meter SN:     |

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: Rec'd MS/MSD for MW-2

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

|  |  |   |  |  |   |
|--|--|---|--|--|---|
| <b>Section A</b><br>Required Client Information: | Company: Alabama Power Company<br>Address: 744 Highway 87 GSC Bldg #8<br>Calaera, AL 35040<br>Email To: lbmidkitt@southernco.com<br>Phone: 205-664-6197<br>Requested Due Date: 28 days | <b>Section B</b><br>Required Project Information: | Report To: Laura Mickitt<br>Copy To: Brooke Caton & Renee Jernigan<br>Purchase Order #: APC10700688<br>Project Name: Plant Gorgas Pooled Upgradient<br>Project Number: WNWGORPU 1328 | <b>Section C</b><br>Invoice Information: | Attention: Laura Mickitt<br>Company Name: Alabama Power Co.<br>Address: 744 Highway 87 GSC Bldg #8<br>Face Quote:<br>CCR<br>Face Project Manager: Kevin Herring@pacelabs.com<br>Face Profile #: 13805 |
|--|--|---|--|--|---|

|                       |  |  |                      |  |  |
|-----------------------|--|--|----------------------|--|--|
| Regulatory Agency: AL |  |  | State / Location: AL |  |  |
|-----------------------|--|--|----------------------|--|--|

| ITEM # | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |       | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives  | Analyses Test   | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) |
|--------|---------------------------------------|-----------------------------|-----------|-------|---------------------------|-----------------|--|---|-----------------------------------|-------------------------|
|        |                                       |                             | DATE      | TIME  |                           |                 |  |   |                                   |                         |
| 1      | BB12492                               | MW-1                        | 7/12/2021 | 10:45 | 1                         | X               | H2SO4<br>HNO3<br>HCl<br>NaOH<br>Na2S2O3<br>Methanol<br>Other | EPA 9315<br>EPA 9320<br>Total Radium Sum<br>Matrix Spike/Matrix Spike D |                                   |                         |
| 2      | BB12493                               | MW-1 DUP                    | 7/12/2021 | 10:45 | 1                         | X               |  |   |                                   |                         |
| 3      | BB12494                               | MW-2                        | 7/12/2021 | 11:48 | 3                         | X               |  |   |                                   |                         |
| 4      | BB12495                               | MW-3                        | 7/12/2021 | 12:53 | 1                         | X               |  |   |                                   |                         |
| 5      | BB12496                               | MW-4                        | 7/12/2021 | 14:35 | 1                         | X               |  |   |                                   |                         |
| 6      | BB12497                               | EB-1                        | 7/12/2021 | 15:00 | 1                         | X               |  |   |                                   |                         |
| 7      | BB12498                               | FB-1                        | 7/12/2021 | 15:10 | 1                         | X               |  |   |                                   |                         |
| 8      |                                       |                             |           |       |                           |                 |  |   |                                   |                         |
| 9      |                                       |                             |           |       |                           |                 |  |   |                                   |                         |
| 10     |                                       |                             |           |       |                           |                 |  |   |                                   |                         |
| 11     |                                       |                             |           |       |                           |                 |  |   |                                   |                         |
| 12     |                                       |                             |           |       |                           |                 |  |   |                                   |                         |

**ADDITIONAL COMMENTS:** Relinquished by Affiliation

Relinquished By / Affiliation: Laura Mickitt/ APC GTL DATE: 7/13/2021 TIME: 10:15

**ACCEPTED BY / AFFILIATION:** *KEM*

Accepted By / Affiliation: DATE: 7-15-21 TIME: 09:20

**TEMP In C:** N/A

**SAMPLE CONDITIONS:**  
 Received on Ice (Y/N): N  
 Custody Sealed Cooler (Y/N): N  
 Samples Intact (Y/N): Y

**SAMPLER NAME AND SIGNATURE:**  
 PRINT Name of SAMPLER:  
 SIGNATURE of SAMPLER:  
 DATE Signed:

**MO#: 92549918**

PM: KLH1      Due Date: 08/13/21  
 CLIENT: 92-RL Power

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: JC2  
Date: 7/30/2021  
Worklist: 61831  
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2210350 |
| MB concentration:                   | 0.186   |
| MB 2 Sigma CSU:                     | 0.369   |
| MB MDC:                             | 0.813   |
| MB Numerical Performance Indicator: | 0.99    |
| MB Status vs Numerical Indicator:   | Pass    |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |           |
|---|----------------|-----------|
|   | LCSD61831      | LCSD61831 |
| Count Date:                                   | 8/3/2021       |           |
| Spike I.D.:                                   | 21-003         |           |
| Decay Corrected Spike Concentration (pCi/mL): | 36.708         |           |
| Volume Used (mL):                             | 0.10           |           |
| Aliquot Volume (L, g, F):                     | 0.810          |           |
| Target Conc. (pCi/L, g, F):                   | 4.534          |           |
| Uncertainty (Calculated):                     | 0.222          |           |
| LCSD 2 Sigma CSU (pCi/L, g, F):               | 4.013          |           |
| Numerical Performance Indicator:              | 0.972          |           |
| Percent Recovery:                             | -1.03          |           |
| Status vs Numerical Indicator:                | 88.50%         |           |
| Upper % Recovery Limits:                      | N/A            |           |
| Lower % Recovery Limits:                      | Pass           |           |
|   | 135%           |           |
|   | 60%            |           |

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

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

Comments:

| Sample Matrix Spike Control Assessment                          | MS/MSD 1    | MS/MSD 2    |
|---|-------------|-------------|
| Sample Collection Date:   | 7/14/2021   | 7/12/2021   |
| Sample I.D.:  | 92550955021 | 92549918003 |
| Sample MS I.D.:   | 92550955022 | 92549918004 |
| Sample MSD I.D.:  | 92550955023 | 92549918005 |
| Spike I.D.:   | 21-003      | 21-003      |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):            | 36.952      | 36.952      |
| Spike Volume Used in MS (mL):                                   | 0.20        | 0.20        |
| Spike Volume Used in MSD (mL):                                  | 0.20        | 0.20        |
| MS Aliquot (L, g, F):   | 0.806       | 0.812       |
| MS Target Conc. (pCi/L, g, F):                                  | 9.165       | 9.099       |
| MSD Aliquot (L, g, F):  | 0.810       | 0.809       |
| MSD Target Conc. (pCi/L, g, F):                                 | 9.123       | 9.137       |
| MS Spike Uncertainty (calculated):                              | 0.449       | 0.446       |
| MSD Spike Uncertainty (calculated):                             | 0.447       | 0.448       |
| Sample Result:  | -0.002      | -0.004      |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                        | 0.326       | 0.356       |
| Sample Matrix Spike Result:                                     | 9.623       | 9.474       |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):                  | 1.948       | 1.878       |
| Sample Matrix Spike Duplicate Result:                           | 10.171      | 9.866       |
| Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 2.026       | 1.960       |
| MS Numerical Performance Indicator:                             | 0.446       | 0.379       |
| MSD Numerical Performance Indicator:                            | 0.980       | 0.703       |
| MS Percent Recovery:  | 105.02%     | 104.17%     |
| MSD Percent Recovery:   | 111.51%     | 108.02%     |
| MS Status vs Numerical Indicator:                               | Pass        | Pass        |
| MSD Status vs Numerical Indicator:                              | Pass        | Pass        |
| MS Status vs Recovery:  | Pass        | Pass        |
| MSD Status vs Recovery:   | Pass        | Pass        |
| MS/MSD Upper % Recovery Limits:                                 | 135%        | 135%        |
| MS/MSD Lower % Recovery Limits:                                 | 60%         | 60%         |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment           | MS/MSD 1    | MS/MSD 2    |
|---|-------------|-------------|
| Sample I.D.:  | 92550955021 | 92549918003 |
| Sample MS I.D.:   | 92550955022 | 92549918004 |
| Sample MSD I.D.:  | 92550955023 | 92549918005 |
| Spike I.D.:   | 21-003      | 21-003      |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):                  | 9.623       | 9.474       |
| Sample Matrix Spike Duplicate Result:                           | 1.948       | 1.878       |
| Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 10.171      | 9.866       |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):        | 2.026       | 1.960       |
| Duplicate Numerical Performance Indicator:                      | -0.382      | -0.283      |
| Duplicate Status vs Numerical Indicator:                        | 5.99%       | 3.63%       |
| MS/MSD Duplicate Status vs Numerical Indicator:                 | Pass        | Pass        |
| MS/MSD Duplicate Status vs RPD:                                 | Pass        | Pass        |
| % RPD Limit:  | 36%         | 36%         |

MS/MSD

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 7/23/2021  
Worklist: 61766  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2207826 |
| MB concentration:                   | 0.061   |
| M/B Counting Uncertainty:           | 0.218   |
| MB MDC:                             | 0.537   |
| MB Numerical Performance Indicator: | 0.55    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          | LCSD (Y or N)? |           |
|---|----------------|-----------|
|   | LCS61766       | N         |
| Count Date:                                   | 8/13/2021      | LCS061766 |
| Spike I.D.:                                   | 19-033         |           |
| Decay Corrected Spike Concentration (pCi/mL): | 24.035         |           |
| Volume Used (mL):                             | 0.10           |           |
| Aliquot Volume (L, g, F):                     | 0.200          |           |
| Target Conc. (pCi/L, g, F):                   | 12.013         |           |
| Uncertainty (Calculated):                     | 0.144          |           |
| Result (pCi/L, g, F):                         | 13.562         |           |
| LCSD Counting Uncertainty (pCi/L, g, F):      | 1.284          |           |
| Numerical Performance Indicator:              | 2.35           |           |
| Percent Recovery:                             | 112.89%        |           |
| Status vs Numerical Indicator:                | N/A            |           |
| Status vs Recovery:                           | Pass           |           |
| Upper % Recovery Limits:                      | 125%           |           |
| Lower % Recovery Limits:                      | 75%            |           |

| Duplicate Sample Assessment                          | See Below ## |
|--|--------------|
| Sample I.D.:   |              |
| Duplicate Sample I.D.:                               |              |
| Sample Result (pCi/L, g, F):                         |              |
| Sample Duplicate Result (pCi/L, g, F):               |              |
| Sample Duplicate Counting Uncertainty (pCi/L, g, F): |              |
| Are sample and/or duplicate results below RL?        |              |
| Duplicate Numerical Performance Indicator:           |              |
| Duplicate RPD:                                       |              |
| Duplicate Status vs Numerical Indicator:             |              |
| Duplicate Status vs RPD:                             |              |
| % RPD Limit:   |              |

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

Comments:

*Handwritten signature/initials*

| Sample Matrix Spike Control Assessment                            | MS/MSD 1    | MS/MSD 2 |
|---|-------------|----------|
| Sample Collection Date:   |             |          |
| Sample I.D.:  | 92549918003 |          |
| Sample MS I.D.:   | 92549918004 |          |
| Sample MSD I.D.:  | 92549918005 |          |
| Spike I.D.:   | 19-033      |          |
| Spike I.D.:   | 25.335      |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):              | 0.20        |          |
| Spike Volume Used in MS (mL):                                     | 0.20        |          |
| Spike Volume Used in MSD (mL):                                    | 0.201       |          |
| MS Aliquot (L, g, F):   | 25.256      |          |
| MS Target Conc. (pCi/L, g, F):                                    | 0.210       |          |
| MSD Aliquot (L, g, F):  | 24.093      |          |
| MSD Target Conc. (pCi/L, g, F):                                   | 0.303       |          |
| MS Spike Uncertainty (calculated):                                | 0.289       |          |
| MSD Spike Uncertainty (calculated):                               | 0.155       |          |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 | 0.208       |          |
| Sample Matrix Spike Result:                                       | 21.803      |          |
| Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):           | 1.637       |          |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           | 21.161      |          |
| Sample Matrix Spike Duplicate Result:                             | 1.655       |          |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): | -4.215      |          |
| MS Numerical Performance Indicator:                               | -3.573      |          |
| MSD Numerical Performance Indicator:                              | 85.72%      |          |
| MS Percent Recovery:  | 87.19%      |          |
| MSD Percent Recovery:   | N/A         |          |
| MS Status vs Numerical Indicator:                                 | N/A         |          |
| MSD Status vs Numerical Indicator:                                | Pass        |          |
| MS Status vs Recovery:  | Pass        |          |
| MSD Status vs Recovery:   | 125%        |          |
| MS/MSD Upper % Recovery Limits:                                   | 125%        |          |
| MS/MSD Lower % Recovery Limits:                                   | 75%         |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |             |
|---|-------------|
| Sample I.D.:  | 92549918003 |
| Sample MS I.D.:   | 92549918004 |
| Sample MSD I.D.:  | 92549918005 |
| Spike I.D.:   | 21.803      |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           | 1.637       |
| Sample Matrix Spike Duplicate Result:                             | 21.161      |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): | 1.655       |
| Duplicate Numerical Performance Indicator:                        | 0.540       |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           | 1.70%       |
| MS/MSD Duplicate Status vs Numerical Indicator:                   | N/A         |
| MS/MSD Duplicate Status vs RPD:                                   | Pass        |
| % RPD Limit:  | 25%         |



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

# *Analytical Report*



**Sample Group :** WMWGORLF\_1330

**Project/Site :** Gorgas Landfill  
Parrish, AL 35580

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

**Attention :** Dustin Brooks & Greg Dyer

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

August 23, 2021

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory between July 21, 2021 and July 22, 2021. All results reported herein conform to the laboratory's most current Quality Assurance Manual. Results marked with an asterisk conform to the most current applicable TNI/NELAC requirements. Exceptions will be noted in the body of the report.

Some analyses were subcontracted. The test report from the external subcontractor is attached to this report in its entirety.

Laboratory certification ID: E571114  
Issued By: State of Florida, Department of Health  
Expiration: June 30, 2022

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

Sincerely,

Quality Control: **Laura Midkiff**  
Digitally signed by Laura Midkiff  
DN: cn=Laura Midkiff, o=Alabama Power  
Company, ou=Environmental Affairs,  
email=lmidkif@southernco.com, c=US  
Date: 2021.08.23 12:55:12 -05'00'

Supervision: **T. Durant Maske**  
Digitally signed by T. Durant Maske  
DN: cn=T. Durant Maske, o=Alabama  
Power Company, ou=Environmental  
Affairs, email=tdmaske@southernco.com,  
c=US  
Date: 2021.08.23 14:26:38 -05'00'



### REPORT OF LABORATORY ANALYSIS

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.



## Case Narrative

Total Metals ICP

Gorgas Landfill

WMWGORLF\_1330

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

| <u>Sample ID</u> | <u>Batch ID</u>           | <u>Project ID</u> |
|------------------|---------------------------|-------------------|
| BB13181          | 703638 & 703658 (Ca Only) | WMWGORLF_1330     |
| BB13182          | 703638 & 703658 (Ca Only) | WMWGORLF_1330     |
| BB13183          | 703638 & 703658 (Ca Only) | WMWGORLF_1330     |
| BB13184          | 703638 & 703658 (Ca Only) | WMWGORLF_1330     |
| BB13185          | 703638 & 703658 (Ca Only) | WMWGORLF_1330     |
| BB13186          | 703638 & 703658 (Ca Only) | WMWGORLF_1330     |
| BB13187          | 703638 & 703658 (Ca Only) | WMWGORLF_1330     |
| BB13188          | 703638 & 703658 (Ca Only) | WMWGORLF_1330     |
| BB13189          | 703638 & 703658 (Ca Only) | WMWGORLF_1330     |
| BB13190          | 703638 & 703658 (Ca Only) | WMWGORLF_1330     |
| BB13191          | 704249                    | WMWGORLF_1330     |
| BB13324          | 704249                    | WMWGORLF_1330     |
| BB13325          | 704249                    | WMWGORLF_1330     |
| BB13326          | 704249                    | WMWGORLF_1330     |
| BB13327          | 704249                    | WMWGORLF_1330     |
| BB13328          | 704249                    | WMWGORLF_1330     |
| BB13329          | 704249                    | WMWGORLF_1330     |
| BB13330          | 704249                    | WMWGORLF_1330     |
| BB13331          | 704249                    | WMWGORLF_1330     |
| BB13332          | 704249                    | WMWGORLF_1330     |
| BB13333          | 704250                    | WMWGORLF_1330     |

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

### General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes, except for the following:
  - The method blank for Calcium failed in batch 703638. All affected samples were reprepared and reanalyzed in batch 703658 for Calcium only. The method blank associated with batch 703658 passed all acceptance criteria for Calcium.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met, except for the following:
  - BB13190 Iron, Magnesium, and Sodium MS/MSD spike levels were <30% of the sample concentrations.
  - BB13332 Calcium, Iron, Magnesium, and Sodium MS/MSD spike levels were <30% of the sample concentrations.
  - BB13333 Calcium, Magnesium, and Sodium MS/MSD spike levels were <30% of the sample concentrations.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.

## Case Narrative

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> |
|------------------|----------------------------------|------------------------|
| BB13181          | Calcium, Magnesium               | 10.15                  |
| BB13182          | Calcium, Magnesium               | 10.15                  |
| BB13183          | Calcium, Iron, Magnesium         | 10.15                  |
| BB13184          | Calcium, Magnesium, Sodium       | 10.15                  |
| BB13185          | Calcium, Iron, Magnesium, Sodium | 10.15                  |
| BB13186          | Calcium, Iron, Magnesium, Sodium | 10.15                  |
| BB13187          | Calcium, Magnesium, Sodium       | 10.15                  |
| BB13189          | Calcium, Magnesium, Sodium       | 10.15                  |
| BB13190          | Calcium, Iron, Magnesium, Sodium | 10.15                  |
| BB13189          | Iron                             | 101.5                  |
| BB13191          | Calcium, Magnesium               | 10.15                  |
| BB13324          | Calcium, Magnesium, Sodium       | 10.15                  |
| BB13325          | Calcium, Magnesium               | 10.15                  |
| BB13326          | Calcium                          | 10.15                  |
| BB13327          | Calcium, Iron, Magnesium         | 10.15                  |
| BB13328          | Calcium, Magnesium               | 10.15                  |
| BB13331          | Calcium, Magnesium, Sodium       | 10.15                  |
| BB13332          | Calcium, Iron, Magnesium, Sodium | 10.15                  |
| BB13333          | Calcium, Magnesium,              | 10.15                  |
| BB13327          | Magnesium                        | 101.5                  |

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

Dissolved Metals ICP

Gorgas Landfill

WMWGORLF\_1330

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB13181          | 703659          | WMWGORLF_1330     |
| BB13182          | 703659          | WMWGORLF_1330     |
| BB13183          | 703659          | WMWGORLF_1330     |
| BB13184          | 703659          | WMWGORLF_1330     |
| BB13185          | 703659          | WMWGORLF_1330     |
| BB13186          | 703659          | WMWGORLF_1330     |
| BB13187          | 703659          | WMWGORLF_1330     |
| BB13189          | 703659          | WMWGORLF_1330     |
| BB13190          | 703659          | WMWGORLF_1330     |
| BB13191          | 703659          | WMWGORLF_1330     |
| BB13324          | 703661          | WMWGORLF_1330     |
| BB13325          | 703661          | WMWGORLF_1330     |
| BB13326          | 703661          | WMWGORLF_1330     |
| BB13327          | 703661          | WMWGORLF_1330     |
| BB13328          | 703661          | WMWGORLF_1330     |
| BB13331          | 703661          | WMWGORLF_1330     |
| BB13332          | 703661          | WMWGORLF_1330     |
| BB13333          | 703661          | WMWGORLF_1330     |

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

#### General Quality Control Procedures:

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

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

#### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution Factor</u> |
|------------------|----------------|------------------------|
| BB13183          | Iron           | 10.15                  |
| BB13185          | Iron           | 10.15                  |
| BB13186          | Iron           | 10.15                  |
| BB13189          | Iron           | 101.5                  |
| BB13190          | Iron           | 10.15                  |
| BB13327          | Iron           | 10.15                  |
| BB13332          | Iron           | 10.15                  |

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

Total Metals ICPMS

Gorgas Landfill

WMWGORLF\_1330

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB13181          | 703864          | WMWGORLF_1330     |
| BB13182          | 703864          | WMWGORLF_1330     |
| BB13183          | 703864          | WMWGORLF_1330     |
| BB13184          | 703864          | WMWGORLF_1330     |
| BB13185          | 703864          | WMWGORLF_1330     |
| BB13186          | 703864          | WMWGORLF_1330     |
| BB13187          | 703864          | WMWGORLF_1330     |
| BB13188          | 703864          | WMWGORLF_1330     |
| BB13189          | 703864          | WMWGORLF_1330     |
| BB13190          | 703864          | WMWGORLF_1330     |
| BB13191          | 703865          | WMWGORLF_1330     |
| BB13324          | 703865          | WMWGORLF_1330     |
| BB13325          | 703865          | WMWGORLF_1330     |
| BB13326          | 703865          | WMWGORLF_1330     |
| BB13327          | 703865          | WMWGORLF_1330     |
| BB13328          | 703865          | WMWGORLF_1330     |
| BB13329          | 703865          | WMWGORLF_1330     |
| BB13330          | 703865          | WMWGORLF_1330     |
| BB13331          | 703865          | WMWGORLF_1330     |
| BB13332          | 703865          | WMWGORLF_1330     |
| BB13333          | 703866          | WMWGORLF_1330     |

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

#### General Quality Control Procedures:

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



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

Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
    - BB13333 Manganese MS/MSD spike level was <30% of the sample concentration.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution Factor</u> |
|------------------|----------------|------------------------|
| BB13181          | Manganese      | 5.075                  |
| BB13182          | Manganese      | 5.075                  |
| BB13183          | Manganese      | 92.365                 |
| BB13185          | Manganese      | 92.365                 |
| BB13186          | Manganese      | 92.365                 |
| BB13189          | Manganese      | 92.365                 |
| BB13190          | Manganese      | 5.075                  |
| BB13191          | Manganese      | 5.075                  |
| BB13325          | Manganese      | 5.075                  |
| BB13326          | Manganese      | 5.075                  |
| BB13327          | Manganese      | 92.365                 |
| BB13333          | Manganese      | 5.075                  |

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

## Dissolved Metals ICPMS

Gorgas Landfill

WMWGORLF\_1330

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB13181          | 703867          | WMWGORLF_1330     |
| BB13182          | 703867          | WMWGORLF_1330     |
| BB13183          | 703867          | WMWGORLF_1330     |
| BB13184          | 703867          | WMWGORLF_1330     |
| BB13185          | 703867          | WMWGORLF_1330     |
| BB13186          | 703867          | WMWGORLF_1330     |
| BB13187          | 703867          | WMWGORLF_1330     |
| BB13189          | 703867          | WMWGORLF_1330     |
| BB13190          | 703867          | WMWGORLF_1330     |
| BB13191          | 703867          | WMWGORLF_1330     |
| BB13324          | 703868          | WMWGORLF_1330     |
| BB13325          | 703868          | WMWGORLF_1330     |
| BB13326          | 703868          | WMWGORLF_1330     |
| BB13327          | 703868          | WMWGORLF_1330     |
| BB13328          | 703868          | WMWGORLF_1330     |
| BB13331          | 703868          | WMWGORLF_1330     |
| BB13332          | 703868          | WMWGORLF_1330     |
| BB13333          | 703868          | WMWGORLF_1330     |

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

### General Quality Control Procedures:

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

Revision 5

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

Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
  - BB13191 & BB13333 Manganese MS/MSD spike levels were <30% of the sample concentrations.
- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for precision were met.

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

| <u>Sample ID</u> | <u>Analyte</u> | <u>Dilution Factor</u> |
|------------------|----------------|------------------------|
| BB13181          | Manganese      | 5.075                  |
| BB13182          | Manganese      | 5.075                  |
| BB13183          | Manganese      | 92.365                 |
| BB13185          | Manganese      | 92.365                 |
| BB13186          | Manganese      | 92.365                 |
| BB13189          | Manganese      | 92.365                 |
| BB13190          | Manganese      | 5.075                  |
| BB13191          | Manganese      | 5.075                  |
| BB13325          | Manganese      | 5.075                  |
| BB13326          | Manganese      | 5.075                  |
| BB13327          | Manganese      | 92.365                 |
| BB13333          | Manganese      | 5.075                  |

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

## Case Narrative

Mercury

Gorgas Landfill

WMWGORLF\_1330

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB13181          | 703259          | WMWGORLF_1330     |
| BB13182          | 703259          | WMWGORLF_1330     |
| BB13183          | 703259          | WMWGORLF_1330     |
| BB13184          | 703259          | WMWGORLF_1330     |
| BB13185          | 703259          | WMWGORLF_1330     |
| BB13186          | 703259          | WMWGORLF_1330     |
| BB13187          | 703259          | WMWGORLF_1330     |
| BB13188          | 703259          | WMWGORLF_1330     |
| BB13189          | 703259          | WMWGORLF_1330     |
| BB13190          | 703259          | WMWGORLF_1330     |
| BB13191          | 703260          | WMWGORLF_1330     |
| BB13324          | 703260          | WMWGORLF_1330     |
| BB13325          | 703260          | WMWGORLF_1330     |
| BB13326          | 703260          | WMWGORLF_1330     |
| BB13327          | 703260          | WMWGORLF_1330     |
| BB13328          | 703260          | WMWGORLF_1330     |
| BB13329          | 703260          | WMWGORLF_1330     |
| BB13330          | 703260          | WMWGORLF_1330     |
| BB13331          | 703260          | WMWGORLF_1330     |
| BB13332          | 703260          | WMWGORLF_1330     |
| BB13333          | 703261          | WMWGORLF_1330     |

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

### General Quality Control Procedures:

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

### Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.
7. All samples were analyzed without a dilution.
  8. The raw data results are shown with dilution factors included.

TDS

Gorgas Landfill

WMWGORLF\_1330

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB13181          | 703262          | WMWGORLF_1330     |
| BB13182          | 703262          | WMWGORLF_1330     |
| BB13183          | 703262          | WMWGORLF_1330     |
| BB13184          | 703262          | WMWGORLF_1330     |
| BB13185          | 703262          | WMWGORLF_1330     |
| BB13186          | 703262          | WMWGORLF_1330     |
| BB13187          | 703262          | WMWGORLF_1330     |
| BB13188          | 703262          | WMWGORLF_1330     |
| BB13189          | 703262          | WMWGORLF_1330     |
| BB13190          | 703262          | WMWGORLF_1330     |
| BB13191          | 703263          | WMWGORLF_1330     |
| BB13324          | 703336          | WMWGORLF_1330     |
| BB13325          | 703336          | WMWGORLF_1330     |
| BB13326          | 703336          | WMWGORLF_1330     |
| BB13327          | 703336          | WMWGORLF_1330     |
| BB13328          | 703336          | WMWGORLF_1330     |
| BB13329          | 703336          | WMWGORLF_1330     |
| BB13330          | 703336          | WMWGORLF_1330     |
| BB13331          | 703336          | WMWGORLF_1330     |
| BB13332          | 703336          | WMWGORLF_1330     |
| BB13333          | 703336          | WMWGORLF_1330     |

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

### General Quality Control Procedures:

- A Method Blank was analyzed with each batch. All criteria were met.
- All final weights of samples, standards, and blanks agreed within 0.5mg of the previous weight.
- A sample duplicate was analyzed with each batch. RPD/2 was less than 5%.
- A laboratory control sample was analyzed with each batch. All criteria were met.
- Samples were between 2.5mg and 200mg residue.
- All samples with residue <2.5mg had the maximum volume of 150mL filtered. Affected samples are as follows:
  - BB13188
  - BB13329
  - BB13330

Anions

Gorgas Landfill

WMWGORLF\_1330

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

| <u>Sample ID</u> | <u>Batch ID</u>          | <u>Project ID</u> |
|------------------|--------------------------|-------------------|
| BB13181          | 703372, 703375, & 703378 | WMWGORLF_1330     |
| BB13182          | 703372, 703375, & 703378 | WMWGORLF_1330     |
| BB13183          | 703372, 703375, & 703378 | WMWGORLF_1330     |
| BB13184          | 703372, 703375, & 703378 | WMWGORLF_1330     |
| BB13185          | 703372, 703375, & 703378 | WMWGORLF_1330     |
| BB13186          | 703372, 703375, & 703378 | WMWGORLF_1330     |
| BB13187          | 703372, 703375, & 703378 | WMWGORLF_1330     |
| BB13188          | 703372, 703375, & 703378 | WMWGORLF_1330     |
| BB13189          | 703372, 703375, & 703378 | WMWGORLF_1330     |
| BB13190          | 703372, 703375, & 703378 | WMWGORLF_1330     |
| BB13191          | 703373, 703376, & 703379 | WMWGORLF_1330     |
| BB13324          | 703373, 703376, & 703379 | WMWGORLF_1330     |
| BB13325          | 703373, 703376, & 703379 | WMWGORLF_1330     |
| BB13326          | 703373, 703376, & 703379 | WMWGORLF_1330     |
| BB13327          | 703373, 703376, & 703379 | WMWGORLF_1330     |
| BB13328          | 703373, 703376, & 703379 | WMWGORLF_1330     |
| BB13329          | 703373, 703376, & 703379 | WMWGORLF_1330     |
| BB13330          | 703373, 703376, & 703379 | WMWGORLF_1330     |
| BB13331          | 703373, 703376, & 703379 | WMWGORLF_1330     |
| BB13332          | 703373, 703376, & 703379 | WMWGORLF_1330     |
| BB13333          | 703374, 703377, & 703380 | WMWGORLF_1330     |

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



General Quality Control Procedures:

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

Matrix Specific Quality Control Procedures:

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

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

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

| <u>Sample ID</u> | <u>Analyte</u>     | <u>Dilution Factor</u> |
|------------------|--------------------|------------------------|
| BB13181          | Sulfate            | 50                     |
| BB13182          | Sulfate            | 80                     |
| BB13183          | Sulfate            | 50                     |
| BB13184          | Chloride & Sulfate | 8 & 40                 |
| BB13185          | Sulfate            | 160                    |
| BB13186          | Sulfate            | 160                    |
| BB13187          | Sulfate            | 40                     |
| BB13189          | Sulfate            | 160                    |
| BB13190          | Sulfate            | 50                     |
| BB13191          | Sulfate            | 40                     |
| BB13324          | Sulfate            | 100                    |

## Case Narrative

|         |                    |         |
|---------|--------------------|---------|
| BB13325 | Sulfate            | 40      |
| BB13326 | Sulfate            | 40      |
| BB13327 | Sulfate            | 100     |
| BB13328 | Sulfate            | 80      |
| BB13331 | Chloride & Sulfate | 10 & 40 |
| BB13332 | Chloride & Sulfate | 16 & 80 |
| BB13333 | Sulfate            | 160     |

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

Alkalinity

Gorgas Landfill

WMWGORLF\_1330

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

| <u>Sample ID</u> | <u>Batch ID</u> | <u>Project ID</u> |
|------------------|-----------------|-------------------|
| BB13181          | 703999 & 704000 | WMWGORLF_1330     |
| BB13182          | 703999 & 704000 | WMWGORLF_1330     |
| BB13183          | 703999 & 704000 | WMWGORLF_1330     |
| BB13184          | 703999 & 704000 | WMWGORLF_1330     |
| BB13185          | 703999 & 704000 | WMWGORLF_1330     |
| BB13186          | 703999 & 704000 | WMWGORLF_1330     |
| BB13187          | 703999 & 704000 | WMWGORLF_1330     |
| BB13188          | 703999 & 704000 | WMWGORLF_1330     |
| BB13189          | 703999 & 704000 | WMWGORLF_1330     |
| BB13190          | 703999 & 704000 | WMWGORLF_1330     |
| BB13191          | 703999 & 704000 | WMWGORLF_1330     |
| BB13324          | 703999 & 704000 | WMWGORLF_1330     |
| BB13325          | 703999 & 704000 | WMWGORLF_1330     |
| BB13326          | 703999 & 704000 | WMWGORLF_1330     |
| BB13327          | 703999 & 704000 | WMWGORLF_1330     |
| BB13328          | 703999 & 704000 | WMWGORLF_1330     |
| BB13329          | 703999 & 704000 | WMWGORLF_1330     |
| BB13330          | 703999 & 704000 | WMWGORLF_1330     |
| BB13331          | 703999 & 704000 | WMWGORLF_1330     |
| BB13332          | 703999 & 704000 | WMWGORLF_1330     |
| BB13333          | 703999 & 704000 | WMWGORLF_1330     |

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

### General Quality Control Procedures:

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-13

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 09:13  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13181

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 13:33 | 7/22/21 19:08       |          | 1.015 | 0.0592                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 13:33       |          | 10.15 | 262                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 13:33 | 7/22/21 19:08       |          | 1.015 | 0.0540                              | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/21/21 13:33 | 7/22/21 19:08       |          | 1.015 | 0.0282                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 13:33 | 7/27/21 15:45       |          | 10.15 | 305                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/21/21 13:33 | 7/22/21 19:08       |          | 1.015 | 31.5                                | mg/L  | 0.03045  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 10:29       |          | 1.015 | 0.0483                              | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | 0.000154                            | mg/L  | 0.000068 | 0.000203   | J |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | 0.0118                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | 0.00414                             | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | 0.000506                            | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | 8.28                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 22:35       |          | 5.075 | 1.38                                | mg/L  | 0.000340 | 0.001015   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | 0.00315                             | mg/L  | 0.000508 | 0.001015   |   |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 13:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 21:24       |          | 5.075 | 1.42                                | mg/L  | 0.000340 | 0.001015   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 19:17       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 223                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/22/21 12:06 | 8/2/21 08:20        |          | 1     | 2520                                | mg/L  |          | 125        |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-13

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 09:13  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13181

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 223     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.11    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:18 | 7/26/21 10:18       |          | 1  | 1.70    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:23 | 7/26/21 13:23       |          | 1  | 0.323   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 13:28 | 7/23/21 13:28       |          | 50 | 1560    | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/20/21 09:10 | 7/20/21 09:10       |          |    | 2629.85 | uS/cm |       |     | FA |
| pH   | 7/20/21 09:10 | 7/20/21 09:10       |          |    | 6.59    | SU    |       |     | FA |
| Temperature                                  | 7/20/21 09:10 | 7/20/21 09:10       |          |    | 20.50   | C     |       |     | FA |
| Turbidity                                    | 7/20/21 09:10 | 7/20/21 09:10       |          |    | 0.57    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/20/21 09:13

**Customer ID:**

**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-13

**Laboratory ID Number:** BB13181

| Sample  | Analysis               | Units | MB         |          |       |         |         | Standard |                    | Rec   |             |       | Prec Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|-------|-------------|-------|------------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec   | Limit       | Prec  |            |
| BB13190 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.107   | 0.109   | 0.106    | 0.0850 to 0.115    | 106   | 70.0 to 130 | 1.85  | 20.0       |
| BB13191 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.15    | 2.11    | 0.197    | 0.170 to 0.230     | 95.0  | 70.0 to 130 | 1.88  | 20.0       |
| BB13190 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0902  | 0.0876  | 0.0932   | 0.0850 to 0.115    | 89.2  | 70.0 to 130 | 2.92  | 20.0       |
| BB13190 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0990  | 0.0993  | 0.0929   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 0.303 | 20.0       |
| BB13190 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.108   | 0.109   | 0.112    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 0.922 | 20.0       |
| BB13190 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.0963  | 0.0976  | 0.103    | 0.0850 to 0.115    | 95.3  | 70.0 to 130 | 1.34  | 20.0       |
| BB13190 | Lithium, Total         | mg/L  | 4.400E-06  | 0.0154   | 0.200 | 0.436   | 0.437   | 0.197    | 0.170 to 0.230     | 120   | 70.0 to 130 | 0.229 | 20.0       |
| BB13190 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.0984  | 0.103   | 0.0998   | 0.0850 to 0.115    | 98.2  | 70.0 to 130 | 4.57  | 20.0       |
| BB13190 | Magnesium, Total       | mg/L  | 0.0146     | 0.0462   | 5.00  | 78.6    | 78.8    | 5.02     | 4.25 to 5.75       | 46.0  | 70.0 to 130 | 0.254 | 20.0       |
| BB13190 | Sodium, Total          | mg/L  | 0.00987    | 0.0660   | 5.00  | 68.8    | 68.5    | 4.98     | 4.25 to 5.75       | 64.0  | 70.0 to 130 | 0.437 | 20.0       |
| BB13190 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.111   | 0.114   | 0.101    | 0.0850 to 0.115    | 97.9  | 70.0 to 130 | 2.67  | 20.0       |
| BB13190 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.73    | 1.74    | 0.100    | 0.0850 to 0.115    | 100   | 70.0 to 130 | 0.576 | 20.0       |
| BB13190 | Boron, Total           | mg/L  | 0.00843    | 0.0650   | 1.00  | 1.22    | 1.22    | 0.982    | 0.850 to 1.15      | 102   | 70.0 to 130 | 0.00  | 20.0       |
| BB13189 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334     | 335     | 4.97     | 4.25 to 5.75       | 80.0  | 70.0 to 130 | 0.299 | 20.0       |
| BB13190 | Iron, Total            | mg/L  | 0.00365    | 0.0176   | 0.2   | 8.54    | 8.58    | 0.201    | 0.170 to 0.230     | -65.0 | 70.0 to 130 | 0.467 | 20.0       |
| BB13190 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.122   | 0.122   | 0.0990   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 0.00  | 20.0       |
| BB13190 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.3    | 16.2    | 10.5     | 8.50 to 11.5       | 105   | 70.0 to 130 | 0.615 | 20.0       |
| BB13190 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00388 | 0.00388 | 0.00389  | 0.00340 to 0.00460 | 97.0  | 70.0 to 130 | 0.00  | 20.0       |
| BB13190 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.0928  | 0.0941  | 0.0982   | 0.0850 to 0.115    | 92.7  | 70.0 to 130 | 1.39  | 20.0       |
| BB13190 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.103   | 0.106   | 0.110    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 2.87  | 20.0       |
| BB13191 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 3.05    | 3.03    | 0.108    | 0.0850 to 0.115    | 10.0  | 70.0 to 130 | 0.658 | 20.0       |
| BB13190 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0961  | 0.0967  | 0.0988   | 0.0850 to 0.115    | 96.0  | 70.0 to 130 | 0.622 | 20.0       |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 09:13  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-13

**Laboratory ID Number:** BB13181

| Sample  | Analysis                   | Units | MB     | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|--------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB13190 | Sulfate                    | mg/L  | -0.437 | 1.00     | 1000  | 1680 | 667              | 19.0     | 18.0 to 22.0   | 102  | 80.0 to 120 | 0.300 | 20.0       |
| BB13190 | Chloride                   | mg/L  | -0.107 | 1.00     | 10.0  | 13.3 | 3.46             | 9.89     | 9.00 to 11.0   | 96.6 | 80.0 to 120 | 5.07  | 20.0       |
| BB13190 | Solids, Dissolved          | mg/L  | -2.00  | 25.0     |       |      | 1060             | 55.0     | 40.0 to 60.0   |      |             | 0.935 | 5.00       |
| BB13190 | Fluoride                   | mg/L  | 0.0205 | 0.100    | 2.50  | 2.84 | 0.286            | 2.59     | 2.25 to 2.75   | 103  | 80.0 to 120 | 6.50  | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |        |          |       |      | 163              | 53.4     | 45.0 to 55.0   |      |             | 0.612 | 10.0       |

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



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-14

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 10:16  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13182

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 13:33 | 7/22/21 19:11       |          | 1.015 | 0.0485                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 13:37       |          | 10.15 | 316                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 13:33 | 7/22/21 19:11       |          | 1.015 | 1.33                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/21/21 13:33 | 7/22/21 19:11       |          | 1.015 | 0.0376                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 13:33 | 7/27/21 15:48       |          | 10.15 | 347                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/21/21 13:33 | 7/22/21 19:11       |          | 1.015 | 32.1                                | mg/L  | 0.03045  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 10:33       |          | 1.015 | 1.23                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | 0.000783                            | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | 0.0116                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | 0.00847                             | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | 0.000280                            | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | 8.53                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 22:38       |          | 5.075 | 2.30                                | mg/L  | 0.000340 | 0.001015   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:00       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 21:27       |          | 5.075 | 2.23                                | mg/L  | 0.000340 | 0.001015   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 19:21       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 244                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/22/21 12:06 | 8/2/21 08:20        |          | 1     | 2990                                | mg/L  |          | 147.1      |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-14

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 10:16  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13182

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 244     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.08    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:20 | 7/26/21 10:20       |          | 1  | 3.65    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:24 | 7/26/21 13:24       |          | 1  | 0.276   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 13:29 | 7/23/21 13:29       |          | 80 | 1830    | mg/L  | 40.00 | 80  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/20/21 10:12 | 7/20/21 10:12       |          |    | 2964.18 | uS/cm |       |     | FA |
| pH   | 7/20/21 10:12 | 7/20/21 10:12       |          |    | 6.38    | SU    |       |     | FA |
| Temperature                                  | 7/20/21 10:12 | 7/20/21 10:12       |          |    | 20.10   | C     |       |     | FA |
| Turbidity                                    | 7/20/21 10:12 | 7/20/21 10:12       |          |    | 2.44    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/20/21 10:16

**Customer ID:**

**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-14

**Laboratory ID Number:** BB13182

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec   | Limit       |       |       |
| BB13190 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.0963  | 0.0976  | 0.103    | 0.0850 to 0.115    | 95.3  | 70.0 to 130 | 1.34  | 20.0  |
| BB13190 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.73    | 1.74    | 0.100    | 0.0850 to 0.115    | 100   | 70.0 to 130 | 0.576 | 20.0  |
| BB13190 | Boron, Total           | mg/L  | 0.00843    | 0.0650   | 1.00  | 1.22    | 1.22    | 0.982    | 0.850 to 1.15      | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13189 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334     | 335     | 4.97     | 4.25 to 5.75       | 80.0  | 70.0 to 130 | 0.299 | 20.0  |
| BB13190 | Iron, Total            | mg/L  | 0.00365    | 0.0176   | 0.2   | 8.54    | 8.58    | 0.201    | 0.170 to 0.230     | -65.0 | 70.0 to 130 | 0.467 | 20.0  |
| BB13190 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0990  | 0.0993  | 0.0929   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 0.303 | 20.0  |
| BB13190 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.108   | 0.109   | 0.112    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 0.922 | 20.0  |
| BB13190 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.107   | 0.109   | 0.106    | 0.0850 to 0.115    | 106   | 70.0 to 130 | 1.85  | 20.0  |
| BB13191 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.15    | 2.11    | 0.197    | 0.170 to 0.230     | 95.0  | 70.0 to 130 | 1.88  | 20.0  |
| BB13190 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0902  | 0.0876  | 0.0932   | 0.0850 to 0.115    | 89.2  | 70.0 to 130 | 2.92  | 20.0  |
| BB13190 | Sodium, Total          | mg/L  | 0.00987    | 0.0660   | 5.00  | 68.8    | 68.5    | 4.98     | 4.25 to 5.75       | 64.0  | 70.0 to 130 | 0.437 | 20.0  |
| BB13190 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.111   | 0.114   | 0.101    | 0.0850 to 0.115    | 97.9  | 70.0 to 130 | 2.67  | 20.0  |
| BB13190 | Lithium, Total         | mg/L  | 4.400E-06  | 0.0154   | 0.200 | 0.436   | 0.437   | 0.197    | 0.170 to 0.230     | 120   | 70.0 to 130 | 0.229 | 20.0  |
| BB13190 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.0984  | 0.103   | 0.0998   | 0.0850 to 0.115    | 98.2  | 70.0 to 130 | 4.57  | 20.0  |
| BB13190 | Magnesium, Total       | mg/L  | 0.0146     | 0.0462   | 5.00  | 78.6    | 78.8    | 5.02     | 4.25 to 5.75       | 46.0  | 70.0 to 130 | 0.254 | 20.0  |
| BB13190 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.0928  | 0.0941  | 0.0982   | 0.0850 to 0.115    | 92.7  | 70.0 to 130 | 1.39  | 20.0  |
| BB13190 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.103   | 0.106   | 0.110    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 2.87  | 20.0  |
| BB13191 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 3.05    | 3.03    | 0.108    | 0.0850 to 0.115    | 10.0  | 70.0 to 130 | 0.658 | 20.0  |
| BB13190 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0961  | 0.0967  | 0.0988   | 0.0850 to 0.115    | 96.0  | 70.0 to 130 | 0.622 | 20.0  |
| BB13190 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.122   | 0.122   | 0.0990   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.3    | 16.2    | 10.5     | 8.50 to 11.5       | 105   | 70.0 to 130 | 0.615 | 20.0  |
| BB13190 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00388 | 0.00388 | 0.00389  | 0.00340 to 0.00460 | 97.0  | 70.0 to 130 | 0.00  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 10:16  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-14

**Laboratory ID Number:** BB13182

| Sample  | Analysis                   | Units | MB     | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|--------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB13190 | Sulfate                    | mg/L  | -0.437 | 1.00     | 1000  | 1680 | 667              | 19.0     | 18.0 to 22.0   | 102  | 80.0 to 120 | 0.300 | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |        |          |       |      | 163              | 53.4     | 45.0 to 55.0   |      |             | 0.612 | 10.0       |
| BB13190 | Fluoride                   | mg/L  | 0.0205 | 0.100    | 2.50  | 2.84 | 0.286            | 2.59     | 2.25 to 2.75   | 103  | 80.0 to 120 | 6.50  | 20.0       |
| BB13190 | Chloride                   | mg/L  | -0.107 | 1.00     | 10.0  | 13.3 | 3.46             | 9.89     | 9.00 to 11.0   | 96.6 | 80.0 to 120 | 5.07  | 20.0       |
| BB13190 | Solids, Dissolved          | mg/L  | -2.00  | 25.0     |       |      | 1060             | 55.0     | 40.0 to 60.0   |      |             | 0.935 | 5.00       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-15

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 11:25  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13183

| Name                                | Prepared      | Analyzed            | Vio Spec | DF     | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|--------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 13:33 | 7/22/21 19:14       |          | 1.015  | 0.0514                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 13:40       |          | 10.15  | 274                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 13:33 | 7/27/21 15:52       |          | 10.15  | 17.8                                | mg/L  | 0.08120  | 0.406      |   |
| * Lithium, Total                    | 7/21/21 13:33 | 7/22/21 19:14       |          | 1.015  | 0.0661                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 13:33 | 7/27/21 15:52       |          | 10.15  | 288                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/21/21 13:33 | 7/22/21 19:14       |          | 1.015  | 30.8                                | mg/L  | 0.03045  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |        |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 12:54       |          | 10.15  | 18.7                                | mg/L  | 0.08120  | 0.406      |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | 0.000286                            | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | 0.0118                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | 0.0721                              | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | 0.0000691                           | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | 5.61                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 22:42       |          | 92.365 | 14.1                                | mg/L  | 0.006188 | 0.018473   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |        |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 21:31       |          | 92.365 | 14.0                                | mg/L  | 0.006188 | 0.018473   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |        |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 19:25       |          | 1      | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |        |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1      | 182                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |        |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/22/21 12:06 | 8/2/21 08:20        |          | 1      | 2600                                | mg/L  |          | 125        |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-15

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 11:25  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13183

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 182     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.03    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500CI E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:21 | 7/26/21 10:21       |          | 1  | 3.16    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:25 | 7/26/21 13:25       |          | 1  | 0.288   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 13:30 | 7/23/21 13:30       |          | 50 | 1700    | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/20/21 11:21 | 7/20/21 11:21       |          |    | 2577.77 | uS/cm |       |     | FA |
| pH   | 7/20/21 11:21 | 7/20/21 11:21       |          |    | 6.03    | SU    |       |     | FA |
| Temperature                                  | 7/20/21 11:21 | 7/20/21 11:21       |          |    | 20.18   | C     |       |     | FA |
| Turbidity                                    | 7/20/21 11:21 | 7/20/21 11:21       |          |    | 1.91    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 11:25  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-15

**Laboratory ID Number:** BB13183

| Sample  | Analysis               | Units | MB         |          |       |         |         | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec   | Limit       |       |       |
| BB13190 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.107   | 0.109   | 0.106    | 0.0850 to 0.115    | 106   | 70.0 to 130 | 1.85  | 20.0  |
| BB13191 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.15    | 2.11    | 0.197    | 0.170 to 0.230     | 95.0  | 70.0 to 130 | 1.88  | 20.0  |
| BB13190 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0902  | 0.0876  | 0.0932   | 0.0850 to 0.115    | 89.2  | 70.0 to 130 | 2.92  | 20.0  |
| BB13190 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.0963  | 0.0976  | 0.103    | 0.0850 to 0.115    | 95.3  | 70.0 to 130 | 1.34  | 20.0  |
| BB13190 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0990  | 0.0993  | 0.0929   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 0.303 | 20.0  |
| BB13190 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.108   | 0.109   | 0.112    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 0.922 | 20.0  |
| BB13190 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.122   | 0.122   | 0.0990   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.3    | 16.2    | 10.5     | 8.50 to 11.5       | 105   | 70.0 to 130 | 0.615 | 20.0  |
| BB13190 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00388 | 0.00388 | 0.00389  | 0.00340 to 0.00460 | 97.0  | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Lithium, Total         | mg/L  | 4.400E-06  | 0.0154   | 0.200 | 0.436   | 0.437   | 0.197    | 0.170 to 0.230     | 120   | 70.0 to 130 | 0.229 | 20.0  |
| BB13190 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.0984  | 0.103   | 0.0998   | 0.0850 to 0.115    | 98.2  | 70.0 to 130 | 4.57  | 20.0  |
| BB13190 | Magnesium, Total       | mg/L  | 0.0146     | 0.0462   | 5.00  | 78.6    | 78.8    | 5.02     | 4.25 to 5.75       | 46.0  | 70.0 to 130 | 0.254 | 20.0  |
| BB13190 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.73    | 1.74    | 0.100    | 0.0850 to 0.115    | 100   | 70.0 to 130 | 0.576 | 20.0  |
| BB13190 | Boron, Total           | mg/L  | 0.00843    | 0.0650   | 1.00  | 1.22    | 1.22    | 0.982    | 0.850 to 1.15      | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13189 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334     | 335     | 4.97     | 4.25 to 5.75       | 80.0  | 70.0 to 130 | 0.299 | 20.0  |
| BB13190 | Iron, Total            | mg/L  | 0.00365    | 0.0176   | 0.2   | 8.54    | 8.58    | 0.201    | 0.170 to 0.230     | -65.0 | 70.0 to 130 | 0.467 | 20.0  |
| BB13190 | Sodium, Total          | mg/L  | 0.00987    | 0.0660   | 5.00  | 68.8    | 68.5    | 4.98     | 4.25 to 5.75       | 64.0  | 70.0 to 130 | 0.437 | 20.0  |
| BB13190 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.111   | 0.114   | 0.101    | 0.0850 to 0.115    | 97.9  | 70.0 to 130 | 2.67  | 20.0  |
| BB13190 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.0928  | 0.0941  | 0.0982   | 0.0850 to 0.115    | 92.7  | 70.0 to 130 | 1.39  | 20.0  |
| BB13190 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.103   | 0.106   | 0.110    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 2.87  | 20.0  |
| BB13191 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 3.05    | 3.03    | 0.108    | 0.0850 to 0.115    | 10.0  | 70.0 to 130 | 0.658 | 20.0  |
| BB13190 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0961  | 0.0967  | 0.0988   | 0.0850 to 0.115    | 96.0  | 70.0 to 130 | 0.622 | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 11:25  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-15

**Laboratory ID Number:** BB13183

| Sample  | Analysis                   | Units | MB     | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec  | Rec<br>Limit | Prec  | Prec<br>Limit |
|---------|----------------------------|-------|--------|-------------|-------|------|---------------------|----------|-------------------|------|--------------|-------|---------------|
| BB13190 | Sulfate                    | mg/L  | -0.437 | 1.00        | 1000  | 1680 | 667                 | 19.0     | 18.0 to 22.0      | 102  | 80.0 to 120  | 0.300 | 20.0          |
| BB13190 | Chloride                   | mg/L  | -0.107 | 1.00        | 10.0  | 13.3 | 3.46                | 9.89     | 9.00 to 11.0      | 96.6 | 80.0 to 120  | 5.07  | 20.0          |
| BB13190 | Solids, Dissolved          | mg/L  | -2.00  | 25.0        |       |      | 1060                | 55.0     | 40.0 to 60.0      |      |              | 0.935 | 5.00          |
| BB13190 | Fluoride                   | mg/L  | 0.0205 | 0.100       | 2.50  | 2.84 | 0.286               | 2.59     | 2.25 to 2.75      | 103  | 80.0 to 120  | 6.50  | 20.0          |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |        |             |       |      | 163                 | 53.4     | 45.0 to 55.0      |      |              | 0.612 | 10.0          |

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



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-12V

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 12:32  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13184

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 13:33 | 7/22/21 19:18       |          | 1.015 | 0.149                               | mg/L  | 0.030000 | 0.1015     |   |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 13:44       |          | 10.15 | 283                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 13:33 | 7/22/21 19:18       |          | 1.015 | 3.78                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/21/21 13:33 | 7/22/21 19:18       |          | 1.015 | 0.330                               | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 13:33 | 7/27/21 15:55       |          | 10.15 | 186                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/21/21 13:33 | 7/27/21 15:55       |          | 10.15 | 124                                 | mg/L  | 0.3045   | 4.06       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 10:40       |          | 1.015 | 3.65                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | 0.00573                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | 0.0186                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | 0.000181                            | mg/L  | 0.000068 | 0.000203   | J |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | 0.00188                             | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | 7.21                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | 0.491                               | mg/L  | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:07       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 12:21       |          | 1.015 | 0.499                               | mg/L  | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 19:29       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 293                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/22/21 12:06 | 8/2/21 08:20        |          | 1     | 2190                                | mg/L  |          | 125        |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-12V

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 12:32  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13184

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 293     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.28    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:30 | 7/26/21 10:30       |          | 8  | 59.2    | mg/L  | 4.00  | 8   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:26 | 7/26/21 13:26       |          | 1  | 0.224   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 13:31 | 7/23/21 13:31       |          | 40 | 1220    | mg/L  | 20.00 | 40  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/20/21 12:29 | 7/20/21 12:29       |          |    | 2516.11 | uS/cm |       |     | FA |
| pH   | 7/20/21 12:29 | 7/20/21 12:29       |          |    | 6.84    | SU    |       |     | FA |
| Temperature                                  | 7/20/21 12:29 | 7/20/21 12:29       |          |    | 22.91   | C     |       |     | FA |
| Turbidity                                    | 7/20/21 12:29 | 7/20/21 12:29       |          |    | 1.48    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 12:32  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-12V

**Laboratory ID Number:** BB13184

| Sample  | Analysis               | Units | MB         | MB       |       |         |         | Standard |                    | Rec   |             |       | Prec Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|-------|-------------|-------|------------|
|         |                        |       |            | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec   | Limit       | Prec  |            |
| BB13190 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0990  | 0.0993  | 0.0929   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 0.303 | 20.0       |
| BB13190 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.108   | 0.109   | 0.112    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 0.922 | 20.0       |
| BB13190 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.0963  | 0.0976  | 0.103    | 0.0850 to 0.115    | 95.3  | 70.0 to 130 | 1.34  | 20.0       |
| BB13190 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.107   | 0.109   | 0.106    | 0.0850 to 0.115    | 106   | 70.0 to 130 | 1.85  | 20.0       |
| BB13191 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.15    | 2.11    | 0.197    | 0.170 to 0.230     | 95.0  | 70.0 to 130 | 1.88  | 20.0       |
| BB13190 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0902  | 0.0876  | 0.0932   | 0.0850 to 0.115    | 89.2  | 70.0 to 130 | 2.92  | 20.0       |
| BB13190 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.0928  | 0.0941  | 0.0982   | 0.0850 to 0.115    | 92.7  | 70.0 to 130 | 1.39  | 20.0       |
| BB13190 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.103   | 0.106   | 0.110    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 2.87  | 20.0       |
| BB13191 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 3.05    | 3.03    | 0.108    | 0.0850 to 0.115    | 10.0  | 70.0 to 130 | 0.658 | 20.0       |
| BB13190 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0961  | 0.0967  | 0.0988   | 0.0850 to 0.115    | 96.0  | 70.0 to 130 | 0.622 | 20.0       |
| BB13190 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.73    | 1.74    | 0.100    | 0.0850 to 0.115    | 100   | 70.0 to 130 | 0.576 | 20.0       |
| BB13190 | Boron, Total           | mg/L  | 0.00843    | 0.0650   | 1.00  | 1.22    | 1.22    | 0.982    | 0.850 to 1.15      | 102   | 70.0 to 130 | 0.00  | 20.0       |
| BB13189 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334     | 335     | 4.97     | 4.25 to 5.75       | 80.0  | 70.0 to 130 | 0.299 | 20.0       |
| BB13190 | Iron, Total            | mg/L  | 0.00365    | 0.0176   | 0.2   | 8.54    | 8.58    | 0.201    | 0.170 to 0.230     | -65.0 | 70.0 to 130 | 0.467 | 20.0       |
| BB13190 | Sodium, Total          | mg/L  | 0.00987    | 0.0660   | 5.00  | 68.8    | 68.5    | 4.98     | 4.25 to 5.75       | 64.0  | 70.0 to 130 | 0.437 | 20.0       |
| BB13190 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.111   | 0.114   | 0.101    | 0.0850 to 0.115    | 97.9  | 70.0 to 130 | 2.67  | 20.0       |
| BB13190 | Lithium, Total         | mg/L  | 4.400E-06  | 0.0154   | 0.200 | 0.436   | 0.437   | 0.197    | 0.170 to 0.230     | 120   | 70.0 to 130 | 0.229 | 20.0       |
| BB13190 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.0984  | 0.103   | 0.0998   | 0.0850 to 0.115    | 98.2  | 70.0 to 130 | 4.57  | 20.0       |
| BB13190 | Magnesium, Total       | mg/L  | 0.0146     | 0.0462   | 5.00  | 78.6    | 78.8    | 5.02     | 4.25 to 5.75       | 46.0  | 70.0 to 130 | 0.254 | 20.0       |
| BB13190 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.122   | 0.122   | 0.0990   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 0.00  | 20.0       |
| BB13190 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.3    | 16.2    | 10.5     | 8.50 to 11.5       | 105   | 70.0 to 130 | 0.615 | 20.0       |
| BB13190 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00388 | 0.00388 | 0.00389  | 0.00340 to 0.00460 | 97.0  | 70.0 to 130 | 0.00  | 20.0       |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 12:32  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-12V

**Laboratory ID Number:** BB13184

| Sample  | Analysis                   | Units | MB     | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|--------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB13190 | Sulfate                    | mg/L  | -0.437 | 1.00     | 1000  | 1680 | 667              | 19.0     | 18.0 to 22.0   | 102  | 80.0 to 120 | 0.300 | 20.0       |
| BB13190 | Chloride                   | mg/L  | -0.107 | 1.00     | 10.0  | 13.3 | 3.46             | 9.89     | 9.00 to 11.0   | 96.6 | 80.0 to 120 | 5.07  | 20.0       |
| BB13190 | Solids, Dissolved          | mg/L  | -2.00  | 25.0     |       |      | 1060             | 55.0     | 40.0 to 60.0   |      |             | 0.935 | 5.00       |
| BB13190 | Fluoride                   | mg/L  | 0.0205 | 0.100    | 2.50  | 2.84 | 0.286            | 2.59     | 2.25 to 2.75   | 103  | 80.0 to 120 | 6.50  | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |        |          |       |      | 163              | 53.4     | 45.0 to 55.0   |      |             | 0.612 | 10.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-6

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 13:57  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13185

| Name                                | Prepared      | Analyzed            | Vio Spec | DF     | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|--------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 13:33 | 7/22/21 19:21       |          | 1.015  | 0.0608                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 13:47       |          | 10.15  | 348                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 13:33 | 7/27/21 15:59       |          | 10.15  | 23.8                                | mg/L  | 0.08120  | 0.406      |   |
| * Lithium, Total                    | 7/21/21 13:33 | 7/22/21 19:21       |          | 1.015  | 0.180                               | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 13:33 | 7/27/21 15:59       |          | 10.15  | 289                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/21/21 13:33 | 7/27/21 15:59       |          | 10.15  | 56.9                                | mg/L  | 0.3045   | 4.06       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |        |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 12:57       |          | 10.15  | 23.5                                | mg/L  | 0.08120  | 0.406      |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | 0.00475                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | 0.0143                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | 0.000480                            | mg/L  | 0.000406 | 0.001015   | J |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | 0.000576                            | mg/L  | 0.000068 | 0.000203   |   |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | 0.216                               | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | 0.0000715                           | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | 6.50                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 22:46       |          | 92.365 | 24.8                                | mg/L  | 0.006188 | 0.018473   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:11       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |        |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 21:34       |          | 92.365 | 26.0                                | mg/L  | 0.006188 | 0.018473   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |        |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 19:33       |          | 1      | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |        |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1      | 134                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |        |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/22/21 12:06 | 8/2/21 08:20        |          | 1      | 3090                                | mg/L  |          | 147.1      |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-6

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 13:57  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13185

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 134     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 0.01    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:23 | 7/26/21 10:23       |          | 1   | 4.04    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:28 | 7/26/21 13:28       |          | 1   | 0.131   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 13:36 | 7/23/21 13:36       |          | 160 | 1930    | mg/L  | 80.00 | 160 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 7/20/21 13:54 | 7/20/21 13:54       |          |     | 3020.13 | uS/cm |       |     | FA |
| pH   | 7/20/21 13:54 | 7/20/21 13:54       |          |     | 5.99    | SU    |       |     | FA |
| Temperature                                  | 7/20/21 13:54 | 7/20/21 13:54       |          |     | 21.06   | C     |       |     | FA |
| Turbidity                                    | 7/20/21 13:54 | 7/20/21 13:54       |          |     | 1.09    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/20/21 13:57

**Customer ID:**

**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-6

**Laboratory ID Number:** BB13185

| Sample  | Analysis               | Units | MB         |          | Spike | MS      | MSD     | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |         |         | Standard | Limit              | Rec   | Limit       |       |       |
| BB13190 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0990  | 0.0993  | 0.0929   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 0.303 | 20.0  |
| BB13190 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.108   | 0.109   | 0.112    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 0.922 | 20.0  |
| BB13190 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.0963  | 0.0976  | 0.103    | 0.0850 to 0.115    | 95.3  | 70.0 to 130 | 1.34  | 20.0  |
| BB13190 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.107   | 0.109   | 0.106    | 0.0850 to 0.115    | 106   | 70.0 to 130 | 1.85  | 20.0  |
| BB13191 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.15    | 2.11    | 0.197    | 0.170 to 0.230     | 95.0  | 70.0 to 130 | 1.88  | 20.0  |
| BB13190 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0902  | 0.0876  | 0.0932   | 0.0850 to 0.115    | 89.2  | 70.0 to 130 | 2.92  | 20.0  |
| BB13190 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.73    | 1.74    | 0.100    | 0.0850 to 0.115    | 100   | 70.0 to 130 | 0.576 | 20.0  |
| BB13190 | Boron, Total           | mg/L  | 0.00843    | 0.0650   | 1.00  | 1.22    | 1.22    | 0.982    | 0.850 to 1.15      | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13189 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334     | 335     | 4.97     | 4.25 to 5.75       | 80.0  | 70.0 to 130 | 0.299 | 20.0  |
| BB13190 | Iron, Total            | mg/L  | 0.00365    | 0.0176   | 0.2   | 8.54    | 8.58    | 0.201    | 0.170 to 0.230     | -65.0 | 70.0 to 130 | 0.467 | 20.0  |
| BB13190 | Sodium, Total          | mg/L  | 0.00987    | 0.0660   | 5.00  | 68.8    | 68.5    | 4.98     | 4.25 to 5.75       | 64.0  | 70.0 to 130 | 0.437 | 20.0  |
| BB13190 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.111   | 0.114   | 0.101    | 0.0850 to 0.115    | 97.9  | 70.0 to 130 | 2.67  | 20.0  |
| BB13190 | Lithium, Total         | mg/L  | 4.400E-06  | 0.0154   | 0.200 | 0.436   | 0.437   | 0.197    | 0.170 to 0.230     | 120   | 70.0 to 130 | 0.229 | 20.0  |
| BB13190 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.0984  | 0.103   | 0.0998   | 0.0850 to 0.115    | 98.2  | 70.0 to 130 | 4.57  | 20.0  |
| BB13190 | Magnesium, Total       | mg/L  | 0.0146     | 0.0462   | 5.00  | 78.6    | 78.8    | 5.02     | 4.25 to 5.75       | 46.0  | 70.0 to 130 | 0.254 | 20.0  |
| BB13190 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.122   | 0.122   | 0.0990   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.3    | 16.2    | 10.5     | 8.50 to 11.5       | 105   | 70.0 to 130 | 0.615 | 20.0  |
| BB13190 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00388 | 0.00388 | 0.00389  | 0.00340 to 0.00460 | 97.0  | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.0928  | 0.0941  | 0.0982   | 0.0850 to 0.115    | 92.7  | 70.0 to 130 | 1.39  | 20.0  |
| BB13190 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.103   | 0.106   | 0.110    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 2.87  | 20.0  |
| BB13191 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 3.05    | 3.03    | 0.108    | 0.0850 to 0.115    | 10.0  | 70.0 to 130 | 0.658 | 20.0  |
| BB13190 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0961  | 0.0967  | 0.0988   | 0.0850 to 0.115    | 96.0  | 70.0 to 130 | 0.622 | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 13:57  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-6

**Laboratory ID Number:** BB13185

| Sample  | Analysis                   | Units | MB     | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|--------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB13190 | Sulfate                    | mg/L  | -0.437 | 1.00     | 1000  | 1680 | 667              | 19.0     | 18.0 to 22.0   | 102  | 80.0 to 120 | 0.300 | 20.0       |
| BB13190 | Fluoride                   | mg/L  | 0.0205 | 0.100    | 2.50  | 2.84 | 0.286            | 2.59     | 2.25 to 2.75   | 103  | 80.0 to 120 | 6.50  | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |        |          |       |      | 163              | 53.4     | 45.0 to 55.0   |      |             | 0.612 | 10.0       |
| BB13190 | Chloride                   | mg/L  | -0.107 | 1.00     | 10.0  | 13.3 | 3.46             | 9.89     | 9.00 to 11.0   | 96.6 | 80.0 to 120 | 5.07  | 20.0       |
| BB13190 | Solids, Dissolved          | mg/L  | -2.00  | 25.0     |       |      | 1060             | 55.0     | 40.0 to 60.0   |      |             | 0.935 | 5.00       |

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



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-6 DUP

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 13:57  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13186

| Name                                | Prepared      | Analyzed            | Vio Spec | DF     | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|--------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 13:33 | 7/22/21 19:25       |          | 1.015  | 0.0631                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 13:50       |          | 10.15  | 351                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 13:33 | 7/27/21 16:02       |          | 10.15  | 23.7                                | mg/L  | 0.08120  | 0.406      |   |
| * Lithium, Total                    | 7/21/21 13:33 | 7/22/21 19:25       |          | 1.015  | 0.180                               | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 13:33 | 7/27/21 16:02       |          | 10.15  | 291                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/21/21 13:33 | 7/27/21 16:02       |          | 10.15  | 57.2                                | mg/L  | 0.3045   | 4.06       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |        |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 13:01       |          | 10.15  | 23.3                                | mg/L  | 0.08120  | 0.406      |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | 0.00451                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | 0.0137                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | 0.000453                            | mg/L  | 0.000406 | 0.001015   | J |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | 0.000626                            | mg/L  | 0.000068 | 0.000203   |   |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | 0.216                               | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | 0.0000827                           | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | 6.38                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 22:49       |          | 92.365 | 25.9                                | mg/L  | 0.006188 | 0.018473   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:14       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |        |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 21:38       |          | 92.365 | 27.9                                | mg/L  | 0.006188 | 0.018473   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |        |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 19:37       |          | 1      | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |        |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1      | 135                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |        |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/22/21 12:06 | 8/2/21 08:20        |          | 1      | 2980                                | mg/L  |          | 147.1      |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-6 DUP

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 13:57  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13186

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 135     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 0.01    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:24 | 7/26/21 10:24       |          | 1   | 4.05    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:29 | 7/26/21 13:29       |          | 1   | 0.138   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 13:37 | 7/23/21 13:37       |          | 160 | 2000    | mg/L  | 80.00 | 160 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 7/20/21 13:54 | 7/20/21 13:54       |          |     | 3020.13 | uS/cm |       |     | FA |
| pH   | 7/20/21 13:54 | 7/20/21 13:54       |          |     | 5.99    | SU    |       |     | FA |
| Temperature                                  | 7/20/21 13:54 | 7/20/21 13:54       |          |     | 21.06   | C     |       |     | FA |
| Turbidity                                    | 7/20/21 13:54 | 7/20/21 13:54       |          |     | 1.09    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/20/21 13:57

**Customer ID:**

**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-6 DUP

**Laboratory ID Number:** BB13186

| Sample  | Analysis               | Units | MB         |          |       |         | Standard |          | Rec                |       | Prec        | Limit |       |
|---------|------------------------|-------|------------|----------|-------|---------|----------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD      | Standard | Limit              | Rec   |             |       | Limit |
| BB13190 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.0963  | 0.0976   | 0.103    | 0.0850 to 0.115    | 95.3  | 70.0 to 130 | 1.34  | 20.0  |
| BB13190 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0990  | 0.0993   | 0.0929   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 0.303 | 20.0  |
| BB13190 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.108   | 0.109    | 0.112    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 0.922 | 20.0  |
| BB13190 | Lithium, Total         | mg/L  | 4.400E-06  | 0.0154   | 0.200 | 0.436   | 0.437    | 0.197    | 0.170 to 0.230     | 120   | 70.0 to 130 | 0.229 | 20.0  |
| BB13190 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.0984  | 0.103    | 0.0998   | 0.0850 to 0.115    | 98.2  | 70.0 to 130 | 4.57  | 20.0  |
| BB13190 | Magnesium, Total       | mg/L  | 0.0146     | 0.0462   | 5.00  | 78.6    | 78.8     | 5.02     | 4.25 to 5.75       | 46.0  | 70.0 to 130 | 0.254 | 20.0  |
| BB13190 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.122   | 0.122    | 0.0990   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.3    | 16.2     | 10.5     | 8.50 to 11.5       | 105   | 70.0 to 130 | 0.615 | 20.0  |
| BB13190 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00388 | 0.00388  | 0.00389  | 0.00340 to 0.00460 | 97.0  | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Sodium, Total          | mg/L  | 0.00987    | 0.0660   | 5.00  | 68.8    | 68.5     | 4.98     | 4.25 to 5.75       | 64.0  | 70.0 to 130 | 0.437 | 20.0  |
| BB13190 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.111   | 0.114    | 0.101    | 0.0850 to 0.115    | 97.9  | 70.0 to 130 | 2.67  | 20.0  |
| BB13190 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.73    | 1.74     | 0.100    | 0.0850 to 0.115    | 100   | 70.0 to 130 | 0.576 | 20.0  |
| BB13190 | Boron, Total           | mg/L  | 0.00843    | 0.0650   | 1.00  | 1.22    | 1.22     | 0.982    | 0.850 to 1.15      | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13189 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334     | 335      | 4.97     | 4.25 to 5.75       | 80.0  | 70.0 to 130 | 0.299 | 20.0  |
| BB13190 | Iron, Total            | mg/L  | 0.00365    | 0.0176   | 0.2   | 8.54    | 8.58     | 0.201    | 0.170 to 0.230     | -65.0 | 70.0 to 130 | 0.467 | 20.0  |
| BB13190 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.0928  | 0.0941   | 0.0982   | 0.0850 to 0.115    | 92.7  | 70.0 to 130 | 1.39  | 20.0  |
| BB13190 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.103   | 0.106    | 0.110    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 2.87  | 20.0  |
| BB13191 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 3.05    | 3.03     | 0.108    | 0.0850 to 0.115    | 10.0  | 70.0 to 130 | 0.658 | 20.0  |
| BB13190 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0961  | 0.0967   | 0.0988   | 0.0850 to 0.115    | 96.0  | 70.0 to 130 | 0.622 | 20.0  |
| BB13190 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.107   | 0.109    | 0.106    | 0.0850 to 0.115    | 106   | 70.0 to 130 | 1.85  | 20.0  |
| BB13191 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.15    | 2.11     | 0.197    | 0.170 to 0.230     | 95.0  | 70.0 to 130 | 1.88  | 20.0  |
| BB13190 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0902  | 0.0876   | 0.0932   | 0.0850 to 0.115    | 89.2  | 70.0 to 130 | 2.92  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 13:57  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-6 DUP

**Laboratory ID Number:** BB13186

| Sample  | Analysis                   | Units | MB     | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|--------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB13190 | Sulfate                    | mg/L  | -0.437 | 1.00     | 1000  | 1680 | 667              | 19.0     | 18.0 to 22.0   | 102  | 80.0 to 120 | 0.300 | 20.0       |
| BB13190 | Fluoride                   | mg/L  | 0.0205 | 0.100    | 2.50  | 2.84 | 0.286            | 2.59     | 2.25 to 2.75   | 103  | 80.0 to 120 | 6.50  | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |        |          |       |      | 163              | 53.4     | 45.0 to 55.0   |      |             | 0.612 | 10.0       |
| BB13190 | Chloride                   | mg/L  | -0.107 | 1.00     | 10.0  | 13.3 | 3.46             | 9.89     | 9.00 to 11.0   | 96.6 | 80.0 to 120 | 5.07  | 20.0       |
| BB13190 | Solids, Dissolved          | mg/L  | -2.00  | 25.0     |       |      | 1060             | 55.0     | 40.0 to 60.0   |      |             | 0.935 | 5.00       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-8

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 15:25  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13187

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 13:33 | 7/22/21 19:28       |          | 1.015 | 0.0656                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 13:54       |          | 10.15 | 281                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 13:33 | 7/22/21 19:28       |          | 1.015 | 1.98                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/21/21 13:33 | 7/22/21 19:28       |          | 1.015 | 0.151                               | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 13:33 | 7/27/21 16:05       |          | 10.15 | 274                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/21/21 13:33 | 7/27/21 16:05       |          | 10.15 | 38.0                                | mg/L  | 0.3045   | 4.06       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 10:50       |          | 1.015 | 1.29                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | 0.00111                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | 0.0141                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | 0.00714                             | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | 0.0000944                           | mg/L  | 0.000068 | 0.000203   | J |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | 0.000329                            | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | 8.14                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | 0.929                               | mg/L  | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:18       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 12:31       |          | 1.015 | 0.917                               | mg/L  | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 19:40       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 321                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/22/21 12:06 | 8/2/21 08:20        |          | 1     | 2420                                | mg/L  |          | 125        |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-8

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 15:25  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13187

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 321     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.20    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500CI E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:26 | 7/26/21 10:26       |          | 1  | 14.3    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:30 | 7/26/21 13:30       |          | 1  | 0.262   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 13:35 | 7/23/21 13:35       |          | 40 | 1500    | mg/L  | 20.00 | 40  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/20/21 15:22 | 7/20/21 15:22       |          |    | 2503.35 | uS/cm |       |     | FA |
| pH   | 7/20/21 15:22 | 7/20/21 15:22       |          |    | 6.64    | SU    |       |     | FA |
| Temperature                                  | 7/20/21 15:22 | 7/20/21 15:22       |          |    | 22.63   | C     |       |     | FA |
| Turbidity                                    | 7/20/21 15:22 | 7/20/21 15:22       |          |    | 6.59    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 15:25  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-8

**Laboratory ID Number:** BB13187

| Sample  | Analysis               | Units | MB         |          |       |         | Standard |          | Rec                |       | Prec        | Limit |       |
|---------|------------------------|-------|------------|----------|-------|---------|----------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD      | Standard | Limit              | Rec   |             |       | Limit |
| BB13190 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0990  | 0.0993   | 0.0929   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 0.303 | 20.0  |
| BB13190 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.108   | 0.109    | 0.112    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 0.922 | 20.0  |
| BB13190 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.73    | 1.74     | 0.100    | 0.0850 to 0.115    | 100   | 70.0 to 130 | 0.576 | 20.0  |
| BB13190 | Boron, Total           | mg/L  | 0.00843    | 0.0650   | 1.00  | 1.22    | 1.22     | 0.982    | 0.850 to 1.15      | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13189 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334     | 335      | 4.97     | 4.25 to 5.75       | 80.0  | 70.0 to 130 | 0.299 | 20.0  |
| BB13190 | Iron, Total            | mg/L  | 0.00365    | 0.0176   | 0.2   | 8.54    | 8.58     | 0.201    | 0.170 to 0.230     | -65.0 | 70.0 to 130 | 0.467 | 20.0  |
| BB13190 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.0963  | 0.0976   | 0.103    | 0.0850 to 0.115    | 95.3  | 70.0 to 130 | 1.34  | 20.0  |
| BB13190 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.0928  | 0.0941   | 0.0982   | 0.0850 to 0.115    | 92.7  | 70.0 to 130 | 1.39  | 20.0  |
| BB13190 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.103   | 0.106    | 0.110    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 2.87  | 20.0  |
| BB13191 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 3.05    | 3.03     | 0.108    | 0.0850 to 0.115    | 10.0  | 70.0 to 130 | 0.658 | 20.0  |
| BB13190 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0961  | 0.0967   | 0.0988   | 0.0850 to 0.115    | 96.0  | 70.0 to 130 | 0.622 | 20.0  |
| BB13190 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.107   | 0.109    | 0.106    | 0.0850 to 0.115    | 106   | 70.0 to 130 | 1.85  | 20.0  |
| BB13191 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.15    | 2.11     | 0.197    | 0.170 to 0.230     | 95.0  | 70.0 to 130 | 1.88  | 20.0  |
| BB13190 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0902  | 0.0876   | 0.0932   | 0.0850 to 0.115    | 89.2  | 70.0 to 130 | 2.92  | 20.0  |
| BB13190 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.122   | 0.122    | 0.0990   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.3    | 16.2     | 10.5     | 8.50 to 11.5       | 105   | 70.0 to 130 | 0.615 | 20.0  |
| BB13190 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00388 | 0.00388  | 0.00389  | 0.00340 to 0.00460 | 97.0  | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Sodium, Total          | mg/L  | 0.00987    | 0.0660   | 5.00  | 68.8    | 68.5     | 4.98     | 4.25 to 5.75       | 64.0  | 70.0 to 130 | 0.437 | 20.0  |
| BB13190 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.111   | 0.114    | 0.101    | 0.0850 to 0.115    | 97.9  | 70.0 to 130 | 2.67  | 20.0  |
| BB13190 | Lithium, Total         | mg/L  | 4.400E-06  | 0.0154   | 0.200 | 0.436   | 0.437    | 0.197    | 0.170 to 0.230     | 120   | 70.0 to 130 | 0.229 | 20.0  |
| BB13190 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.0984  | 0.103    | 0.0998   | 0.0850 to 0.115    | 98.2  | 70.0 to 130 | 4.57  | 20.0  |
| BB13190 | Magnesium, Total       | mg/L  | 0.0146     | 0.0462   | 5.00  | 78.6    | 78.8     | 5.02     | 4.25 to 5.75       | 46.0  | 70.0 to 130 | 0.254 | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 15:25  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-8

**Laboratory ID Number:** BB13187

| Sample  | Analysis                   | Units | MB     | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|--------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB13190 | Sulfate                    | mg/L  | -0.437 | 1.00     | 1000  | 1680 | 667              | 19.0     | 18.0 to 22.0   | 102  | 80.0 to 120 | 0.300 | 20.0       |
| BB13190 | Chloride                   | mg/L  | -0.107 | 1.00     | 10.0  | 13.3 | 3.46             | 9.89     | 9.00 to 11.0   | 96.6 | 80.0 to 120 | 5.07  | 20.0       |
| BB13190 | Solids, Dissolved          | mg/L  | -2.00  | 25.0     |       |      | 1060             | 55.0     | 40.0 to 60.0   |      |             | 0.935 | 5.00       |
| BB13190 | Fluoride                   | mg/L  | 0.0205 | 0.100    | 2.50  | 2.84 | 0.286            | 2.59     | 2.25 to 2.75   | 103  | 80.0 to 120 | 6.50  | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |        |          |       |      | 163              | 53.4     | 45.0 to 55.0   |      |             | 0.612 | 10.0       |

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



# Certificate Of Analysis

**Description:** Gorgas Landfill Field Blank-2

**Location Code:** WMWGORLFFB  
**Collected:** 7/20/21 16:05  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13188

| Name                                       | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|--|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b>        |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                             | 7/21/21 13:33 | 7/22/21 19:31       |          | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                           | 7/28/21 08:00 | 7/28/21 13:57       |          | 1.015 | Not Detected                        | mg/L  | 0.070035 | 0.406      | U |
| * Iron, Total                              | 7/21/21 13:33 | 7/22/21 19:31       |          | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| * Lithium, Total                           | 7/21/21 13:33 | 7/22/21 19:31       |          | 1.015 | Not Detected                        | mg/L  | 0.007105 | 0.01999956 | U |
| * Magnesium, Total                         | 7/21/21 13:33 | 7/22/21 19:31       |          | 1.015 | Not Detected                        | mg/L  | 0.021315 | 0.406      | U |
| * Sodium, Total                            | 7/21/21 13:33 | 7/22/21 19:31       |          | 1.015 | Not Detected                        | mg/L  | 0.03045  | 0.406      | U |
| <b>Analytical Method: EPA 200.8</b>        |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                          | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                           | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Barium, Total                            | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000102 | 0.000203   | U |
| * Beryllium, Total                         | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                           | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                          | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                            | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                              | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                        | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Manganese, Total                         | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | 0.000115                            | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                         | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.169505 | 0.5075     | U |
| * Selenium, Total                          | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                          | 7/23/21 13:00 | 7/26/21 14:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 245.1</b>        |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA                   | 7/22/21 15:11 | 7/22/21 19:44       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2540C</b>         |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                        | 7/22/21 12:06 | 8/2/21 08:20        |          | 1     | Not Detected                        | mg/L  |          | 25         | U |
| <b>Analytical Method: SM4500CI E</b>       |               | <b>Analyst: JCC</b> |          |       |                                     |       |          |            |   |
| * Chloride                                 | 7/26/21 10:27 | 7/26/21 10:27       |          | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |
| <b>Analytical Method: SM4500F G 2017</b>   |               | <b>Analyst: JCC</b> |          |       |                                     |       |          |            |   |
| * Fluoride                                 | 7/26/21 13:31 | 7/26/21 13:31       |          | 1     | Not Detected                        | mg/L  | 0.06     | 0.1        | U |
| <b>Analytical Method: SM4500SO4 E 2011</b> |               | <b>Analyst: JCC</b> |          |       |                                     |       |          |            |   |
| * Sulfate                                  | 7/23/21 13:39 | 7/23/21 13:39       |          | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLFFB

**Sample Date:** 7/20/21 16:05

**Customer ID:**

**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill Field Blank-2

**Laboratory ID Number:** BB13188

| Sample  | Analysis               | Units | MB         |          |       |         |         | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec   | Limit       |       |       |
| BB13190 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0990  | 0.0993  | 0.0929   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 0.303 | 20.0  |
| BB13190 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.108   | 0.109   | 0.112    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 0.922 | 20.0  |
| BB13190 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.107   | 0.109   | 0.106    | 0.0850 to 0.115    | 106   | 70.0 to 130 | 1.85  | 20.0  |
| BB13190 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0902  | 0.0876  | 0.0932   | 0.0850 to 0.115    | 89.2  | 70.0 to 130 | 2.92  | 20.0  |
| BB13190 | Sodium, Total          | mg/L  | 0.00987    | 0.0660   | 5.00  | 68.8    | 68.5    | 4.98     | 4.25 to 5.75       | 64.0  | 70.0 to 130 | 0.437 | 20.0  |
| BB13190 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.111   | 0.114   | 0.101    | 0.0850 to 0.115    | 97.9  | 70.0 to 130 | 2.67  | 20.0  |
| BB13190 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.122   | 0.122   | 0.0990   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.3    | 16.2    | 10.5     | 8.50 to 11.5       | 105   | 70.0 to 130 | 0.615 | 20.0  |
| BB13190 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00388 | 0.00388 | 0.00389  | 0.00340 to 0.00460 | 97.0  | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.0963  | 0.0976  | 0.103    | 0.0850 to 0.115    | 95.3  | 70.0 to 130 | 1.34  | 20.0  |
| BB13190 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.0928  | 0.0941  | 0.0982   | 0.0850 to 0.115    | 92.7  | 70.0 to 130 | 1.39  | 20.0  |
| BB13190 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.103   | 0.106   | 0.110    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 2.87  | 20.0  |
| BB13190 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0961  | 0.0967  | 0.0988   | 0.0850 to 0.115    | 96.0  | 70.0 to 130 | 0.622 | 20.0  |
| BB13190 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.73    | 1.74    | 0.100    | 0.0850 to 0.115    | 100   | 70.0 to 130 | 0.576 | 20.0  |
| BB13190 | Boron, Total           | mg/L  | 0.00843    | 0.0650   | 1.00  | 1.22    | 1.22    | 0.982    | 0.850 to 1.15      | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13189 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334     | 335     | 4.97     | 4.25 to 5.75       | 80.0  | 70.0 to 130 | 0.299 | 20.0  |
| BB13190 | Iron, Total            | mg/L  | 0.00365    | 0.0176   | 0.2   | 8.54    | 8.58    | 0.201    | 0.170 to 0.230     | -65.0 | 70.0 to 130 | 0.467 | 20.0  |
| BB13190 | Lithium, Total         | mg/L  | 4.400E-06  | 0.0154   | 0.200 | 0.436   | 0.437   | 0.197    | 0.170 to 0.230     | 120   | 70.0 to 130 | 0.229 | 20.0  |
| BB13190 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.0984  | 0.103   | 0.0998   | 0.0850 to 0.115    | 98.2  | 70.0 to 130 | 4.57  | 20.0  |
| BB13190 | Magnesium, Total       | mg/L  | 0.0146     | 0.0462   | 5.00  | 78.6    | 78.8    | 5.02     | 4.25 to 5.75       | 46.0  | 70.0 to 130 | 0.254 | 20.0  |

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGORLFFB

**Sample Date:** 7/20/21 16:05

**Customer ID:**

**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill Field Blank-2

**Laboratory ID Number:** BB13188

| Sample  | Analysis          | Units | MB     | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec  | Rec<br>Limit | Prec  | Prec<br>Limit |
|---------|-------------------|-------|--------|-------------|-------|------|---------------------|----------|-------------------|------|--------------|-------|---------------|
| BB13190 | Sulfate           | mg/L  | -0.437 | 1.00        | 1000  | 1680 | 667                 | 19.0     | 18.0 to 22.0      | 102  | 80.0 to 120  | 0.300 | 20.0          |
| BB13190 | Chloride          | mg/L  | -0.107 | 1.00        | 10.0  | 13.3 | 3.46                | 9.89     | 9.00 to 11.0      | 96.6 | 80.0 to 120  | 5.07  | 20.0          |
| BB13190 | Solids, Dissolved | mg/L  | -2.00  | 25.0        |       |      | 1060                | 55.0     | 40.0 to 60.0      |      |              | 0.935 | 5.00          |
| BB13190 | Fluoride          | mg/L  | 0.0205 | 0.100       | 2.50  | 2.84 | 0.286               | 2.59     | 2.25 to 2.75      | 103  | 80.0 to 120  | 6.50  | 20.0          |

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**Comments:**

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-12

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 11:53  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13189

| Name                                | Prepared      | Analyzed            | Vio Spec | DF     | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|--------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/21/21 13:33 | 7/22/21 19:35       |          | 1.015  | 0.227                               | mg/L  | 0.030000 | 0.1015     |   |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 14:04       |          | 10.15  | 330                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/21/21 13:33 | 7/27/21 15:42       |          | 101.5  | 173                                 | mg/L  | 0.8120   | 4.06       |   |
| * Lithium, Total                    | 7/21/21 13:33 | 7/22/21 19:35       |          | 1.015  | 0.0769                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/21/21 13:33 | 7/27/21 16:09       |          | 10.15  | 360                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/21/21 13:33 | 7/27/21 16:09       |          | 10.15  | 46.0                                | mg/L  | 0.3045   | 4.06       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |        |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 13:04       |          | 101.5  | 181                                 | mg/L  | 0.8120   | 4.06       |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | 0.0668                              | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | 0.0120                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | 0.000276                            | mg/L  | 0.000203 | 0.001015   | J |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | 0.0460                              | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | 0.000231                            | mg/L  | 0.000068 | 0.000203   |   |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | 0.000169                            | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | 23.0                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 23:03       |          | 92.365 | 21.3                                | mg/L  | 0.006188 | 0.018473   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:25       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |        |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 21:41       |          | 92.365 | 20.6                                | mg/L  | 0.006188 | 0.018473   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |        |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 19:48       |          | 1      | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |        |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1      | 206                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |        |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/22/21 12:06 | 8/2/21 08:20        |          | 1      | 3680                                | mg/L  |          | 178.6      |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-12

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 11:53  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13189

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 206     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 0.01    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:28 | 7/26/21 10:28       |          | 1   | 9.85    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:32 | 7/26/21 13:32       |          | 1   | 0.219   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 13:40 | 7/23/21 13:40       |          | 160 | 2500    | mg/L  | 80.00 | 160 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 7/20/21 11:50 | 7/20/21 11:50       |          |     | 3168.03 | uS/cm |       |     | FA |
| pH   | 7/20/21 11:50 | 7/20/21 11:50       |          |     | 5.53    | SU    |       |     | FA |
| Temperature                                  | 7/20/21 11:50 | 7/20/21 11:50       |          |     | 22.65   | C     |       |     | FA |
| Turbidity                                    | 7/20/21 11:50 | 7/20/21 11:50       |          |     | 4.23    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/20/21 11:53

**Customer ID:**

**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-12

**Laboratory ID Number:** BB13189

| Sample  | Analysis               | Units | MB         |          |       |         |         | Standard |                    | Rec   |             |       | Prec Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|-------|-------------|-------|------------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec   | Limit       | Prec  |            |
| BB13190 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.107   | 0.109   | 0.106    | 0.0850 to 0.115    | 106   | 70.0 to 130 | 1.85  | 20.0       |
| BB13191 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.15    | 2.11    | 0.197    | 0.170 to 0.230     | 95.0  | 70.0 to 130 | 1.88  | 20.0       |
| BB13190 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0902  | 0.0876  | 0.0932   | 0.0850 to 0.115    | 89.2  | 70.0 to 130 | 2.92  | 20.0       |
| BB13190 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.73    | 1.74    | 0.100    | 0.0850 to 0.115    | 100   | 70.0 to 130 | 0.576 | 20.0       |
| BB13190 | Boron, Total           | mg/L  | 0.00843    | 0.0650   | 1.00  | 1.22    | 1.22    | 0.982    | 0.850 to 1.15      | 102   | 70.0 to 130 | 0.00  | 20.0       |
| BB13189 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334     | 335     | 4.97     | 4.25 to 5.75       | 80.0  | 70.0 to 130 | 0.299 | 20.0       |
| BB13190 | Iron, Total            | mg/L  | 0.00365    | 0.0176   | 0.2   | 8.54    | 8.58    | 0.201    | 0.170 to 0.230     | -65.0 | 70.0 to 130 | 0.467 | 20.0       |
| BB13190 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0990  | 0.0993  | 0.0929   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 0.303 | 20.0       |
| BB13190 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.108   | 0.109   | 0.112    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 0.922 | 20.0       |
| BB13190 | Sodium, Total          | mg/L  | 0.00987    | 0.0660   | 5.00  | 68.8    | 68.5    | 4.98     | 4.25 to 5.75       | 64.0  | 70.0 to 130 | 0.437 | 20.0       |
| BB13190 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.111   | 0.114   | 0.101    | 0.0850 to 0.115    | 97.9  | 70.0 to 130 | 2.67  | 20.0       |
| BB13190 | Lithium, Total         | mg/L  | 4.400E-06  | 0.0154   | 0.200 | 0.436   | 0.437   | 0.197    | 0.170 to 0.230     | 120   | 70.0 to 130 | 0.229 | 20.0       |
| BB13190 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.0984  | 0.103   | 0.0998   | 0.0850 to 0.115    | 98.2  | 70.0 to 130 | 4.57  | 20.0       |
| BB13190 | Magnesium, Total       | mg/L  | 0.0146     | 0.0462   | 5.00  | 78.6    | 78.8    | 5.02     | 4.25 to 5.75       | 46.0  | 70.0 to 130 | 0.254 | 20.0       |
| BB13190 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.0963  | 0.0976  | 0.103    | 0.0850 to 0.115    | 95.3  | 70.0 to 130 | 1.34  | 20.0       |
| BB13190 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.122   | 0.122   | 0.0990   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 0.00  | 20.0       |
| BB13190 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.3    | 16.2    | 10.5     | 8.50 to 11.5       | 105   | 70.0 to 130 | 0.615 | 20.0       |
| BB13190 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00388 | 0.00388 | 0.00389  | 0.00340 to 0.00460 | 97.0  | 70.0 to 130 | 0.00  | 20.0       |
| BB13190 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.0928  | 0.0941  | 0.0982   | 0.0850 to 0.115    | 92.7  | 70.0 to 130 | 1.39  | 20.0       |
| BB13190 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.103   | 0.106   | 0.110    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 2.87  | 20.0       |
| BB13191 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 3.05    | 3.03    | 0.108    | 0.0850 to 0.115    | 10.0  | 70.0 to 130 | 0.658 | 20.0       |
| BB13190 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0961  | 0.0967  | 0.0988   | 0.0850 to 0.115    | 96.0  | 70.0 to 130 | 0.622 | 20.0       |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 11:53  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-12

**Laboratory ID Number:** BB13189

| Sample  | Analysis                   | Units | MB     | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|--------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB13190 | Sulfate                    | mg/L  | -0.437 | 1.00     | 1000  | 1680 | 667              | 19.0     | 18.0 to 22.0   | 102  | 80.0 to 120 | 0.300 | 20.0       |
| BB13190 | Fluoride                   | mg/L  | 0.0205 | 0.100    | 2.50  | 2.84 | 0.286            | 2.59     | 2.25 to 2.75   | 103  | 80.0 to 120 | 6.50  | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |        |          |       |      | 163              | 53.4     | 45.0 to 55.0   |      |             | 0.612 | 10.0       |
| BB13190 | Chloride                   | mg/L  | -0.107 | 1.00     | 10.0  | 13.3 | 3.46             | 9.89     | 9.00 to 11.0   | 96.6 | 80.0 to 120 | 5.07  | 20.0       |
| BB13190 | Solids, Dissolved          | mg/L  | -2.00  | 25.0     |       |      | 1060             | 55.0     | 40.0 to 60.0   |      |             | 0.935 | 5.00       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-10

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 13:15  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13190

| Name                                | Prepared      | Analyzed      | Vio Spec            | DF    | Results                             | Units | MDL      | RL         | Q  |
|-------------------------------------|---------------|---------------|---------------------|-------|-------------------------------------|-------|----------|------------|----|
| <b>Analytical Method: EPA 200.7</b> |               |               | <b>Analyst: ABB</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |    |
| * Boron, Total                      | 7/21/21 13:33 | 7/22/21 19:38 |                     | 1.015 | 0.201                               | mg/L  | 0.030000 | 0.1015     |    |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 14:01 |                     | 10.15 | 149                                 | mg/L  | 0.70035  | 4.06       |    |
| * Iron, Total                       | 7/21/21 13:33 | 7/27/21 16:12 |                     | 10.15 | 8.67                                | mg/L  | 0.08120  | 0.406      | RA |
| * Lithium, Total                    | 7/21/21 13:33 | 7/22/21 19:38 |                     | 1.015 | 0.196                               | mg/L  | 0.007105 | 0.01999956 |    |
| * Magnesium, Total                  | 7/21/21 13:33 | 7/27/21 16:12 |                     | 10.15 | 76.3                                | mg/L  | 0.21315  | 4.06       | RA |
| * Sodium, Total                     | 7/21/21 13:33 | 7/27/21 16:12 |                     | 10.15 | 65.6                                | mg/L  | 0.3045   | 4.06       | RA |
| <b>Analytical Method: EPA 200.7</b> |               |               | <b>Analyst: ABB</b> |       |                                     |       |          |            |    |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 13:08 |                     | 10.15 | 10.1                                | mg/L  | 0.08120  | 0.406      |    |
| <b>Analytical Method: EPA 200.8</b> |               |               | <b>Analyst: ABB</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |    |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U  |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | 0.00102                             | mg/L  | 0.000068 | 0.000203   |    |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | 0.0208                              | mg/L  | 0.000102 | 0.000203   |    |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | 0.000951                            | mg/L  | 0.000406 | 0.001015   | J  |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | 0.000807                            | mg/L  | 0.000068 | 0.000203   | J  |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | 0.000213                            | mg/L  | 0.000203 | 0.001015   | J  |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | 0.0131                              | mg/L  | 0.000068 | 0.000203   |    |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | 0.0000767                           | mg/L  | 0.000068 | 0.000203   | J  |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | 0.0000769                           | mg/L  | 0.000068 | 0.000203   | J  |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | 5.81                                | mg/L  | 0.169505 | 0.5075     |    |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 23:07 |                     | 5.075 | 1.63                                | mg/L  | 0.000340 | 0.001015   |    |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | 0.000982                            | mg/L  | 0.000508 | 0.001015   | J  |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:29 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U  |
| <b>Analytical Method: EPA 200.8</b> |               |               | <b>Analyst: DLJ</b> |       |                                     |       |          |            |    |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 21:45 |                     | 5.075 | 1.87                                | mg/L  | 0.000340 | 0.001015   |    |
| <b>Analytical Method: EPA 245.1</b> |               |               | <b>Analyst: ABB</b> |       |                                     |       |          |            |    |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 19:52 |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U  |
| <b>Analytical Method: SM 2320 B</b> |               |               | <b>Analyst: JAG</b> |       |                                     |       |          |            |    |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58 |                     | 1     | 123                                 | mg/L  |          | 0.1        |    |
| <b>Analytical Method: SM 2540C</b>  |               |               | <b>Analyst: CNJ</b> |       |                                     |       |          |            |    |
| * Solids, Dissolved                 | 7/22/21 12:06 | 8/2/21 08:20  |                     | 1     | 1080                                | mg/L  |          | 75.8       |    |

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

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



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-10

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 13:15  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13190

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 123     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.04    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:29 | 7/26/21 10:29       |          | 1  | 3.64    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:34 | 7/26/21 13:34       |          | 1  | 0.268   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 13:41 | 7/23/21 13:41       |          | 50 | 665     | mg/L  | 25.00 | 50  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/20/21 13:11 | 7/20/21 13:11       |          |    | 1257.92 | uS/cm |       |     | FA |
| pH   | 7/20/21 13:11 | 7/20/21 13:11       |          |    | 6.46    | SU    |       |     | FA |
| Temperature                                  | 7/20/21 13:11 | 7/20/21 13:11       |          |    | 20.67   | C     |       |     | FA |
| Turbidity                                    | 7/20/21 13:11 | 7/20/21 13:11       |          |    | 5.42    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/20/21 13:15

**Customer ID:**

**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-10

**Laboratory ID Number:** BB13190

| Sample  | Analysis               | Units | MB         |          |       |         | Standard |          | Rec                |       | Prec        | Limit |       |
|---------|------------------------|-------|------------|----------|-------|---------|----------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD      | Standard | Limit              | Rec   |             |       | Limit |
| BB13190 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.0963  | 0.0976   | 0.103    | 0.0850 to 0.115    | 95.3  | 70.0 to 130 | 1.34  | 20.0  |
| BB13190 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.122   | 0.122    | 0.0990   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.3    | 16.2     | 10.5     | 8.50 to 11.5       | 105   | 70.0 to 130 | 0.615 | 20.0  |
| BB13190 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00388 | 0.00388  | 0.00389  | 0.00340 to 0.00460 | 97.0  | 70.0 to 130 | 0.00  | 20.0  |
| BB13190 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.107   | 0.109    | 0.106    | 0.0850 to 0.115    | 106   | 70.0 to 130 | 1.85  | 20.0  |
| BB13191 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.15    | 2.11     | 0.197    | 0.170 to 0.230     | 95.0  | 70.0 to 130 | 1.88  | 20.0  |
| BB13190 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0902  | 0.0876   | 0.0932   | 0.0850 to 0.115    | 89.2  | 70.0 to 130 | 2.92  | 20.0  |
| BB13190 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.73    | 1.74     | 0.100    | 0.0850 to 0.115    | 100   | 70.0 to 130 | 0.576 | 20.0  |
| BB13190 | Boron, Total           | mg/L  | 0.00843    | 0.0650   | 1.00  | 1.22    | 1.22     | 0.982    | 0.850 to 1.15      | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13189 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334     | 335      | 4.97     | 4.25 to 5.75       | 80.0  | 70.0 to 130 | 0.299 | 20.0  |
| BB13190 | Iron, Total            | mg/L  | 0.00365    | 0.0176   | 0.2   | 8.54    | 8.58     | 0.201    | 0.170 to 0.230     | -65.0 | 70.0 to 130 | 0.467 | 20.0  |
| BB13190 | Sodium, Total          | mg/L  | 0.00987    | 0.0660   | 5.00  | 68.8    | 68.5     | 4.98     | 4.25 to 5.75       | 64.0  | 70.0 to 130 | 0.437 | 20.0  |
| BB13190 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.111   | 0.114    | 0.101    | 0.0850 to 0.115    | 97.9  | 70.0 to 130 | 2.67  | 20.0  |
| BB13190 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.0928  | 0.0941   | 0.0982   | 0.0850 to 0.115    | 92.7  | 70.0 to 130 | 1.39  | 20.0  |
| BB13190 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.103   | 0.106    | 0.110    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 2.87  | 20.0  |
| BB13191 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 3.05    | 3.03     | 0.108    | 0.0850 to 0.115    | 10.0  | 70.0 to 130 | 0.658 | 20.0  |
| BB13190 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0961  | 0.0967   | 0.0988   | 0.0850 to 0.115    | 96.0  | 70.0 to 130 | 0.622 | 20.0  |
| BB13190 | Lithium, Total         | mg/L  | 4.400E-06  | 0.0154   | 0.200 | 0.436   | 0.437    | 0.197    | 0.170 to 0.230     | 120   | 70.0 to 130 | 0.229 | 20.0  |
| BB13190 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.0984  | 0.103    | 0.0998   | 0.0850 to 0.115    | 98.2  | 70.0 to 130 | 4.57  | 20.0  |
| BB13190 | Magnesium, Total       | mg/L  | 0.0146     | 0.0462   | 5.00  | 78.6    | 78.8     | 5.02     | 4.25 to 5.75       | 46.0  | 70.0 to 130 | 0.254 | 20.0  |
| BB13190 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0990  | 0.0993   | 0.0929   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 0.303 | 20.0  |
| BB13190 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.108   | 0.109    | 0.112    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 0.922 | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/20/21 13:15

**Customer ID:**

**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-10

**Laboratory ID Number:** BB13190

| Sample  | Analysis                   | Units | MB     | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|--------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB13190 | Sulfate                    | mg/L  | -0.437 | 1.00     | 1000  | 1680 | 667              | 19.0     | 18.0 to 22.0   | 102  | 80.0 to 120 | 0.300 | 20.0       |
| BB13190 | Fluoride                   | mg/L  | 0.0205 | 0.100    | 2.50  | 2.84 | 0.286            | 2.59     | 2.25 to 2.75   | 103  | 80.0 to 120 | 6.50  | 20.0       |
| BB13190 | Chloride                   | mg/L  | -0.107 | 1.00     | 10.0  | 13.3 | 3.46             | 9.89     | 9.00 to 11.0   | 96.6 | 80.0 to 120 | 5.07  | 20.0       |
| BB13190 | Solids, Dissolved          | mg/L  | -2.00  | 25.0     |       |      | 1060             | 55.0     | 40.0 to 60.0   |      |             | 0.935 | 5.00       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |        |          |       |      | 163              | 53.4     | 45.0 to 55.0   |      |             | 0.612 | 10.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-7

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 14:30  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13191

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q  |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|----|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |    |
| * Boron, Total                      | 7/28/21 08:00 | 7/28/21 14:21       |          | 1.015 | 0.0721                              | mg/L  | 0.030000 | 0.1015     | J  |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 15:41       |          | 10.15 | 254                                 | mg/L  | 0.70035  | 4.06       |    |
| * Iron, Total                       | 7/28/21 08:00 | 7/28/21 14:21       |          | 1.015 | 2.01                                | mg/L  | 0.008120 | 0.0406     |    |
| * Lithium, Total                    | 7/28/21 08:00 | 7/28/21 14:21       |          | 1.015 | 0.0960                              | mg/L  | 0.007105 | 0.01999956 |    |
| * Magnesium, Total                  | 7/28/21 08:00 | 7/28/21 15:41       |          | 10.15 | 229                                 | mg/L  | 0.21315  | 4.06       |    |
| * Sodium, Total                     | 7/28/21 08:00 | 7/28/21 14:21       |          | 1.015 | 38.4                                | mg/L  | 0.03045  | 0.406      |    |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |    |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 11:00       |          | 1.015 | 1.96                                | mg/L  | 0.008120 | 0.0406     |    |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |    |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U  |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | 0.00164                             | mg/L  | 0.000068 | 0.000203   |    |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | 0.0142                              | mg/L  | 0.000102 | 0.000203   |    |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U  |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U  |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U  |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | 0.00561                             | mg/L  | 0.000068 | 0.000203   |    |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U  |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | 0.000860                            | mg/L  | 0.000068 | 0.000203   |    |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | 6.84                                | mg/L  | 0.169505 | 0.5075     |    |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 23:21       |          | 5.075 | 2.97                                | mg/L  | 0.000340 | 0.001015   |    |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U  |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:50       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U  |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |    |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 21:48       |          | 5.075 | 3.04                                | mg/L  | 0.000340 | 0.001015   | RA |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |    |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 20:20       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U  |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |    |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 275                                 | mg/L  |          | 0.1        |    |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |    |
| * Solids, Dissolved                 | 7/22/21 12:06 | 8/2/21 08:20        |          | 1     | 2110                                | mg/L  |          | 125        |    |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-7

**Location Code:** WMWGORLF  
**Collected:** 7/20/21 14:30  
**Customer ID:**  
**Submittal Date:** 7/21/21 09:49

**Laboratory ID Number:** BB13191

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 275     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.16    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:43 | 7/26/21 10:43       |          | 1  | 6.35    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:45 | 7/26/21 13:45       |          | 1  | 0.286   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 14:25 | 7/23/21 14:25       |          | 40 | 1170    | mg/L  | 20.00 | 40  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/20/21 14:27 | 7/20/21 14:27       |          |    | 2199.04 | uS/cm |       |     | FA |
| pH   | 7/20/21 14:27 | 7/20/21 14:27       |          |    | 6.58    | SU    |       |     | FA |
| Temperature                                  | 7/20/21 14:27 | 7/20/21 14:27       |          |    | 20.48   | C     |       |     | FA |
| Turbidity                                    | 7/20/21 14:27 | 7/20/21 14:27       |          |    | 1.57    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/20/21 14:30

**Customer ID:**

**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-7

**Laboratory ID Number:** BB13191

| Sample  | Analysis               | Units | MB         |          | Spike | MS     | MSD    | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|--------|--------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |        |        | Standard | Limit              | Rec   | Limit       |       |       |
| BB13332 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.115  | 0.120  | 0.0990   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 4.26  | 20.0  |
| BB13191 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.15   | 2.11   | 0.197    | 0.170 to 0.230     | 95.0  | 70.0 to 130 | 1.88  | 20.0  |
| BB13332 | Boron, Total           | mg/L  | 0.000162   | 0.0650   | 1.00  | 1.11   | 1.11   | 0.979    | 0.850 to 1.15      | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.102  | 0.102  | 0.103    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Sodium, Total          | mg/L  | -0.000208  | 0.0660   | 5.00  | 138    | 141    | 4.85     | 4.25 to 5.75       | 40.0  | 70.0 to 130 | 2.15  | 20.0  |
| BB13332 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.100  | 0.0983 | 0.0998   | 0.0850 to 0.115    | 100   | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0866 | 0.0884 | 0.0932   | 0.0850 to 0.115    | 86.6  | 70.0 to 130 | 2.06  | 20.0  |
| BB13332 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.110  | 0.110  | 0.112    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Iron, Total            | mg/L  | -0.000465  | 0.0176   | 0.2   | 6.85   | 7.00   | 0.197    | 0.170 to 0.230     | 20.0  | 70.0 to 130 | 2.17  | 20.0  |
| BB13332 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334    | 342    | 4.97     | 4.25 to 5.75       | -40.0 | 70.0 to 130 | 2.37  | 20.0  |
| BB13332 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.0996 | 0.0984 | 0.101    | 0.0850 to 0.115    | 99.4  | 70.0 to 130 | 1.21  | 20.0  |
| BB13332 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.24   | 1.24   | 0.100    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.102  | 0.0992 | 0.0982   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 2.78  | 20.0  |
| BB13191 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 3.05   | 3.03   | 0.108    | 0.0850 to 0.115    | 10.0  | 70.0 to 130 | 0.658 | 20.0  |
| BB13332 | Magnesium, Total       | mg/L  | -0.00978   | 0.0462   | 5.00  | 174    | 177    | 4.88     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Lithium, Total         | mg/L  | -9.150E-05 | 0.0154   | 0.200 | 0.492  | 0.492  | 0.196    | 0.170 to 0.230     | 126   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.0039 | 0.0039 | 0.00386  | 0.00340 to 0.00460 | 97.5  | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0986 | 0.0959 | 0.0988   | 0.0850 to 0.115    | 98.6  | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.108  | 0.106  | 0.110    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 1.87  | 20.0  |
| BB13332 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.108  | 0.107  | 0.106    | 0.0850 to 0.115    | 107   | 70.0 to 130 | 0.930 | 20.0  |
| BB13332 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.5   | 16.1   | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 2.45  | 20.0  |
| BB13332 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0993 | 0.101  | 0.0929   | 0.0850 to 0.115    | 99.3  | 70.0 to 130 | 1.70  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/20/21 14:30  
**Customer ID:**  
**Delivery Date:** 7/21/21 09:49

**Description:** Gorgas Landfill - MW-7

**Laboratory ID Number:** BB13191

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|-----|-------------|-------|------------|
| BB13191 | Solids, Dissolved          | mg/L  | -2.00   | 25.0     |       |      | 2180             | 55.0     | 40.0 to 60.0   |     |             | 1.63  | 5.00       |
| BB13332 | Sulfate                    | mg/L  | -0.454  | 1.00     | 1600  | 3090 | 1470             | 18.4     | 18.0 to 22.0   | 101 | 80.0 to 120 | 0.678 | 20.0       |
| BB13332 | Chloride                   | mg/L  | -0.0654 | 1.00     | 160   | 232  | 68.5             | 9.92     | 9.00 to 11.0   | 103 | 80.0 to 120 | 0.880 | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 163              | 53.4     | 45.0 to 55.0   |     |             | 0.612 | 10.0       |
| BB13332 | Fluoride                   | mg/L  | 0.0225  | 0.100    | 2.50  | 2.79 | 0.149            | 2.63     | 2.25 to 2.75   | 106 | 80.0 to 120 | 4.11  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-5

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 10:53  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13324

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/28/21 08:00 | 7/28/21 14:24       |          | 1.015 | 0.0319                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 15:45       |          | 10.15 | 384                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/28/21 08:00 | 7/28/21 14:24       |          | 1.015 | 2.62                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/28/21 08:00 | 7/28/21 14:24       |          | 1.015 | 0.113                               | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/28/21 08:00 | 7/28/21 15:45       |          | 10.15 | 383                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/28/21 08:00 | 7/28/21 15:45       |          | 10.15 | 52.3                                | mg/L  | 0.3045   | 4.06       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 11:17       |          | 1.015 | 2.08                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | 0.000461                            | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | 0.0116                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | 0.00127                             | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | 0.00126                             | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | 6.47                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | 0.366                               | mg/L  | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | 0.00178                             | mg/L  | 0.000508 | 0.001015   |   |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:54       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 13:03       |          | 1.015 | 0.416                               | mg/L  | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 20:24       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 318                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/23/21 10:25 | 7/27/21 10:25       |          | 1     | 3570                                | mg/L  |          | 178.6      |   |

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

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



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-5

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 10:53  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13324

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 318     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 0.13    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500CI E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:44 | 7/26/21 10:44       |          | 1   | 6.73    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:46 | 7/26/21 13:46       |          | 1   | 0.331   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 14:27 | 7/23/21 14:27       |          | 100 | 2240    | mg/L  | 50.00 | 100 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 7/21/21 10:49 | 7/21/21 10:49       |          |     | 3105.06 | uS/cm |       |     | FA |
| pH   | 7/21/21 10:49 | 7/21/21 10:49       |          |     | 6.40    | SU    |       |     | FA |
| Temperature                                  | 7/21/21 10:49 | 7/21/21 10:49       |          |     | 22.24   | C     |       |     | FA |
| Turbidity                                    | 7/21/21 10:49 | 7/21/21 10:49       |          |     | 2.99    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/21/21 10:53

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-5

**Laboratory ID Number:** BB13324

| Sample  | Analysis               | Units | MB         |          |       |        |        | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|--------|--------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS     | MSD    | Standard | Limit              | Rec   | Limit       |       |       |
| BB13332 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.100  | 0.0983 | 0.0998   | 0.0850 to 0.115    | 100   | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.115  | 0.120  | 0.0990   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 4.26  | 20.0  |
| BB13332 | Boron, Total           | mg/L  | 0.000162   | 0.0650   | 1.00  | 1.11   | 1.11   | 0.979    | 0.850 to 1.15      | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.102  | 0.102  | 0.103    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Sodium, Total          | mg/L  | -0.000208  | 0.0660   | 5.00  | 138    | 141    | 4.85     | 4.25 to 5.75       | 40.0  | 70.0 to 130 | 2.15  | 20.0  |
| BB13332 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0866 | 0.0884 | 0.0932   | 0.0850 to 0.115    | 86.6  | 70.0 to 130 | 2.06  | 20.0  |
| BB13332 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.110  | 0.110  | 0.112    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Iron, Total            | mg/L  | -0.000465  | 0.0176   | 0.2   | 6.85   | 7.00   | 0.197    | 0.170 to 0.230     | 20.0  | 70.0 to 130 | 2.17  | 20.0  |
| BB13332 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334    | 342    | 4.97     | 4.25 to 5.75       | -40.0 | 70.0 to 130 | 2.37  | 20.0  |
| BB13332 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.0996 | 0.0984 | 0.101    | 0.0850 to 0.115    | 99.4  | 70.0 to 130 | 1.21  | 20.0  |
| BB13333 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.09   | 2.06   | 0.197    | 0.170 to 0.230     | 105   | 70.0 to 130 | 1.45  | 20.0  |
| BB13333 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 1.61   | 1.60   | 0.108    | 0.0850 to 0.115    | 60.0  | 70.0 to 130 | 0.623 | 20.0  |
| BB13332 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.0039 | 0.0039 | 0.00386  | 0.00340 to 0.00460 | 97.5  | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Cadmium, Total         | mg/L  | 0.000000   | 0.000147 | 0.100 | 0.0986 | 0.0959 | 0.0988   | 0.0850 to 0.115    | 98.6  | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.108  | 0.106  | 0.110    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 1.87  | 20.0  |
| BB13332 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.108  | 0.107  | 0.106    | 0.0850 to 0.115    | 107   | 70.0 to 130 | 0.930 | 20.0  |
| BB13332 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.5   | 16.1   | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 2.45  | 20.0  |
| BB13332 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0993 | 0.101  | 0.0929   | 0.0850 to 0.115    | 99.3  | 70.0 to 130 | 1.70  | 20.0  |
| BB13332 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.24   | 1.24   | 0.100    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.102  | 0.0992 | 0.0982   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Magnesium, Total       | mg/L  | -0.00978   | 0.0462   | 5.00  | 174    | 177    | 4.88     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Lithium, Total         | mg/L  | -9.150E-05 | 0.0154   | 0.200 | 0.492  | 0.492  | 0.196    | 0.170 to 0.230     | 126   | 70.0 to 130 | 0.00  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/21/21 10:53  
**Customer ID:**  
**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-5

**Laboratory ID Number:** BB13324

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|-----|-------------|-------|------------|
| BB13332 | Chloride                   | mg/L  | -0.0654 | 1.00     | 160   | 232  | 68.5             | 9.92     | 9.00 to 11.0   | 103 | 80.0 to 120 | 0.880 | 20.0       |
| BB13332 | Sulfate                    | mg/L  | -0.454  | 1.00     | 1600  | 3090 | 1470             | 18.4     | 18.0 to 22.0   | 101 | 80.0 to 120 | 0.678 | 20.0       |
| BB13333 | Solids, Dissolved          | mg/L  | 1.00    | 25.0     |       |      | 3060             | 57.0     | 40.0 to 60.0   |     |             | 1.13  | 5.00       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 163              | 53.4     | 45.0 to 55.0   |     |             | 0.612 | 10.0       |
| BB13332 | Fluoride                   | mg/L  | 0.0225  | 0.100    | 2.50  | 2.79 | 0.149            | 2.63     | 2.25 to 2.75   | 106 | 80.0 to 120 | 4.11  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-16

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 12:10  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13325

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/28/21 08:00 | 7/28/21 14:28       |          | 1.015 | 0.0437                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 15:48       |          | 10.15 | 295                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/28/21 08:00 | 7/28/21 14:28       |          | 1.015 | 2.68                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/28/21 08:00 | 7/28/21 14:28       |          | 1.015 | 0.0179                              | mg/L  | 0.007105 | 0.01999956 | J |
| * Magnesium, Total                  | 7/28/21 08:00 | 7/28/21 15:48       |          | 10.15 | 242                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/28/21 08:00 | 7/28/21 14:28       |          | 1.015 | 31.0                                | mg/L  | 0.03045  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 11:20       |          | 1.015 | 2.57                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | 0.00269                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | 0.0132                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | 0.00887                             | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | 0.000426                            | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | 8.11                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 23:25       |          | 5.075 | 2.70                                | mg/L  | 0.000340 | 0.001015   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 14:57       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 22:10       |          | 5.075 | 2.60                                | mg/L  | 0.000340 | 0.001015   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 20:28       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 357                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/23/21 10:25 | 7/27/21 10:25       |          | 1     | 2290                                | mg/L  |          | 125        |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-16

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 12:10  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13325

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 357     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.13    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:46 | 7/26/21 10:46       |          | 1  | 2.97    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:48 | 7/26/21 13:48       |          | 1  | 0.201   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 14:28 | 7/23/21 14:28       |          | 40 | 1370    | mg/L  | 20.00 | 40  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/21/21 12:07 | 7/21/21 12:07       |          |    | 2259.08 | uS/cm |       |     | FA |
| pH   | 7/21/21 12:07 | 7/21/21 12:07       |          |    | 6.24    | SU    |       |     | FA |
| Temperature                                  | 7/21/21 12:07 | 7/21/21 12:07       |          |    | 20.85   | C     |       |     | FA |
| Turbidity                                    | 7/21/21 12:07 | 7/21/21 12:07       |          |    | 0.1     | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/21/21 12:10

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-16

**Laboratory ID Number:** BB13325

| Sample  | Analysis               | Units | MB         |          |       |        |        | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|--------|--------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS     | MSD    | Standard | Limit              | Rec   | Limit       |       |       |
| BB13332 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.115  | 0.120  | 0.0990   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 4.26  | 20.0  |
| BB13332 | Boron, Total           | mg/L  | 0.000162   | 0.0650   | 1.00  | 1.11   | 1.11   | 0.979    | 0.850 to 1.15      | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.102  | 0.102  | 0.103    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Sodium, Total          | mg/L  | -0.000208  | 0.0660   | 5.00  | 138    | 141    | 4.85     | 4.25 to 5.75       | 40.0  | 70.0 to 130 | 2.15  | 20.0  |
| BB13332 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0866 | 0.0884 | 0.0932   | 0.0850 to 0.115    | 86.6  | 70.0 to 130 | 2.06  | 20.0  |
| BB13332 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.110  | 0.110  | 0.112    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.100  | 0.0983 | 0.0998   | 0.0850 to 0.115    | 100   | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.0039 | 0.0039 | 0.00386  | 0.00340 to 0.00460 | 97.5  | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0986 | 0.0959 | 0.0988   | 0.0850 to 0.115    | 98.6  | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.108  | 0.106  | 0.110    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 1.87  | 20.0  |
| BB13332 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.108  | 0.107  | 0.106    | 0.0850 to 0.115    | 107   | 70.0 to 130 | 0.930 | 20.0  |
| BB13332 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.5   | 16.1   | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 2.45  | 20.0  |
| BB13332 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0993 | 0.101  | 0.0929   | 0.0850 to 0.115    | 99.3  | 70.0 to 130 | 1.70  | 20.0  |
| BB13333 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 1.61   | 1.60   | 0.108    | 0.0850 to 0.115    | 60.0  | 70.0 to 130 | 0.623 | 20.0  |
| BB13332 | Iron, Total            | mg/L  | -0.000465  | 0.0176   | 0.2   | 6.85   | 7.00   | 0.197    | 0.170 to 0.230     | 20.0  | 70.0 to 130 | 2.17  | 20.0  |
| BB13332 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334    | 342    | 4.97     | 4.25 to 5.75       | -40.0 | 70.0 to 130 | 2.37  | 20.0  |
| BB13332 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.0996 | 0.0984 | 0.101    | 0.0850 to 0.115    | 99.4  | 70.0 to 130 | 1.21  | 20.0  |
| BB13333 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.09   | 2.06   | 0.197    | 0.170 to 0.230     | 105   | 70.0 to 130 | 1.45  | 20.0  |
| BB13332 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.24   | 1.24   | 0.100    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.102  | 0.0992 | 0.0982   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Magnesium, Total       | mg/L  | -0.00978   | 0.0462   | 5.00  | 174    | 177    | 4.88     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Lithium, Total         | mg/L  | -9.150E-05 | 0.0154   | 0.200 | 0.492  | 0.492  | 0.196    | 0.170 to 0.230     | 126   | 70.0 to 130 | 0.00  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/21/21 12:10  
**Customer ID:**  
**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-16

**Laboratory ID Number:** BB13325

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|-----|-------------|-------|------------|
| BB13332 | Sulfate                    | mg/L  | -0.454  | 1.00     | 1600  | 3090 | 1470             | 18.4     | 18.0 to 22.0   | 101 | 80.0 to 120 | 0.678 | 20.0       |
| BB13332 | Chloride                   | mg/L  | -0.0654 | 1.00     | 160   | 232  | 68.5             | 9.92     | 9.00 to 11.0   | 103 | 80.0 to 120 | 0.880 | 20.0       |
| BB13333 | Solids, Dissolved          | mg/L  | 1.00    | 25.0     |       |      | 3060             | 57.0     | 40.0 to 60.0   |     |             | 1.13  | 5.00       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 163              | 53.4     | 45.0 to 55.0   |     |             | 0.612 | 10.0       |
| BB13332 | Fluoride                   | mg/L  | 0.0225  | 0.100    | 2.50  | 2.79 | 0.149            | 2.63     | 2.25 to 2.75   | 106 | 80.0 to 120 | 4.11  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-16 DUP

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 12:10  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13326

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/28/21 08:00 | 7/28/21 14:31       |          | 1.015 | 0.0433                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 15:51       |          | 10.15 | 295                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/28/21 08:00 | 7/28/21 14:31       |          | 1.015 | 2.70                                | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/28/21 08:00 | 7/28/21 14:31       |          | 1.015 | 0.0179                              | mg/L  | 0.007105 | 0.01999956 | J |
| * Magnesium, Total                  | 7/28/21 08:00 | 7/28/21 15:51       |          | 10.15 | 244                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/28/21 08:00 | 7/28/21 14:31       |          | 1.015 | 31.2                                | mg/L  | 0.03045  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 11:24       |          | 1.015 | 2.61                                | mg/L  | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | 0.00257                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | 0.0127                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | 0.00887                             | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | 0.000479                            | mg/L  | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | 8.03                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 23:28       |          | 5.075 | 2.75                                | mg/L  | 0.000340 | 0.001015   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 15:01       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 22:13       |          | 5.075 | 2.63                                | mg/L  | 0.000340 | 0.001015   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 20:32       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 327                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/23/21 10:25 | 7/27/21 10:25       |          | 1     | 2340                                | mg/L  |          | 125        |   |

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

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



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-16 DUP

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 12:10  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13326

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 327     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.13    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:47 | 7/26/21 10:47       |          | 1  | 2.95    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:49 | 7/26/21 13:49       |          | 1  | 0.202   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 14:32 | 7/23/21 14:32       |          | 40 | 1290    | mg/L  | 20.00 | 40  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/21/21 12:07 | 7/21/21 12:07       |          |    | 2259.08 | uS/cm |       |     | FA |
| pH   | 7/21/21 12:07 | 7/21/21 12:07       |          |    | 6.24    | SU    |       |     | FA |
| Temperature                                  | 7/21/21 12:07 | 7/21/21 12:07       |          |    | 20.85   | C     |       |     | FA |
| Turbidity                                    | 7/21/21 12:07 | 7/21/21 12:07       |          |    | 0.1     | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/21/21 12:10

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-16 DUP

**Laboratory ID Number:** BB13326

| Sample  | Analysis               | Units | MB         |          | Spike | MS     | MSD    | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|--------|--------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |        |        | Standard | Limit              | Rec   | Limit       |       |       |
| BB13332 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0866 | 0.0884 | 0.0932   | 0.0850 to 0.115    | 86.6  | 70.0 to 130 | 2.06  | 20.0  |
| BB13332 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.110  | 0.110  | 0.112    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.100  | 0.0983 | 0.0998   | 0.0850 to 0.115    | 100   | 70.0 to 130 | 1.71  | 20.0  |
| BB13333 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 1.61   | 1.60   | 0.108    | 0.0850 to 0.115    | 60.0  | 70.0 to 130 | 0.623 | 20.0  |
| BB13332 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.0039 | 0.0039 | 0.00386  | 0.00340 to 0.00460 | 97.5  | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Cadmium, Total         | mg/L  | 0.000000   | 0.000147 | 0.100 | 0.0986 | 0.0959 | 0.0988   | 0.0850 to 0.115    | 98.6  | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.108  | 0.106  | 0.110    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 1.87  | 20.0  |
| BB13332 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.108  | 0.107  | 0.106    | 0.0850 to 0.115    | 107   | 70.0 to 130 | 0.930 | 20.0  |
| BB13332 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.5   | 16.1   | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 2.45  | 20.0  |
| BB13332 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0993 | 0.101  | 0.0929   | 0.0850 to 0.115    | 99.3  | 70.0 to 130 | 1.70  | 20.0  |
| BB13332 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.24   | 1.24   | 0.100    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.102  | 0.0992 | 0.0982   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Magnesium, Total       | mg/L  | -0.00978   | 0.0462   | 5.00  | 174    | 177    | 4.88     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Lithium, Total         | mg/L  | -9.150E-05 | 0.0154   | 0.200 | 0.492  | 0.492  | 0.196    | 0.170 to 0.230     | 126   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Iron, Total            | mg/L  | -0.000465  | 0.0176   | 0.2   | 6.85   | 7.00   | 0.197    | 0.170 to 0.230     | 20.0  | 70.0 to 130 | 2.17  | 20.0  |
| BB13332 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334    | 342    | 4.97     | 4.25 to 5.75       | -40.0 | 70.0 to 130 | 2.37  | 20.0  |
| BB13332 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.0996 | 0.0984 | 0.101    | 0.0850 to 0.115    | 99.4  | 70.0 to 130 | 1.21  | 20.0  |
| BB13333 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.09   | 2.06   | 0.197    | 0.170 to 0.230     | 105   | 70.0 to 130 | 1.45  | 20.0  |
| BB13332 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.115  | 0.120  | 0.0990   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 4.26  | 20.0  |
| BB13332 | Boron, Total           | mg/L  | 0.000162   | 0.0650   | 1.00  | 1.11   | 1.11   | 0.979    | 0.850 to 1.15      | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.102  | 0.102  | 0.103    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Sodium, Total          | mg/L  | -0.000208  | 0.0660   | 5.00  | 138    | 141    | 4.85     | 4.25 to 5.75       | 40.0  | 70.0 to 130 | 2.15  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/21/21 12:10  
**Customer ID:**  
**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-16 DUP

**Laboratory ID Number:** BB13326

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|-----|-------------|-------|------------|
| BB13332 | Sulfate                    | mg/L  | -0.454  | 1.00     | 1600  | 3090 | 1470             | 18.4     | 18.0 to 22.0   | 101 | 80.0 to 120 | 0.678 | 20.0       |
| BB13333 | Solids, Dissolved          | mg/L  | 1.00    | 25.0     |       |      | 3060             | 57.0     | 40.0 to 60.0   |     |             | 1.13  | 5.00       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 163              | 53.4     | 45.0 to 55.0   |     |             | 0.612 | 10.0       |
| BB13332 | Fluoride                   | mg/L  | 0.0225  | 0.100    | 2.50  | 2.79 | 0.149            | 2.63     | 2.25 to 2.75   | 106 | 80.0 to 120 | 4.11  | 20.0       |
| BB13332 | Chloride                   | mg/L  | -0.0654 | 1.00     | 160   | 232  | 68.5             | 9.92     | 9.00 to 11.0   | 103 | 80.0 to 120 | 0.880 | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-17R

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 13:30  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13327

| Name                                | Prepared      | Analyzed            | Vio Spec | DF     | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|--------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/28/21 08:00 | 7/28/21 14:34       |          | 1.015  | 0.0549                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 15:55       |          | 10.15  | 380                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/28/21 08:00 | 7/28/21 15:55       |          | 10.15  | 23.5                                | mg/L  | 0.08120  | 0.406      |   |
| * Lithium, Total                    | 7/28/21 08:00 | 7/28/21 14:34       |          | 1.015  | 0.0504                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/28/21 08:00 | 7/28/21 15:38       |          | 101.5  | 405                                 | mg/L  | 2.1315   | 40.6       |   |
| * Sodium, Total                     | 7/28/21 08:00 | 7/28/21 15:55       |          | 10.15  | 36.4                                | mg/L  | 0.3045   | 4.06       |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |        |                                     |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 13:11       |          | 10.15  | 20.3                                | mg/L  | 0.08120  | 0.406      |   |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |        | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | 0.00196                             | mg/L  | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | 0.0140                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | 0.000360                            | mg/L  | 0.000203 | 0.001015   | J |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | 0.329                               | mg/L  | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | 0.0000922                           | mg/L  | 0.000068 | 0.000203   | J |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | 0.000172                            | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | 7.34                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 23:32       |          | 92.365 | 22.0                                | mg/L  | 0.006188 | 0.018473   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | 0.000666                            | mg/L  | 0.000508 | 0.001015   | J |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 15:04       |          | 1.015  | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |        |                                     |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 22:17       |          | 92.365 | 18.9                                | mg/L  | 0.006188 | 0.018473   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |        |                                     |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 20:36       |          | 1      | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |        |                                     |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1      | 157                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |        |                                     |       |          |            |   |
| * Solids, Dissolved                 | 7/23/21 10:25 | 7/27/21 10:25       |          | 1      | 3860                                | mg/L  |          | 178.6      |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-17R

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 13:30  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13327

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 157     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 0.08    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:48 | 7/26/21 10:48       |          | 1   | 2.38    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:50 | 7/26/21 13:50       |          | 1   | 0.183   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 14:30 | 7/23/21 14:30       |          | 100 | 2450    | mg/L  | 50.00 | 100 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 7/21/21 13:26 | 7/21/21 13:26       |          |     | 3081.80 | uS/cm |       |     | FA |
| pH   | 7/21/21 13:26 | 7/21/21 13:26       |          |     | 5.79    | SU    |       |     | FA |
| Temperature                                  | 7/21/21 13:26 | 7/21/21 13:26       |          |     | 22.47   | C     |       |     | FA |
| Turbidity                                    | 7/21/21 13:26 | 7/21/21 13:26       |          |     | 0.27    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/21/21 13:30

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-17R

**Laboratory ID Number:** BB13327

| Sample  | Analysis               | Units | MB         |          |       |        |        | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|--------|--------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS     | MSD    | Standard | Limit              | Rec   | Limit       |       |       |
| BB13332 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.100  | 0.0983 | 0.0998   | 0.0850 to 0.115    | 100   | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0866 | 0.0884 | 0.0932   | 0.0850 to 0.115    | 86.6  | 70.0 to 130 | 2.06  | 20.0  |
| BB13332 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.110  | 0.110  | 0.112    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.115  | 0.120  | 0.0990   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 4.26  | 20.0  |
| BB13332 | Boron, Total           | mg/L  | 0.000162   | 0.0650   | 1.00  | 1.11   | 1.11   | 0.979    | 0.850 to 1.15      | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.102  | 0.102  | 0.103    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Sodium, Total          | mg/L  | -0.000208  | 0.0660   | 5.00  | 138    | 141    | 4.85     | 4.25 to 5.75       | 40.0  | 70.0 to 130 | 2.15  | 20.0  |
| BB13333 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 1.61   | 1.60   | 0.108    | 0.0850 to 0.115    | 60.0  | 70.0 to 130 | 0.623 | 20.0  |
| BB13332 | Iron, Total            | mg/L  | -0.000465  | 0.0176   | 0.2   | 6.85   | 7.00   | 0.197    | 0.170 to 0.230     | 20.0  | 70.0 to 130 | 2.17  | 20.0  |
| BB13332 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334    | 342    | 4.97     | 4.25 to 5.75       | -40.0 | 70.0 to 130 | 2.37  | 20.0  |
| BB13332 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.0996 | 0.0984 | 0.101    | 0.0850 to 0.115    | 99.4  | 70.0 to 130 | 1.21  | 20.0  |
| BB13333 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.09   | 2.06   | 0.197    | 0.170 to 0.230     | 105   | 70.0 to 130 | 1.45  | 20.0  |
| BB13332 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.24   | 1.24   | 0.100    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.102  | 0.0992 | 0.0982   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Magnesium, Total       | mg/L  | -0.00978   | 0.0462   | 5.00  | 174    | 177    | 4.88     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Lithium, Total         | mg/L  | -9.150E-05 | 0.0154   | 0.200 | 0.492  | 0.492  | 0.196    | 0.170 to 0.230     | 126   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.0039 | 0.0039 | 0.00386  | 0.00340 to 0.00460 | 97.5  | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0986 | 0.0959 | 0.0988   | 0.0850 to 0.115    | 98.6  | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.108  | 0.106  | 0.110    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 1.87  | 20.0  |
| BB13332 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.108  | 0.107  | 0.106    | 0.0850 to 0.115    | 107   | 70.0 to 130 | 0.930 | 20.0  |
| BB13332 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.5   | 16.1   | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 2.45  | 20.0  |
| BB13332 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0993 | 0.101  | 0.0929   | 0.0850 to 0.115    | 99.3  | 70.0 to 130 | 1.70  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/21/21 13:30

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-17R

**Laboratory ID Number:** BB13327

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|-----|-------------|-------|------------|
| BB13332 | Sulfate                    | mg/L  | -0.454  | 1.00     | 1600  | 3090 | 1470             | 18.4     | 18.0 to 22.0   | 101 | 80.0 to 120 | 0.678 | 20.0       |
| BB13332 | Chloride                   | mg/L  | -0.0654 | 1.00     | 160   | 232  | 68.5             | 9.92     | 9.00 to 11.0   | 103 | 80.0 to 120 | 0.880 | 20.0       |
| BB13333 | Solids, Dissolved          | mg/L  | 1.00    | 25.0     |       |      | 3060             | 57.0     | 40.0 to 60.0   |     |             | 1.13  | 5.00       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 163              | 53.4     | 45.0 to 55.0   |     |             | 0.612 | 10.0       |
| BB13332 | Fluoride                   | mg/L  | 0.0225  | 0.100    | 2.50  | 2.79 | 0.149            | 2.63     | 2.25 to 2.75   | 106 | 80.0 to 120 | 4.11  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-18

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 14:28  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13328

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                      | 7/28/21 08:00 | 7/28/21 14:38       |          | 1.015 | 0.0318                              | mg/L  | 0.030000 | 0.1015     | J |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 15:58       |          | 10.15 | 289                                 | mg/L  | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/28/21 08:00 | 7/28/21 14:38       |          | 1.015 | 0.0676                              | mg/L  | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/28/21 08:00 | 7/28/21 14:38       |          | 1.015 | 0.0574                              | mg/L  | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/28/21 08:00 | 7/28/21 15:58       |          | 10.15 | 292                                 | mg/L  | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/28/21 08:00 | 7/28/21 14:38       |          | 1.015 | 32.1                                | mg/L  | 0.03045  | 0.406      |   |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 11:30       |          | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | 0.0105                              | mg/L  | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | 0.000103                            | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | 6.91                                | mg/L  | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | 0.00122                             | mg/L  | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | 0.00294                             | mg/L  | 0.000508 | 0.001015   |   |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 15:08       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 13:18       |          | 1.015 | 0.000340                            | mg/L  | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 20:40       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 151                                 | mg/L  |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Solids, Dissolved                 | 7/23/21 10:25 | 7/27/21 10:25       |          | 1     | 2620                                | mg/L  |          | 125        |   |

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

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



# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-18

**Location Code:** WMWGORLF

**Collected:** 7/21/21 14:28

**Customer ID:**

**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13328

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 151     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.10    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 10:49 | 7/26/21 10:49       |          | 1  | 1.40    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:51 | 7/26/21 13:51       |          | 1  | 0.348   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 14:33 | 7/23/21 14:33       |          | 80 | 1650    | mg/L  | 40.00 | 80  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: TJD</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/21/21 14:24 | 7/21/21 14:24       |          |    | 2357.17 | uS/cm |       |     | FA |
| pH   | 7/21/21 14:24 | 7/21/21 14:24       |          |    | 6.33    | SU    |       |     | FA |
| Temperature                                  | 7/21/21 14:24 | 7/21/21 14:24       |          |    | 22.33   | C     |       |     | FA |
| Turbidity                                    | 7/21/21 14:24 | 7/21/21 14:24       |          |    | 0.23    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/21/21 14:28

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-18

**Laboratory ID Number:** BB13328

| Sample  | Analysis               | Units | MB         |          |       |        | Standard |          | Rec                |       | Prec        | Limit |       |
|---------|------------------------|-------|------------|----------|-------|--------|----------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS     | MSD      | Standard | Limit              | Rec   |             |       | Limit |
| BB13332 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0866 | 0.0884   | 0.0932   | 0.0850 to 0.115    | 86.6  | 70.0 to 130 | 2.06  | 20.0  |
| BB13332 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.110  | 0.110    | 0.112    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.100  | 0.0983   | 0.0998   | 0.0850 to 0.115    | 100   | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.0039 | 0.0039   | 0.00386  | 0.00340 to 0.00460 | 97.5  | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Cadmium, Total         | mg/L  | 0.000000   | 0.000147 | 0.100 | 0.0986 | 0.0959   | 0.0988   | 0.0850 to 0.115    | 98.6  | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.108  | 0.106    | 0.110    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 1.87  | 20.0  |
| BB13332 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.108  | 0.107    | 0.106    | 0.0850 to 0.115    | 107   | 70.0 to 130 | 0.930 | 20.0  |
| BB13332 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.5   | 16.1     | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 2.45  | 20.0  |
| BB13332 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0993 | 0.101    | 0.0929   | 0.0850 to 0.115    | 99.3  | 70.0 to 130 | 1.70  | 20.0  |
| BB13333 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 1.61   | 1.60     | 0.108    | 0.0850 to 0.115    | 60.0  | 70.0 to 130 | 0.623 | 20.0  |
| BB13332 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.24   | 1.24     | 0.100    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.102  | 0.0992   | 0.0982   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Magnesium, Total       | mg/L  | -0.00978   | 0.0462   | 5.00  | 174    | 177      | 4.88     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Lithium, Total         | mg/L  | -9.150E-05 | 0.0154   | 0.200 | 0.492  | 0.492    | 0.196    | 0.170 to 0.230     | 126   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.115  | 0.120    | 0.0990   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 4.26  | 20.0  |
| BB13332 | Boron, Total           | mg/L  | 0.000162   | 0.0650   | 1.00  | 1.11   | 1.11     | 0.979    | 0.850 to 1.15      | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.102  | 0.102    | 0.103    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Sodium, Total          | mg/L  | -0.000208  | 0.0660   | 5.00  | 138    | 141      | 4.85     | 4.25 to 5.75       | 40.0  | 70.0 to 130 | 2.15  | 20.0  |
| BB13332 | Iron, Total            | mg/L  | -0.000465  | 0.0176   | 0.2   | 6.85   | 7.00     | 0.197    | 0.170 to 0.230     | 20.0  | 70.0 to 130 | 2.17  | 20.0  |
| BB13332 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334    | 342      | 4.97     | 4.25 to 5.75       | -40.0 | 70.0 to 130 | 2.37  | 20.0  |
| BB13332 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.0996 | 0.0984   | 0.101    | 0.0850 to 0.115    | 99.4  | 70.0 to 130 | 1.21  | 20.0  |
| BB13333 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.09   | 2.06     | 0.197    | 0.170 to 0.230     | 105   | 70.0 to 130 | 1.45  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/21/21 14:28  
**Customer ID:**  
**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-18

**Laboratory ID Number:** BB13328

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec | Limit       | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|-----|-------------|-------|------------|
| BB13333 | Solids, Dissolved          | mg/L  | 1.00    | 25.0     |       |      | 3060             | 57.0     | 40.0 to 60.0   |     |             | 1.13  | 5.00       |
| BB13332 | Sulfate                    | mg/L  | -0.454  | 1.00     | 1600  | 3090 | 1470             | 18.4     | 18.0 to 22.0   | 101 | 80.0 to 120 | 0.678 | 20.0       |
| BB13332 | Chloride                   | mg/L  | -0.0654 | 1.00     | 160   | 232  | 68.5             | 9.92     | 9.00 to 11.0   | 103 | 80.0 to 120 | 0.880 | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 163              | 53.4     | 45.0 to 55.0   |     |             | 0.612 | 10.0       |
| BB13332 | Fluoride                   | mg/L  | 0.0225  | 0.100    | 2.50  | 2.79 | 0.149            | 2.63     | 2.25 to 2.75   | 106 | 80.0 to 120 | 4.11  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill Field Blank-1

**Location Code:** WMWGORLFFB  
**Collected:** 7/21/21 15:00  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13329

| Name                                       | Prepared      | Analyzed      | Vio Spec            | DF    | Results                             | Units | MDL      | RL         | Q |
|--|---------------|---------------|---------------------|-------|-------------------------------------|-------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b>        |               |               | <b>Analyst: ABB</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Boron, Total                             | 7/28/21 08:00 | 7/28/21 14:41 |                     | 1.015 | Not Detected                        | mg/L  | 0.030000 | 0.1015     | U |
| * Calcium, Total                           | 7/28/21 08:00 | 7/28/21 14:41 |                     | 1.015 | Not Detected                        | mg/L  | 0.070035 | 0.406      | U |
| * Iron, Total                              | 7/28/21 08:00 | 7/28/21 14:41 |                     | 1.015 | Not Detected                        | mg/L  | 0.008120 | 0.0406     | U |
| * Lithium, Total                           | 7/28/21 08:00 | 7/28/21 14:41 |                     | 1.015 | Not Detected                        | mg/L  | 0.007105 | 0.01999956 | U |
| * Magnesium, Total                         | 7/28/21 08:00 | 7/28/21 14:41 |                     | 1.015 | Not Detected                        | mg/L  | 0.021315 | 0.406      | U |
| * Sodium, Total                            | 7/28/21 08:00 | 7/28/21 14:41 |                     | 1.015 | Not Detected                        | mg/L  | 0.03045  | 0.406      | U |
| <b>Analytical Method: EPA 200.8</b>        |               |               | <b>Analyst: ABB</b> |       | <b>Preparation Method: EPA 1638</b> |       |          |            |   |
| * Antimony, Total                          | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Arsenic, Total                           | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Barium, Total                            | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000102 | 0.000203   | U |
| * Beryllium, Total                         | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U |
| * Cadmium, Total                           | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Chromium, Total                          | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U |
| * Cobalt, Total                            | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Lead, Total                              | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                        | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| * Manganese, Total                         | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | 0.000102                            | mg/L  | 0.000068 | 0.000203   | J |
| * Potassium, Total                         | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.169505 | 0.5075     | U |
| * Selenium, Total                          | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U |
| * Thallium, Total                          | 7/23/21 13:00 | 7/26/21 15:11 |                     | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 245.1</b>        |               |               | <b>Analyst: ABB</b> |       |                                     |       |          |            |   |
| * Mercury, Total by CVAA                   | 7/22/21 15:11 | 7/22/21 20:44 |                     | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2540C</b>         |               |               | <b>Analyst: CNJ</b> |       |                                     |       |          |            |   |
| * Solids, Dissolved                        | 7/23/21 10:25 | 7/27/21 10:25 |                     | 1     | Not Detected                        | mg/L  |          | 25         | U |
| <b>Analytical Method: SM4500CI E</b>       |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Chloride                                 | 7/26/21 10:50 | 7/26/21 10:50 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |
| <b>Analytical Method: SM4500F G 2017</b>   |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Fluoride                                 | 7/26/21 13:52 | 7/26/21 13:52 |                     | 1     | Not Detected                        | mg/L  | 0.06     | 0.1        | U |
| <b>Analytical Method: SM4500SO4 E 2011</b> |               |               | <b>Analyst: JCC</b> |       |                                     |       |          |            |   |
| * Sulfate                                  | 7/23/21 14:34 | 7/23/21 14:34 |                     | 1     | Not Detected                        | mg/L  | 0.50     | 1          | U |

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLFFB

**Sample Date:** 7/21/21 15:00

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill Field Blank-1

**Laboratory ID Number:** BB13329

| Sample  | Analysis               | Units | MB         |          | Spike | MS     | MSD    | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|--------|--------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    |       |        |        | Standard | Limit              | Rec   | Limit       |       |       |
| BB13332 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0866 | 0.0884 | 0.0932   | 0.0850 to 0.115    | 86.6  | 70.0 to 130 | 2.06  | 20.0  |
| BB13332 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.110  | 0.110  | 0.112    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.115  | 0.120  | 0.0990   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 4.26  | 20.0  |
| BB13332 | Boron, Total           | mg/L  | 0.000162   | 0.0650   | 1.00  | 1.11   | 1.11   | 0.979    | 0.850 to 1.15      | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.102  | 0.102  | 0.103    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Sodium, Total          | mg/L  | -0.000208  | 0.0660   | 5.00  | 138    | 141    | 4.85     | 4.25 to 5.75       | 40.0  | 70.0 to 130 | 2.15  | 20.0  |
| BB13332 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.100  | 0.0983 | 0.0998   | 0.0850 to 0.115    | 100   | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.24   | 1.24   | 0.100    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.102  | 0.0992 | 0.0982   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Magnesium, Total       | mg/L  | -0.00978   | 0.0462   | 5.00  | 174    | 177    | 4.88     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Lithium, Total         | mg/L  | -9.150E-05 | 0.0154   | 0.200 | 0.492  | 0.492  | 0.196    | 0.170 to 0.230     | 126   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.0039 | 0.0039 | 0.00386  | 0.00340 to 0.00460 | 97.5  | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Cadmium, Total         | mg/L  | 0.000000   | 0.000147 | 0.100 | 0.0986 | 0.0959 | 0.0988   | 0.0850 to 0.115    | 98.6  | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.108  | 0.106  | 0.110    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 1.87  | 20.0  |
| BB13332 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.108  | 0.107  | 0.106    | 0.0850 to 0.115    | 107   | 70.0 to 130 | 0.930 | 20.0  |
| BB13332 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.5   | 16.1   | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 2.45  | 20.0  |
| BB13332 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0993 | 0.101  | 0.0929   | 0.0850 to 0.115    | 99.3  | 70.0 to 130 | 1.70  | 20.0  |
| BB13332 | Iron, Total            | mg/L  | -0.000465  | 0.0176   | 0.2   | 6.85   | 7.00   | 0.197    | 0.170 to 0.230     | 20.0  | 70.0 to 130 | 2.17  | 20.0  |
| BB13332 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334    | 342    | 4.97     | 4.25 to 5.75       | -40.0 | 70.0 to 130 | 2.37  | 20.0  |
| BB13332 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.0996 | 0.0984 | 0.101    | 0.0850 to 0.115    | 99.4  | 70.0 to 130 | 1.21  | 20.0  |

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGORLFFB

**Sample Date:** 7/21/21 15:00

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill Field Blank-1

**Laboratory ID Number:** BB13329

| Sample  | Analysis          | Units | MB      | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec | Rec<br>Limit | Prec  | Prec<br>Limit |
|---------|-------------------|-------|---------|-------------|-------|------|---------------------|----------|-------------------|-----|--------------|-------|---------------|
| BB13332 | Sulfate           | mg/L  | -0.454  | 1.00        | 1600  | 3090 | 1470                | 18.4     | 18.0 to 22.0      | 101 | 80.0 to 120  | 0.678 | 20.0          |
| BB13333 | Solids, Dissolved | mg/L  | 1.00    | 25.0        |       |      | 3060                | 57.0     | 40.0 to 60.0      |     |              | 1.13  | 5.00          |
| BB13332 | Fluoride          | mg/L  | 0.0225  | 0.100       | 2.50  | 2.79 | 0.149               | 2.63     | 2.25 to 2.75      | 106 | 80.0 to 120  | 4.11  | 20.0          |
| BB13332 | Chloride          | mg/L  | -0.0654 | 1.00        | 160   | 232  | 68.5                | 9.92     | 9.00 to 11.0      | 103 | 80.0 to 120  | 0.880 | 20.0          |

**Comments:**

# Certificate Of Analysis

**Description:** Gorgas Landfill Equipment Blank-1

**Location Code:** WMWGORLFEB  
**Collected:** 7/21/21 15:10  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13330

| Name                                       | Prepared      | Analyzed      | Vio Spec            | DF    | Results      | Units                               | MDL      | RL         | Q |
|--|---------------|---------------|---------------------|-------|--------------|-------------------------------------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b>        |               |               | <b>Analyst: ABB</b> |       |              | <b>Preparation Method: EPA 1638</b> |          |            |   |
| * Boron, Total                             | 7/28/21 08:00 | 7/28/21 14:45 |                     | 1.015 | Not Detected | mg/L                                | 0.030000 | 0.1015     | U |
| * Calcium, Total                           | 7/28/21 08:00 | 7/28/21 14:45 |                     | 1.015 | Not Detected | mg/L                                | 0.070035 | 0.406      | U |
| * Iron, Total                              | 7/28/21 08:00 | 7/28/21 14:45 |                     | 1.015 | Not Detected | mg/L                                | 0.008120 | 0.0406     | U |
| * Lithium, Total                           | 7/28/21 08:00 | 7/28/21 14:45 |                     | 1.015 | Not Detected | mg/L                                | 0.007105 | 0.01999956 | U |
| * Magnesium, Total                         | 7/28/21 08:00 | 7/28/21 14:45 |                     | 1.015 | Not Detected | mg/L                                | 0.021315 | 0.406      | U |
| * Sodium, Total                            | 7/28/21 08:00 | 7/28/21 14:45 |                     | 1.015 | Not Detected | mg/L                                | 0.03045  | 0.406      | U |
| <b>Analytical Method: EPA 200.8</b>        |               |               | <b>Analyst: ABB</b> |       |              | <b>Preparation Method: EPA 1638</b> |          |            |   |
| * Antimony, Total                          | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000508 | 0.001015   | U |
| * Arsenic, Total                           | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | 0.0000837    | mg/L                                | 0.000068 | 0.000203   | J |
| * Barium, Total                            | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000102 | 0.000203   | U |
| * Beryllium, Total                         | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000406 | 0.001015   | U |
| * Cadmium, Total                           | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000068 | 0.000203   | U |
| * Chromium, Total                          | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000203 | 0.001015   | U |
| * Cobalt, Total                            | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000068 | 0.000203   | U |
| * Lead, Total                              | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                        | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000068 | 0.000203   | U |
| * Manganese, Total                         | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000068 | 0.000203   | U |
| * Potassium, Total                         | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.169505 | 0.5075     | U |
| * Selenium, Total                          | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000508 | 0.001015   | U |
| * Thallium, Total                          | 7/23/21 13:00 | 7/26/21 15:15 |                     | 1.015 | Not Detected | mg/L                                | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 245.1</b>        |               |               | <b>Analyst: ABB</b> |       |              |                                     |          |            |   |
| * Mercury, Total by CVAA                   | 7/22/21 15:11 | 7/22/21 20:48 |                     | 1     | Not Detected | mg/L                                | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2540C</b>         |               |               | <b>Analyst: CNJ</b> |       |              |                                     |          |            |   |
| * Solids, Dissolved                        | 7/23/21 10:25 | 7/27/21 10:25 |                     | 1     | Not Detected | mg/L                                |          | 25         | U |
| <b>Analytical Method: SM4500CI E</b>       |               |               | <b>Analyst: JCC</b> |       |              |                                     |          |            |   |
| * Chloride                                 | 7/26/21 10:52 | 7/26/21 10:52 |                     | 1     | Not Detected | mg/L                                | 0.50     | 1          | U |
| <b>Analytical Method: SM4500F G 2017</b>   |               |               | <b>Analyst: JCC</b> |       |              |                                     |          |            |   |
| * Fluoride                                 | 7/26/21 13:54 | 7/26/21 13:54 |                     | 1     | Not Detected | mg/L                                | 0.06     | 0.1        | U |
| <b>Analytical Method: SM4500SO4 E 2011</b> |               |               | <b>Analyst: JCC</b> |       |              |                                     |          |            |   |
| * Sulfate                                  | 7/23/21 14:35 | 7/23/21 14:35 |                     | 1     | Not Detected | mg/L                                | 0.50     | 1          | U |

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGORLFEB

**Sample Date:** 7/21/21 15:10

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill Equipment Blank-1

**Laboratory ID Number:** BB13330

| Sample  | Analysis               | Units | MB         |          |       |        |        | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|--------|--------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS     | MSD    | Standard | Limit              | Rec   | Limit       |       |       |
| BB13332 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0866 | 0.0884 | 0.0932   | 0.0850 to 0.115    | 86.6  | 70.0 to 130 | 2.06  | 20.0  |
| BB13332 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.110  | 0.110  | 0.112    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.100  | 0.0983 | 0.0998   | 0.0850 to 0.115    | 100   | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.115  | 0.120  | 0.0990   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 4.26  | 20.0  |
| BB13332 | Boron, Total           | mg/L  | 0.000162   | 0.0650   | 1.00  | 1.11   | 1.11   | 0.979    | 0.850 to 1.15      | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.102  | 0.102  | 0.103    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Sodium, Total          | mg/L  | -0.000208  | 0.0660   | 5.00  | 138    | 141    | 4.85     | 4.25 to 5.75       | 40.0  | 70.0 to 130 | 2.15  | 20.0  |
| BB13332 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.0039 | 0.0039 | 0.00386  | 0.00340 to 0.00460 | 97.5  | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Cadmium, Total         | mg/L  | 0.00000    | 0.000147 | 0.100 | 0.0986 | 0.0959 | 0.0988   | 0.0850 to 0.115    | 98.6  | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.108  | 0.106  | 0.110    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 1.87  | 20.0  |
| BB13332 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.108  | 0.107  | 0.106    | 0.0850 to 0.115    | 107   | 70.0 to 130 | 0.930 | 20.0  |
| BB13332 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.5   | 16.1   | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 2.45  | 20.0  |
| BB13332 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0993 | 0.101  | 0.0929   | 0.0850 to 0.115    | 99.3  | 70.0 to 130 | 1.70  | 20.0  |
| BB13332 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.24   | 1.24   | 0.100    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.102  | 0.0992 | 0.0982   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Magnesium, Total       | mg/L  | -0.00978   | 0.0462   | 5.00  | 174    | 177    | 4.88     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Lithium, Total         | mg/L  | -9.150E-05 | 0.0154   | 0.200 | 0.492  | 0.492  | 0.196    | 0.170 to 0.230     | 126   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Iron, Total            | mg/L  | -0.000465  | 0.0176   | 0.2   | 6.85   | 7.00   | 0.197    | 0.170 to 0.230     | 20.0  | 70.0 to 130 | 2.17  | 20.0  |
| BB13332 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334    | 342    | 4.97     | 4.25 to 5.75       | -40.0 | 70.0 to 130 | 2.37  | 20.0  |
| BB13332 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.0996 | 0.0984 | 0.101    | 0.0850 to 0.115    | 99.4  | 70.0 to 130 | 1.21  | 20.0  |

**Comments:**



## Batch QC Summary

**Customer Account:** WMWGORLFEB

**Sample Date:** 7/21/21 15:10

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill Equipment Blank-1

**Laboratory ID Number:** BB13330

| Sample  | Analysis          | Units | MB      | MB<br>Limit | Spike | MS   | Sample<br>Duplicate | Standard | Standard<br>Limit | Rec | Rec<br>Limit | Prec  | Prec<br>Limit |
|---------|-------------------|-------|---------|-------------|-------|------|---------------------|----------|-------------------|-----|--------------|-------|---------------|
| BB13332 | Sulfate           | mg/L  | -0.454  | 1.00        | 1600  | 3090 | 1470                | 18.4     | 18.0 to 22.0      | 101 | 80.0 to 120  | 0.678 | 20.0          |
| BB13333 | Solids, Dissolved | mg/L  | 1.00    | 25.0        |       |      | 3060                | 57.0     | 40.0 to 60.0      |     |              | 1.13  | 5.00          |
| BB13332 | Fluoride          | mg/L  | 0.0225  | 0.100       | 2.50  | 2.79 | 0.149               | 2.63     | 2.25 to 2.75      | 106 | 80.0 to 120  | 4.11  | 20.0          |
| BB13332 | Chloride          | mg/L  | -0.0654 | 1.00        | 160   | 232  | 68.5                | 9.92     | 9.00 to 11.0      | 103 | 80.0 to 120  | 0.880 | 20.0          |

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**Comments:**

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-11

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 11:34  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13331

| Name                                | Prepared      | Analyzed      | Vio Spec            | DF    | Results      | Units                               | MDL      | RL         | Q |
|-------------------------------------|---------------|---------------|---------------------|-------|--------------|-------------------------------------|----------|------------|---|
| <b>Analytical Method: EPA 200.7</b> |               |               | <b>Analyst: ABB</b> |       |              | <b>Preparation Method: EPA 1638</b> |          |            |   |
| * Boron, Total                      | 7/28/21 08:00 | 7/28/21 14:48 |                     | 1.015 | 0.104        | mg/L                                | 0.030000 | 0.1015     |   |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 16:01 |                     | 10.15 | 322          | mg/L                                | 0.70035  | 4.06       |   |
| * Iron, Total                       | 7/28/21 08:00 | 7/28/21 14:48 |                     | 1.015 | 3.97         | mg/L                                | 0.008120 | 0.0406     |   |
| * Lithium, Total                    | 7/28/21 08:00 | 7/28/21 14:48 |                     | 1.015 | 0.271        | mg/L                                | 0.007105 | 0.01999956 |   |
| * Magnesium, Total                  | 7/28/21 08:00 | 7/28/21 16:01 |                     | 10.15 | 164          | mg/L                                | 0.21315  | 4.06       |   |
| * Sodium, Total                     | 7/28/21 08:00 | 7/28/21 16:01 |                     | 10.15 | 143          | mg/L                                | 0.3045   | 4.06       |   |
| <b>Analytical Method: EPA 200.7</b> |               |               | <b>Analyst: ABB</b> |       |              |                                     |          |            |   |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 11:34 |                     | 1.015 | 4.05         | mg/L                                | 0.008120 | 0.0406     |   |
| <b>Analytical Method: EPA 200.8</b> |               |               | <b>Analyst: ABB</b> |       |              | <b>Preparation Method: EPA 1638</b> |          |            |   |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | Not Detected | mg/L                                | 0.000508 | 0.001015   | U |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | 0.000901     | mg/L                                | 0.000068 | 0.000203   |   |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | 0.0159       | mg/L                                | 0.000102 | 0.000203   |   |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | Not Detected | mg/L                                | 0.000406 | 0.001015   | U |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | Not Detected | mg/L                                | 0.000068 | 0.000203   | U |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | Not Detected | mg/L                                | 0.000203 | 0.001015   | U |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | 0.000254     | mg/L                                | 0.000068 | 0.000203   |   |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | Not Detected | mg/L                                | 0.000068 | 0.000203   | U |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | 0.00130      | mg/L                                | 0.000068 | 0.000203   |   |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | 6.51         | mg/L                                | 0.169505 | 0.5075     |   |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | 1.15         | mg/L                                | 0.000068 | 0.000203   |   |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | Not Detected | mg/L                                | 0.000508 | 0.001015   | U |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 15:19 |                     | 1.015 | Not Detected | mg/L                                | 0.000068 | 0.000203   | U |
| <b>Analytical Method: EPA 200.8</b> |               |               | <b>Analyst: DLJ</b> |       |              |                                     |          |            |   |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 13:21 |                     | 1.015 | 1.16         | mg/L                                | 0.000068 | 0.000203   |   |
| <b>Analytical Method: EPA 245.1</b> |               |               | <b>Analyst: ABB</b> |       |              |                                     |          |            |   |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 20:51 |                     | 1     | Not Detected | mg/L                                | 0.0003   | 0.0005     | U |
| <b>Analytical Method: SM 2320 B</b> |               |               | <b>Analyst: JAG</b> |       |              |                                     |          |            |   |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58 |                     | 1     | 276          | mg/L                                |          | 0.1        |   |
| <b>Analytical Method: SM 2540C</b>  |               |               | <b>Analyst: CNJ</b> |       |              |                                     |          |            |   |
| * Solids, Dissolved                 | 7/23/21 10:25 | 7/27/21 10:25 |                     | 1     | 2210         | mg/L                                |          | 147.1      |   |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-11

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 11:34  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13331

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 276     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.14    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500CI E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 11:11 | 7/26/21 11:11       |          | 10 | 73.8    | mg/L  | 5.00  | 10  |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:55 | 7/26/21 13:55       |          | 1  | 0.160   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 14:36 | 7/23/21 14:36       |          | 40 | 1420    | mg/L  | 20.00 | 40  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/21/21 11:31 | 7/21/21 11:31       |          |    | 2560.30 | uS/cm |       |     | FA |
| pH   | 7/21/21 11:31 | 7/21/21 11:31       |          |    | 6.74    | SU    |       |     | FA |
| Temperature                                  | 7/21/21 11:31 | 7/21/21 11:31       |          |    | 22.57   | C     |       |     | FA |
| Turbidity                                    | 7/21/21 11:31 | 7/21/21 11:31       |          |    | 0.68    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/21/21 11:34

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-11

**Laboratory ID Number:** BB13331

| Sample  | Analysis               | Units | MB         | MB       |       |        |        | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|--------|--------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       |            | Limit    | Spike | MS     | MSD    | Standard | Limit              | Rec   | Limit       |       |       |
| BB13332 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.115  | 0.120  | 0.0990   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 4.26  | 20.0  |
| BB13332 | Boron, Total           | mg/L  | 0.000162   | 0.0650   | 1.00  | 1.11   | 1.11   | 0.979    | 0.850 to 1.15      | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.102  | 0.102  | 0.103    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Sodium, Total          | mg/L  | -0.000208  | 0.0660   | 5.00  | 138    | 141    | 4.85     | 4.25 to 5.75       | 40.0  | 70.0 to 130 | 2.15  | 20.0  |
| BB13332 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0866 | 0.0884 | 0.0932   | 0.0850 to 0.115    | 86.6  | 70.0 to 130 | 2.06  | 20.0  |
| BB13332 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.110  | 0.110  | 0.112    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.100  | 0.0983 | 0.0998   | 0.0850 to 0.115    | 100   | 70.0 to 130 | 1.71  | 20.0  |
| BB13333 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 1.61   | 1.60   | 0.108    | 0.0850 to 0.115    | 60.0  | 70.0 to 130 | 0.623 | 20.0  |
| BB13332 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.0039 | 0.0039 | 0.00386  | 0.00340 to 0.00460 | 97.5  | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Cadmium, Total         | mg/L  | 0.000000   | 0.000147 | 0.100 | 0.0986 | 0.0959 | 0.0988   | 0.0850 to 0.115    | 98.6  | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.108  | 0.106  | 0.110    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 1.87  | 20.0  |
| BB13332 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.108  | 0.107  | 0.106    | 0.0850 to 0.115    | 107   | 70.0 to 130 | 0.930 | 20.0  |
| BB13332 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.5   | 16.1   | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 2.45  | 20.0  |
| BB13332 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0993 | 0.101  | 0.0929   | 0.0850 to 0.115    | 99.3  | 70.0 to 130 | 1.70  | 20.0  |
| BB13332 | Iron, Total            | mg/L  | -0.000465  | 0.0176   | 0.2   | 6.85   | 7.00   | 0.197    | 0.170 to 0.230     | 20.0  | 70.0 to 130 | 2.17  | 20.0  |
| BB13332 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334    | 342    | 4.97     | 4.25 to 5.75       | -40.0 | 70.0 to 130 | 2.37  | 20.0  |
| BB13332 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.0996 | 0.0984 | 0.101    | 0.0850 to 0.115    | 99.4  | 70.0 to 130 | 1.21  | 20.0  |
| BB13333 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.09   | 2.06   | 0.197    | 0.170 to 0.230     | 105   | 70.0 to 130 | 1.45  | 20.0  |
| BB13332 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.24   | 1.24   | 0.100    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.102  | 0.0992 | 0.0982   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Magnesium, Total       | mg/L  | -0.00978   | 0.0462   | 5.00  | 174    | 177    | 4.88     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Lithium, Total         | mg/L  | -9.150E-05 | 0.0154   | 0.200 | 0.492  | 0.492  | 0.196    | 0.170 to 0.230     | 126   | 70.0 to 130 | 0.00  | 20.0  |

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

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/21/21 11:34  
**Customer ID:**  
**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-11

**Laboratory ID Number:** BB13331

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|-----|-------------|-------|------------|
| BB13332 | Sulfate                    | mg/L  | -0.454  | 1.00     | 1600  | 3090 | 1470             | 18.4     | 18.0 to 22.0   | 101 | 80.0 to 120 | 0.678 | 20.0       |
| BB13333 | Solids, Dissolved          | mg/L  | 1.00    | 25.0     |       |      | 3060             | 57.0     | 40.0 to 60.0   |     |             | 1.13  | 5.00       |
| BB13332 | Chloride                   | mg/L  | -0.0654 | 1.00     | 160   | 232  | 68.5             | 9.92     | 9.00 to 11.0   | 103 | 80.0 to 120 | 0.880 | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 163              | 53.4     | 45.0 to 55.0   |     |             | 0.612 | 10.0       |
| BB13332 | Fluoride                   | mg/L  | 0.0225  | 0.100    | 2.50  | 2.79 | 0.149            | 2.63     | 2.25 to 2.75   | 106 | 80.0 to 120 | 4.11  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-20

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 12:47  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13332

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q  |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|----|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |    |
| * Boron, Total                      | 7/28/21 08:00 | 7/28/21 14:51       |          | 1.015 | 0.0999                              | mg/L  | 0.030000 | 0.1015     | J  |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 16:05       |          | 10.15 | 336                                 | mg/L  | 0.70035  | 4.06       | RA |
| * Iron, Total                       | 7/28/21 08:00 | 7/28/21 16:05       |          | 10.15 | 6.81                                | mg/L  | 0.08120  | 0.406      | RA |
| * Lithium, Total                    | 7/28/21 08:00 | 7/28/21 14:51       |          | 1.015 | 0.239                               | mg/L  | 0.007105 | 0.01999956 |    |
| * Magnesium, Total                  | 7/28/21 08:00 | 7/28/21 16:05       |          | 10.15 | 173                                 | mg/L  | 0.21315  | 4.06       | RA |
| * Sodium, Total                     | 7/28/21 08:00 | 7/28/21 16:05       |          | 10.15 | 136                                 | mg/L  | 0.3045   | 4.06       | RA |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |    |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 13:14       |          | 10.15 | 6.83                                | mg/L  | 0.08120  | 0.406      |    |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |    |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U  |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | 0.000835                            | mg/L  | 0.000068 | 0.000203   |    |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | 0.0160                              | mg/L  | 0.000102 | 0.000203   |    |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U  |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U  |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U  |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | 0.000231                            | mg/L  | 0.000068 | 0.000203   |    |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U  |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | 0.00101                             | mg/L  | 0.000068 | 0.000203   |    |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | 6.13                                | mg/L  | 0.169505 | 0.5075     |    |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | 1.13                                | mg/L  | 0.000068 | 0.000203   |    |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U  |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 15:22       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U  |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |    |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 13:25       |          | 1.015 | 1.17                                | mg/L  | 0.000068 | 0.000203   |    |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |    |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 20:55       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U  |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |    |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 288                                 | mg/L  |          | 0.1        |    |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |    |
| * Solids, Dissolved                 | 7/23/21 10:25 | 7/27/21 10:25       |          | 1     | 2320                                | mg/L  |          | 147.1      |    |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-20

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 12:47  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13332

| Name   | Prepared      | Analyzed            | Vio Spec | DF | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |    |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 288     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1  | 0.19    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Chloride                                   | 7/26/21 11:12 | 7/26/21 11:12       |          | 16 | 67.9    | mg/L  | 8.00  | 16  |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 13:56 | 7/26/21 13:56       |          | 1  | 0.143   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |    |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 14:38 | 7/23/21 14:38       |          | 80 | 1480    | mg/L  | 40.00 | 80  |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |    |         |       |       |     |    |
| Conductivity                                 | 7/21/21 12:43 | 7/21/21 12:43       |          |    | 2648.64 | uS/cm |       |     | FA |
| pH   | 7/21/21 12:43 | 7/21/21 12:43       |          |    | 6.60    | SU    |       |     | FA |
| Temperature                                  | 7/21/21 12:43 | 7/21/21 12:43       |          |    | 20.65   | C     |       |     | FA |
| Turbidity                                    | 7/21/21 12:43 | 7/21/21 12:43       |          |    | 0.81    | NTU   |       |     | FA |

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

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

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/21/21 12:47

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-20

**Laboratory ID Number:** BB13332

| Sample  | Analysis               | Units | MB         | MB       |       |        |        | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|--------|--------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       |            | Limit    | Spike | MS     | MSD    | Standard | Limit              | Rec   | Limit       |       |       |
| BB13332 | Beryllium, Total       | mg/L  | 0.0000379  | 0.000880 | 0.100 | 0.0866 | 0.0884 | 0.0932   | 0.0850 to 0.115    | 86.6  | 70.0 to 130 | 2.06  | 20.0  |
| BB13332 | Thallium, Total        | mg/L  | -0.000149  | 0.000147 | 0.100 | 0.110  | 0.110  | 0.112    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Barium, Total          | mg/L  | 0.0000005  | 0.000200 | 0.100 | 0.115  | 0.120  | 0.0990   | 0.0850 to 0.115    | 99.0  | 70.0 to 130 | 4.26  | 20.0  |
| BB13332 | Boron, Total           | mg/L  | 0.000162   | 0.0650   | 1.00  | 1.11   | 1.11   | 0.979    | 0.850 to 1.15      | 101   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Selenium, Total        | mg/L  | -0.0000428 | 0.00100  | 0.100 | 0.102  | 0.102  | 0.103    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Sodium, Total          | mg/L  | -0.000208  | 0.0660   | 5.00  | 138    | 141    | 4.85     | 4.25 to 5.75       | 40.0  | 70.0 to 130 | 2.15  | 20.0  |
| BB13332 | Chromium, Total        | mg/L  | -0.000126  | 0.000440 | 0.100 | 0.100  | 0.0983 | 0.0998   | 0.0850 to 0.115    | 100   | 70.0 to 130 | 1.71  | 20.0  |
| BB13333 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 1.61   | 1.60   | 0.108    | 0.0850 to 0.115    | 60.0  | 70.0 to 130 | 0.623 | 20.0  |
| BB13332 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.0039 | 0.0039 | 0.00386  | 0.00340 to 0.00460 | 97.5  | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Cadmium, Total         | mg/L  | 0.000000   | 0.000147 | 0.100 | 0.0986 | 0.0959 | 0.0988   | 0.0850 to 0.115    | 98.6  | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Lead, Total            | mg/L  | 0.0000005  | 0.000147 | 0.100 | 0.108  | 0.106  | 0.110    | 0.0850 to 0.115    | 108   | 70.0 to 130 | 1.87  | 20.0  |
| BB13332 | Arsenic, Total         | mg/L  | 0.0000404  | 0.000147 | 0.100 | 0.108  | 0.107  | 0.106    | 0.0850 to 0.115    | 107   | 70.0 to 130 | 0.930 | 20.0  |
| BB13332 | Potassium, Total       | mg/L  | 0.0209     | 0.367    | 10.0  | 16.5   | 16.1   | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 2.45  | 20.0  |
| BB13332 | Antimony, Total        | mg/L  | 0.000065   | 0.00100  | 0.100 | 0.0993 | 0.101  | 0.0929   | 0.0850 to 0.115    | 99.3  | 70.0 to 130 | 1.70  | 20.0  |
| BB13332 | Iron, Total            | mg/L  | -0.000465  | 0.0176   | 0.2   | 6.85   | 7.00   | 0.197    | 0.170 to 0.230     | 20.0  | 70.0 to 130 | 2.17  | 20.0  |
| BB13332 | Calcium, Total         | mg/L  | 0.00423    | 0.152    | 5.00  | 334    | 342    | 4.97     | 4.25 to 5.75       | -40.0 | 70.0 to 130 | 2.37  | 20.0  |
| BB13332 | Cobalt, Total          | mg/L  | -0.000110  | 0.000147 | 0.100 | 0.0996 | 0.0984 | 0.101    | 0.0850 to 0.115    | 99.4  | 70.0 to 130 | 1.21  | 20.0  |
| BB13333 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.09   | 2.06   | 0.197    | 0.170 to 0.230     | 105   | 70.0 to 130 | 1.45  | 20.0  |
| BB13332 | Manganese, Total       | mg/L  | 0.0000072  | 0.000147 | 0.100 | 1.24   | 1.24   | 0.100    | 0.0850 to 0.115    | 110   | 70.0 to 130 | 0.00  | 20.0  |
| BB13332 | Molybdenum, Total      | mg/L  | 0.0000058  | 0.000147 | 0.100 | 0.102  | 0.0992 | 0.0982   | 0.0850 to 0.115    | 101   | 70.0 to 130 | 2.78  | 20.0  |
| BB13332 | Magnesium, Total       | mg/L  | -0.00978   | 0.0462   | 5.00  | 174    | 177    | 4.88     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.71  | 20.0  |
| BB13332 | Lithium, Total         | mg/L  | -9.150E-05 | 0.0154   | 0.200 | 0.492  | 0.492  | 0.196    | 0.170 to 0.230     | 126   | 70.0 to 130 | 0.00  | 20.0  |

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



## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/21/21 12:47  
**Customer ID:**  
**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-20

**Laboratory ID Number:** BB13332

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|-----|-------------|-------|------------|
| BB13333 | Solids, Dissolved          | mg/L  | 1.00    | 25.0     |       |      | 3060             | 57.0     | 40.0 to 60.0   |     |             | 1.13  | 5.00       |
| BB13332 | Chloride                   | mg/L  | -0.0654 | 1.00     | 160   | 232  | 68.5             | 9.92     | 9.00 to 11.0   | 103 | 80.0 to 120 | 0.880 | 20.0       |
| BB13332 | Sulfate                    | mg/L  | -0.454  | 1.00     | 1600  | 3090 | 1470             | 18.4     | 18.0 to 22.0   | 101 | 80.0 to 120 | 0.678 | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 163              | 53.4     | 45.0 to 55.0   |     |             | 0.612 | 10.0       |
| BB13332 | Fluoride                   | mg/L  | 0.0225  | 0.100    | 2.50  | 2.79 | 0.149            | 2.63     | 2.25 to 2.75   | 106 | 80.0 to 120 | 4.11  | 20.0       |

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-19

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 14:01  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13333

| Name                                | Prepared      | Analyzed            | Vio Spec | DF    | Results                             | Units | MDL      | RL         | Q  |
|-------------------------------------|---------------|---------------------|----------|-------|-------------------------------------|-------|----------|------------|----|
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |    |
| * Boron, Total                      | 7/28/21 08:00 | 7/28/21 15:15       |          | 1.015 | 0.0350                              | mg/L  | 0.030000 | 0.1015     | J  |
| * Calcium, Total                    | 7/28/21 08:00 | 7/28/21 16:22       |          | 10.15 | 332                                 | mg/L  | 0.70035  | 4.06       | RA |
| * Iron, Total                       | 7/28/21 08:00 | 7/28/21 15:15       |          | 1.015 | 2.55                                | mg/L  | 0.008120 | 0.0406     |    |
| * Lithium, Total                    | 7/28/21 08:00 | 7/28/21 15:15       |          | 1.015 | 0.0617                              | mg/L  | 0.007105 | 0.01999956 |    |
| * Magnesium, Total                  | 7/28/21 08:00 | 7/28/21 16:22       |          | 10.15 | 344                                 | mg/L  | 0.21315  | 4.06       | RA |
| * Sodium, Total                     | 7/28/21 08:00 | 7/28/21 15:15       |          | 1.015 | 35.3                                | mg/L  | 0.03045  | 0.406      | RA |
| <b>Analytical Method: EPA 200.7</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |    |
| * Iron, Dissolved                   | 7/28/21 09:25 | 7/28/21 11:40       |          | 1.015 | 1.88                                | mg/L  | 0.008120 | 0.0406     |    |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: ABB</b> |          |       | <b>Preparation Method: EPA 1638</b> |       |          |            |    |
| * Antimony, Total                   | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U  |
| * Arsenic, Total                    | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | 0.000176                            | mg/L  | 0.000068 | 0.000203   | J  |
| * Barium, Total                     | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | 0.0100                              | mg/L  | 0.000102 | 0.000203   |    |
| * Beryllium, Total                  | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000406 | 0.001015   | U  |
| * Cadmium, Total                    | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U  |
| * Chromium, Total                   | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000203 | 0.001015   | U  |
| * Cobalt, Total                     | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | 0.0293                              | mg/L  | 0.000068 | 0.000203   |    |
| * Lead, Total                       | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U  |
| * Molybdenum, Total                 | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | 0.000214                            | mg/L  | 0.000068 | 0.000203   |    |
| * Potassium, Total                  | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | 6.12                                | mg/L  | 0.169505 | 0.5075     |    |
| * Manganese, Total                  | 7/23/21 13:00 | 7/26/21 23:35       |          | 5.075 | 1.52                                | mg/L  | 0.000340 | 0.001015   | RA |
| * Selenium, Total                   | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000508 | 0.001015   | U  |
| * Thallium, Total                   | 7/23/21 13:00 | 7/26/21 15:51       |          | 1.015 | Not Detected                        | mg/L  | 0.000068 | 0.000203   | U  |
| <b>Analytical Method: EPA 200.8</b> |               | <b>Analyst: DLJ</b> |          |       |                                     |       |          |            |    |
| * Manganese, Dissolved              | 7/23/21 13:21 | 7/26/21 22:21       |          | 5.075 | 1.55                                | mg/L  | 0.000340 | 0.001015   | RA |
| <b>Analytical Method: EPA 245.1</b> |               | <b>Analyst: ABB</b> |          |       |                                     |       |          |            |    |
| * Mercury, Total by CVAA            | 7/22/21 15:11 | 7/22/21 21:23       |          | 1     | Not Detected                        | mg/L  | 0.0003   | 0.0005     | U  |
| <b>Analytical Method: SM 2320 B</b> |               | <b>Analyst: JAG</b> |          |       |                                     |       |          |            |    |
| Alkalinity, Total as CaCO3          | 7/30/21 10:55 | 7/30/21 11:58       |          | 1     | 164                                 | mg/L  |          | 0.1        |    |
| <b>Analytical Method: SM 2540C</b>  |               | <b>Analyst: CNJ</b> |          |       |                                     |       |          |            |    |
| * Solids, Dissolved                 | 7/23/21 10:25 | 7/27/21 10:25       |          | 1     | 3130                                | mg/L  |          | 147.1      |    |

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

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

# Certificate Of Analysis

**Description:** Gorgas Landfill - MW-19

**Location Code:** WMWGORLF  
**Collected:** 7/21/21 14:01  
**Customer ID:**  
**Submittal Date:** 7/22/21 10:16

**Laboratory ID Number:** BB13333

| Name   | Prepared      | Analyzed            | Vio Spec | DF  | Results | Units | MDL   | RL  | Q  |
|--|---------------|---------------------|----------|-----|---------|-------|-------|-----|----|
| <b>Analytical Method: SM 4500CO2 D</b>       |               | <b>Analyst: JAG</b> |          |     |         |       |       |     |    |
| Bicarbonate Alkalinity, (calc.)              | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 164     | mg/L  |       |     |    |
| Carbonate Alkalinity, (calc.)                | 7/30/21 10:55 | 7/30/21 11:58       |          | 1   | 0.04    | mg/L  |       |     |    |
| <b>Analytical Method: SM4500Cl E</b>         |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Chloride                                   | 7/26/21 11:10 | 7/26/21 11:10       |          | 1   | 1.74    | mg/L  | 0.50  | 1   |    |
| <b>Analytical Method: SM4500F G 2017</b>     |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Fluoride                                   | 7/26/21 14:07 | 7/26/21 14:07       |          | 1   | 0.429   | mg/L  | 0.06  | 0.1 |    |
| <b>Analytical Method: SM4500SO4 E 2011</b>   |               | <b>Analyst: JCC</b> |          |     |         |       |       |     |    |
| * Sulfate                                    | 7/23/21 14:49 | 7/23/21 14:49       |          | 160 | 1990    | mg/L  | 80.00 | 160 |    |
| <b>Analytical Method: Field Measurements</b> |               | <b>Analyst: DKG</b> |          |     |         |       |       |     |    |
| Conductivity                                 | 7/21/21 13:58 | 7/21/21 13:58       |          |     | 2916.25 | uS/cm |       |     | FA |
| pH   | 7/21/21 13:58 | 7/21/21 13:58       |          |     | 6.23    | SU    |       |     | FA |
| Temperature                                  | 7/21/21 13:58 | 7/21/21 13:58       |          |     | 21.11   | C     |       |     | FA |
| Turbidity                                    | 7/21/21 13:58 | 7/21/21 13:58       |          |     | 4.91    | NTU   |       |     | FA |

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGORLF

**Sample Date:** 7/21/21 14:01

**Customer ID:**

**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-19

**Laboratory ID Number:** BB13333

| Sample  | Analysis               | Units | MB         |          |       |         |         | Standard |                    | Rec   |             | Prec  | Limit |
|---------|------------------------|-------|------------|----------|-------|---------|---------|----------|--------------------|-------|-------------|-------|-------|
|         |                        |       | MB         | Limit    | Spike | MS      | MSD     | Standard | Limit              | Rec   | Limit       |       |       |
| BB13333 | Thallium, Total        | mg/L  | -0.000148  | 0.000147 | 0.100 | 0.109   | 0.109   | 0.108    | 0.0850 to 0.115    | 109   | 70.0 to 130 | 0.00  | 20.0  |
| BB13333 | Manganese, Total       | mg/L  | 0.0000239  | 0.000147 | 0.100 | 1.57    | 1.62    | 0.102    | 0.0850 to 0.115    | 50.0  | 70.0 to 130 | 3.13  | 20.0  |
| BB13333 | Cadmium, Total         | mg/L  | 0.000000   | 0.000147 | 0.100 | 0.0976  | 0.0956  | 0.0986   | 0.0850 to 0.115    | 97.6  | 70.0 to 130 | 2.07  | 20.0  |
| BB13333 | Arsenic, Total         | mg/L  | 0.0000231  | 0.000147 | 0.100 | 0.109   | 0.108   | 0.108    | 0.0850 to 0.115    | 109   | 70.0 to 130 | 0.922 | 20.0  |
| BB13333 | Selenium, Total        | mg/L  | -0.0000159 | 0.00100  | 0.100 | 0.103   | 0.103   | 0.104    | 0.0850 to 0.115    | 103   | 70.0 to 130 | 0.00  | 20.0  |
| BB13333 | Molybdenum, Total      | mg/L  | 0.0000003  | 0.000147 | 0.100 | 0.0972  | 0.0996  | 0.102    | 0.0850 to 0.115    | 97.0  | 70.0 to 130 | 2.44  | 20.0  |
| BB13333 | Chromium, Total        | mg/L  | -0.000159  | 0.000440 | 0.100 | 0.0978  | 0.0982  | 0.101    | 0.0850 to 0.115    | 97.8  | 70.0 to 130 | 0.408 | 20.0  |
| BB13333 | Iron, Total            | mg/L  | -0.000799  | 0.0176   | 0.2   | 2.72    | 2.69    | 0.197    | 0.170 to 0.230     | 85.0  | 70.0 to 130 | 1.11  | 20.0  |
| BB13333 | Iron, Dissolved        | mg/L  | -0.000913  | 0.0176   | 0.2   | 2.09    | 2.06    | 0.197    | 0.170 to 0.230     | 105   | 70.0 to 130 | 1.45  | 20.0  |
| BB13333 | Magnesium, Total       | mg/L  | -0.0111    | 0.0462   | 5.00  | 345     | 341     | 4.90     | 4.25 to 5.75       | 20.0  | 70.0 to 130 | 1.17  | 20.0  |
| BB13333 | Mercury, Total by CVAA | mg/L  | 3.000E-05  | 0.000500 | 0.004 | 0.00383 | 0.00389 | 0.00389  | 0.00340 to 0.00460 | 95.8  | 70.0 to 130 | 1.55  | 20.0  |
| BB13333 | Calcium, Total         | mg/L  | 0.000974   | 0.152    | 5.00  | 332     | 328     | 5.00     | 4.25 to 5.75       | 0.00  | 70.0 to 130 | 1.21  | 20.0  |
| BB13333 | Manganese, Dissolved   | mg/L  | 0.0000146  | 0.000147 | 0.100 | 1.61    | 1.60    | 0.108    | 0.0850 to 0.115    | 60.0  | 70.0 to 130 | 0.623 | 20.0  |
| BB13333 | Cobalt, Total          | mg/L  | -0.000114  | 0.000147 | 0.100 | 0.128   | 0.127   | 0.102    | 0.0850 to 0.115    | 98.7  | 70.0 to 130 | 0.784 | 20.0  |
| BB13333 | Boron, Total           | mg/L  | 0.000446   | 0.0650   | 1.00  | 1.05    | 1.03    | 0.974    | 0.850 to 1.15      | 102   | 70.0 to 130 | 1.92  | 20.0  |
| BB13333 | Antimony, Total        | mg/L  | 0.0000727  | 0.00100  | 0.100 | 0.0995  | 0.0997  | 0.0964   | 0.0850 to 0.115    | 99.5  | 70.0 to 130 | 0.201 | 20.0  |
| BB13333 | Beryllium, Total       | mg/L  | 0.0000557  | 0.000880 | 0.100 | 0.0853  | 0.0832  | 0.0955   | 0.0850 to 0.115    | 85.3  | 70.0 to 130 | 2.49  | 20.0  |
| BB13333 | Sodium, Total          | mg/L  | 0.000485   | 0.0660   | 5.00  | 34.3    | 34.2    | 4.82     | 4.25 to 5.75       | -20.0 | 70.0 to 130 | 0.292 | 20.0  |
| BB13333 | Barium, Total          | mg/L  | 0.0000368  | 0.000200 | 0.100 | 0.112   | 0.113   | 0.101    | 0.0850 to 0.115    | 102   | 70.0 to 130 | 0.889 | 20.0  |
| BB13333 | Potassium, Total       | mg/L  | 0.00889    | 0.367    | 10.0  | 16.5    | 16.3    | 10.5     | 8.50 to 11.5       | 104   | 70.0 to 130 | 1.22  | 20.0  |
| BB13333 | Lead, Total            | mg/L  | 0.0000003  | 0.000147 | 0.100 | 0.109   | 0.108   | 0.107    | 0.0850 to 0.115    | 109   | 70.0 to 130 | 0.922 | 20.0  |
| BB13333 | Lithium, Total         | mg/L  | -4.900E-05 | 0.0154   | 0.200 | 0.318   | 0.312   | 0.194    | 0.170 to 0.230     | 128   | 70.0 to 130 | 1.90  | 20.0  |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGORLF  
**Sample Date:** 7/21/21 14:01  
**Customer ID:**  
**Delivery Date:** 7/22/21 10:16

**Description:** Gorgas Landfill - MW-19

**Laboratory ID Number:** BB13333

| Sample  | Analysis                   | Units | MB      | MB Limit | Spike | MS   | Sample Duplicate | Standard | Standard Limit | Rec  | Rec Limit   | Prec  | Prec Limit |
|---------|----------------------------|-------|---------|----------|-------|------|------------------|----------|----------------|------|-------------|-------|------------|
| BB13333 | Chloride                   | mg/L  | -0.0645 | 1.00     | 10.0  | 11.5 | 1.83             | 9.87     | 9.00 to 11.0   | 97.6 | 80.0 to 120 | 5.04  | 20.0       |
| BB13333 | Solids, Dissolved          | mg/L  | 1.00    | 25.0     |       |      | 3060             | 57.0     | 40.0 to 60.0   |      |             | 1.13  | 5.00       |
| BB13333 | Sulfate                    | mg/L  | -0.598  | 1.00     | 3200  | 5610 | 1990             | 18.7     | 18.0 to 22.0   | 113  | 80.0 to 120 | 0.00  | 20.0       |
| BB13333 | Alkalinity, Total as CaCO3 | mg/L  |         |          |       |      | 163              | 53.4     | 45.0 to 55.0   |      |             | 0.612 | 10.0       |
| BB13333 | Fluoride                   | mg/L  | 0.0271  | 0.100    | 2.50  | 3.05 | 0.402            | 2.59     | 2.25 to 2.75   | 105  | 80.0 to 120 | 6.50  | 20.0       |

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Definitions

**Project Number:** WMWGORLF\_1330

| Abbreviation | Description   |
|--------------|---|
| DF           | Dilution Factor   |
| LCS          | Lab Control Sample  |
| LFM          | Lab Fortified Matrix  |
| MB           | Method Blank  |
| MDL          | Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero. |
| MS           | Matrix Spike  |
| MSD          | Matrix Spike Duplicate  |
| Prec         | Precision (% RPD)   |
| Q            | Qualifier; comment used to note deviations or additional information associated with analytical results.  |
| QC           | Quality Control   |
| Rec          | Recovery of Matrix Spike  |
| RL           | Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.   |
| Vio Spec     | Violation Specification; regulatory limit which has been exceeded by the sample analyzed.   |

| Qualifier | Description  |
|-----------|--|
| FA        | Field results were reviewed by the Water Field Group. Refer to APC Field Case Narrative. |
| J         | Reported value is an estimate because concentration is less than reporting limit.        |
| RA        | Matrix spike is invalid due to sample concentration.                                     |
| U         | Compound was analyzed, but not detected.   |



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA

|                         |                     |            |                          |              |           |
|-------------------------|---------------------|------------|--------------------------|--------------|-----------|
| Requested Complete Date | Routine             | Results To | Dustin Brooks, Greg Dyer |              |           |
|                         | Site Representative |            | John Pate                | Requested By | Greg Dyer |
|                         | Collector           |            | Dallas Gentry            |              | Location  |

|         |   |                |        |   |     |        |   |            |        |   |     |     |
|---------|---|----------------|--------|---|-----|--------|---|------------|--------|---|-----|-----|
| Bottles | 1 | Metals         | 500 mL | 3 | Hg  | 250 mL | 5 | Anions     | 250 mL | 7 | N/A | N/A |
|         | 2 | Dissolved Meta | 500 mL | 4 | TDS | 500 mL | 6 | Alkalinity | 250 mL | 8 | N/A | N/A |

Comments

| Sample # | Date       | Time  | Bottle Count | Description      | Lab Filter | Lab Id  |
|----------|------------|-------|--------------|------------------|------------|---------|
| MW-13    | 07/20/2021 | 09:13 | 6            | Groundwater      |            | BB13181 |
| MW-14    | 07/20/2021 | 10:16 | 6            | Groundwater      |            | BB13182 |
| MW-15    | 07/20/2021 | 11:25 | 6            | Groundwater      |            | BB13183 |
| MW-12V   | 07/20/2021 | 12:32 | 6            | Groundwater      |            | BB13184 |
| MW-6     | 07/20/2021 | 13:57 | 6            | Groundwater      |            | BB13185 |
| MW-6 dup | 07/20/2021 | 13:57 | 6            | Sample Duplicate |            | BB13186 |
| MW-8     | 07/20/2021 | 15:25 | 6            | Groundwater      |            | BB13187 |
| FB-2     | 07/20/2021 | 16:05 | 4            | Field Blank      |            | BB13188 |
|          |            |       |              |                  |            |         |
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| Relinquished By | Received By | Date/Time        |
|                 |             | 07/21/2021 08:08 |
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|--------------|----------------|---|
| SmarTroll ID | 7586-41442-5-1 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |
| Turbidity ID | 3901-20010-2-2 |   |
| Sample Event | 1330           |   |
|              |                |   |
|              | Cooler Temp    | 0.1 degrees C   |
|              | Thermometer ID | 5408-27568-2-2  |
|              | pH Strip ID    | 8206-45805-10-9   |

Bottles/Pre-Preserved Bottles are provided by the GTL



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA

|                         |              |              |                          |
|-------------------------|--------------|--------------|--------------------------|
| Requested Complete Date | Routine      | Results To   | Dustin Brooks, Greg Dyer |
| Site Representative     | John Pate    | Requested By | Greg Dyer                |
| Collector               | TJ Daugherty | Location     | Gorgas Landfill          |

|         |   |             |        |   |     |        |   |            |        |   |     |     |
|---------|---|-------------|--------|---|-----|--------|---|------------|--------|---|-----|-----|
| Bottles | 1 | Metals      | 500 mL | 3 | Hg  | 250 mL | 5 | Anions     | 250 mL | 7 | N/A | N/A |
|         | 2 | Diss metals | 500 mL | 4 | TDS | 500 mL | 6 | Alkalinity | 250 mL | 8 | N/A | N/A |

Comments

| Sample # | Date       | Time  | Bottle Count | Description | Lab Filter | Lab Id  |
|----------|------------|-------|--------------|-------------|------------|---------|
| MW-12    | 07/20/2021 | 11:53 | 6            | Groundwater |            | BB13189 |
| MW-10    | 07/20/2021 | 13:15 | 6            | Groundwater |            | BB13190 |
| MW-7     | 07/20/2021 | 14:30 | 6            | Groundwater |            | BB13191 |
|          |            |       |              |             |            |         |
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| Relinquished By | Received By | Date/Time        |
|                 |             | 07/21/2021 08:08 |
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|--------------|----------------|---|-----------------|
| SmarTroll ID | 7586-41443-5-2 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |                 |
| Turbidity ID | 3901-20010-2-2 |   |                 |
| Sample Event | 1330           |   |                 |
|              |                | Cooler Temp   | 0.0 degrees C   |
|              |                | Thermometer ID  | 5408-27568-2-2  |
|              |                | pH Strip ID   | 8206-45805-10-9 |

Bottles/Pre-Preserved Bottles are provided by the GTL





# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA

|   |              |  |                          |
|---|--------------|--|--------------------------|
| Requested Complete Date<br>Site Representative<br>Collector | Routine      | Results To<br>Requested By<br>Location | Dustin Brooks, Greg Dyer |
|   | John Pate    |  | Greg Dyer                |
|   | TJ Daugherty |  | Gorgas Landfill          |

|         |   |             |        |   |     |        |   |            |        |   |     |     |
|---------|---|-------------|--------|---|-----|--------|---|------------|--------|---|-----|-----|
| Bottles | 1 | Metals      | 500 mL | 3 | Hg  | 250 mL | 5 | Anions     | 250 mL | 7 | N/A | N/A |
|         | 2 | Diss Metals | 500 mL | 4 | TDS | 500 mL | 6 | Alkalinity | 250 mL | 8 | N/A | N/A |

Comments

| Sample #  | Date       | Time  | Bottle Count | Description      | Lab Filter | Lab Id  |
|-----------|------------|-------|--------------|------------------|------------|---------|
| MW-5      | 07/21/2021 | 10:53 | 6            | Groundwater      |            | BB13324 |
| MW-16     | 07/21/2021 | 12:10 | 6            | Groundwater      |            | BB13325 |
| MW-16 Dup | 07/21/2021 | 12:10 | 6            | Sample Duplicate |            | BB13326 |
| MW-17R    | 07/21/2021 | 13:30 | 6            | Groundwater      |            | BB13327 |
| MW-18     | 07/21/2021 | 14:28 | 6            | Groundwater      |            | BB13328 |
| FB-1      | 07/21/2021 | 15:00 | 4            | Field Blank      |            | BB13329 |
| EB-1      | 07/21/2021 | 15:10 | 4            | Equipment Blank  |            | BB13330 |
|           |            |       |              |                  |            |         |
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| Relinquished By | Received By | Date/Time        |
|                 |             | 07/22/2021 09:28 |
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|--------------|----------------|---|
| SmarTroll ID | 7586-41443-5-2 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |
| Turbidity ID | 4677-23342-1-1 |   |
| Sample Event | 1330           |   |
|              |                |   |
|              | Cooler Temp    | 0.1 degrees C   |
|              | Thermometer ID | 5408-27568-2-2  |
|              | pH Strip ID    | 8206-45805-10-9   |

Bottles/Pre-Preserved Bottles are provided by the GTL



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

|   |               |              |                          |
|---|---------------|--------------|--------------------------|
| Requested Complete Date<br>Site Representative<br>Collector | Routine       | Results To   | Dustin Brooks, Greg Dyer |
|   | John Pate     | Requested By | Greg Dyer                |
|   | Dallas Gentry | Location     | Gorgas Landfill          |

|         |   |                |        |   |     |        |   |            |        |   |     |     |
|---------|---|----------------|--------|---|-----|--------|---|------------|--------|---|-----|-----|
| Bottles | 1 | Metals         | 500 mL | 3 | Hg  | 250 mL | 5 | Anions     | 250 mL | 7 | N/A | N/A |
|         | 2 | Dissolved Meta | 500 mL | 4 | TDS | 500 mL | 6 | Alkalinity | 250 mL | 8 | N/A | N/A |

Comments

| Sample # | Date       | Time  | Bottle Count | Description | Lab Filter | Lab Id  |
|----------|------------|-------|--------------|-------------|------------|---------|
| MW-11    | 07/21/2021 | 11:34 | 6            | Groundwater |            | BB13331 |
| MW-20    | 07/21/2021 | 12:47 | 6            | Groundwater |            | BB13332 |
| MW-19    | 07/21/2021 | 14:01 | 6            | Groundwater |            | BB13333 |
|          |            |       |              |             |            |         |
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| Relinquished By | Received By        | Date/Time        |
| <i>Mel Dyer</i> | <i>Laura Milby</i> | 07/22/2021 09:28 |
|                 |                    |                  |
|                 |                    |                  |

|                |                 |   |
|----------------|-----------------|---|
| SmarTroll ID   | 7586-41442-5-1  | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |
| Turbidity ID   | 3901-20010-2-2  |   |
| Sample Event   | 1330            |   |
|                |                 |   |
| Cooler Temp    | 0.0 degrees C   |   |
| Thermometer ID | 5408-27568-2-2  |   |
| pH Strip ID    | 8206-45805-10-9 |   |

Bottles/Pre-Preserved Bottles are provided by the GTL



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

|                         |               |              |                          |
|-------------------------|---------------|--------------|--------------------------|
| Requested Complete Date | Routine       | Results To   | Dustin Brooks, Greg Dyer |
| Site Representative     | John Pate     | Requested By | Greg Dyer                |
| Collector               | Dallas Gentry | Location     | Gorgas Landfill          |

|         |   |        |     |   |     |     |   |     |     |   |     |     |
|---------|---|--------|-----|---|-----|-----|---|-----|-----|---|-----|-----|
| Bottles | 1 | Radium | 1 L | 3 | N/A | N/A | 5 | N/A | N/A | 7 | N/A | N/A |
|         | 2 | N/A    | N/A | 4 | N/A | N/A | 6 | N/A | N/A | 8 | N/A | N/A |

Comments: Radium MS/MSD collected at MW-14

| Sample # | Date       | Time  | Bottle Count | Description      | Lab Filter | Lab Id  |
|----------|------------|-------|--------------|------------------|------------|---------|
| MW-13    | 07/20/2021 | 09:13 | 1            | Groundwater      |            | BB13192 |
| MW-14    | 07/20/2021 | 10:16 | 3            | Groundwater      |            | BB13193 |
| MW-15    | 07/20/2021 | 11:25 | 1            | Groundwater      |            | BB13194 |
| MW-12V   | 07/20/2021 | 12:32 | 1            | Groundwater      |            | BB13195 |
| MW-6     | 07/20/2021 | 13:57 | 1            | Groundwater      |            | BB13196 |
| MW-6 dup | 07/20/2021 | 13:57 | 1            | Sample Duplicate |            | BB13197 |
| MW-8     | 07/20/2021 | 15:25 | 1            | Groundwater      |            | BB13198 |
| FB-2     | 07/20/2021 | 16:05 | 1            | Field Blank      |            | BB13199 |
|          |            |       |              |                  |            |         |
|          |            |       |              |                  |            |         |
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|                 |                      |                  |
|-----------------|----------------------|------------------|
| Relinquished By | Received By          | Date/Time        |
| <i>M. Dyer</i>  | <i>Laura M. Dyer</i> | 07/21/2021 08:08 |
|                 |                      |                  |
|                 |                      |                  |

|              |                |   |                 |
|--------------|----------------|---|-----------------|
| SmarTroll ID | 7586-41442-5-1 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |                 |
| Turbidity ID | 3901-20010-2-2 |   |                 |
| Sample Event | 1330           |   |                 |
|              |                |   |                 |
|              |                | Cooler Temp   | N/A             |
|              |                | Thermometer ID  | N/A             |
|              |                | pH Strip ID   | 8206-45805-10-9 |

Bottles/Pre-Preserved Bottles are provided by the GTL



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

|                         |                                  |  |            |                          |                             |  |
|-------------------------|----------------------------------|--|------------|--------------------------|-----------------------------|--|
| Requested Complete Date | Routine                          |  | Results To | Dustin Brooks, Greg Dyer |                             |  |
|                         | Site Representative<br>John Pate |  |            | Requested By             | Greg Dyer                   |  |
|                         | Collector<br>TJ Daugherty        |  |            |                          | Location<br>Gorgas Landfill |  |

|         |   |        |     |   |     |     |   |     |     |   |     |     |
|---------|---|--------|-----|---|-----|-----|---|-----|-----|---|-----|-----|
| Bottles | 1 | Radium | 1 L | 3 | N/A | N/A | 5 | N/A | N/A | 7 | N/A | N/A |
|         | 2 | N/A    | N/A | 4 | N/A | N/A | 6 | N/A | N/A | 8 | N/A | N/A |

Comments: Rad MS/MSD @ MW-7  
MW-7 MSD bottle leaked in transit. Collecting Rad MS/MSD set at another well. LBM 7/21/21

| Sample # | Date       | Time  | Bottle Count | Description | Lab Filter | Lab Id  |
|----------|------------|-------|--------------|-------------|------------|---------|
| MW-12    | 07/20/2021 | 11:53 | 1            | Groundwater |            | BB13200 |
| MW-10    | 07/20/2021 | 13:15 | 1            | Groundwater |            | BB13201 |
| MW-7     | 07/20/2021 | 14:30 | 3            | Groundwater |            | BB13202 |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
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|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |

|                                       |                                   |                               |
|---------------------------------------|-----------------------------------|-------------------------------|
| Relinquished By<br><i>[Signature]</i> | Received By<br><i>[Signature]</i> | Date/Time<br>07/21/2021 08:08 |
|                                       |                                   |                               |
|                                       |                                   |                               |

|              |                |   |                 |
|--------------|----------------|---|-----------------|
| SmarTroll ID | 7586-41443-5-2 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |                 |
| Turbidity ID | 3901-20010-2-2 |   |                 |
| Sample Event | 1330           | Cooler Temp   | N/A             |
|              |                | Thermometer ID  | N/A             |
|              |                | pH Strip ID   | 8206-45805-10-9 |

Bottles/Pre-Preserved Bottles are provided by the GTL



# Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

|                         |              |  |            |                          |           |  |
|-------------------------|--------------|--|------------|--------------------------|-----------|--|
| Requested Complete Date | Routine      |  | Results To | Dustin Brooks, Greg Dyer |           |  |
|                         | John Pate    |  |            | Requested By             | Greg Dyer |  |
|                         | TJ Daugherty |  |            |                          | Location  |  |

|         |   |        |     |   |     |     |   |     |     |   |     |     |
|---------|---|--------|-----|---|-----|-----|---|-----|-----|---|-----|-----|
| Bottles | 1 | Radium | 1 L | 3 | N/A | N/A | 5 | N/A | N/A | 7 | N/A | N/A |
|         | 2 | N/A    | N/A | 4 | N/A | N/A | 6 | N/A | N/A | 8 | N/A | N/A |

Comments

| Sample #  | Date       | Time  | Bottle Count | Description      | Lab Filter | Lab Id  |
|-----------|------------|-------|--------------|------------------|------------|---------|
| MW-5      | 07/21/2021 | 10:53 | 1            | Groundwater      |            | BB13334 |
| MW-16     | 07/21/2021 | 12:10 | 1            | Groundwater      |            | BB13335 |
| MW-16 Dup | 07/21/2021 | 12:10 | 1            | Sample Duplicate |            | BB13336 |
| MW-17R    | 07/21/2021 | 13:30 | 1            | Groundwater      |            | BB13337 |
| MW-18     | 07/21/2021 | 14:28 | 1            | Groundwater      |            | BB13338 |
| FB-1      | 07/21/2021 | 15:00 | 1            | Field Blank      |            | BB13339 |
| EB-1      | 07/21/2021 | 15:10 | 1            | Equipment Blank  |            | BB13340 |
|           |            |       |              |                  |            |         |
|           |            |       |              |                  |            |         |
|           |            |       |              |                  |            |         |
|           |            |       |              |                  |            |         |
|           |            |       |              |                  |            |         |
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|           |            |       |              |                  |            |         |
|           |            |       |              |                  |            |         |

|                    |                    |                  |
|--------------------|--------------------|------------------|
| Relinquished By    | Received By        | Date/Time        |
| <i>[Signature]</i> | <i>[Signature]</i> | 07/22/2021 09:28 |
|                    |                    |                  |
|                    |                    |                  |

|              |                |   |                 |
|--------------|----------------|---|-----------------|
| SmarTroll ID | 7586-41443-5-2 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |                 |
| Turbidity ID | 4677-23342-1-1 |   |                 |
| Sample Event | 1330           |   |                 |
|              |                |   |                 |
|              |                | Cooler Temp   | N/A             |
|              |                | Thermometer ID  | N/A             |
|              |                | pH Strip ID   | 8206-45805-10-9 |

Bottles/Pre-Preserved Bottles are provided by the GTL



# Chain of Custody Groundwater APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

|                         |               |              |                          |
|-------------------------|---------------|--------------|--------------------------|
| Requested Complete Date | Routine       | Results To   | Dustin Brooks, Greg Dyer |
| Site Representative     | John Pate     | Requested By | Greg Dyer                |
| Collector               | Dallas Gentry | Location     | Gorgas Landfill          |

|         |   |        |     |   |     |     |   |     |     |   |     |     |
|---------|---|--------|-----|---|-----|-----|---|-----|-----|---|-----|-----|
| Bottles | 1 | Radium | 1 L | 3 | N/A | N/A | 5 | N/A | N/A | 7 | N/A | N/A |
|         | 2 | N/A    | N/A | 4 | N/A | N/A | 6 | N/A | N/A | 8 | N/A | N/A |

Comments: Radium MS/MSD collected at MW-20

| Sample # | Date       | Time  | Bottle Count | Description | Lab Filter | Lab Id  |
|----------|------------|-------|--------------|-------------|------------|---------|
| MW-11    | 07/21/2021 | 11:34 | 1            | Groundwater |            | BB13341 |
| MW-20    | 07/21/2021 | 12:47 | 3            | Groundwater |            | BB13342 |
| MW-19    | 07/21/2021 | 14:01 | 1            | Groundwater |            | BB13343 |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
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|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |
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|          |            |       |              |             |            |         |
|          |            |       |              |             |            |         |

|                    |                    |                  |
|--------------------|--------------------|------------------|
| Relinquished By    | Received By        | Date/Time        |
| <i>[Signature]</i> | <i>[Signature]</i> | 07/22/2021 09:28 |
|                    |                    |                  |
|                    |                    |                  |

|                |                |   |                 |
|----------------|----------------|---|-----------------|
| SmarTroll ID   | 7586-41442-5-1 | All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> |                 |
| Turbidity ID   | 3901-20010-2-2 |   |                 |
| Sample Event   | 1330           |   |                 |
| Cooler Temp    | N/A            |   |                 |
| Thermometer ID | N/A            | pH Strip ID   | 8206-45805-10-9 |

Bottles/Pre-Preserved Bottles are provided by the GTL

September 07, 2021

Laura Midkiff  
Alabama Power  
744 Highway 87  
GSC #8  
Calera, AL 35040

RE: Project: GORGAS LANDFILL WMWGORLF\_1330  
Pace Project No.: 92551765

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on July 26, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

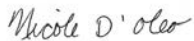
The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

Revision 1 - This report replaces the August, 31, 2021 report. This project was revised on September, 7, 2021 to update the COC. (Greensburg, PA)

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo  
nicole.d'oleo@pacelabs.com  
(704)875-9092  
Project Manager

Enclosures

cc: Brooke Caton, Alabama Power  
Renee Jernigan, Alabama Power



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: GORGAS LANDFILL WMWGORLF\_1330  
Pace Project No.: 92551765

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### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

| Lab ID      | Sample ID         | Matrix | Date Collected | Date Received  |
|-------------|-------------------|--------|----------------|----------------|
| 92551765001 | BB13192 MW-13     | Water  | 07/20/21 09:13 | 07/26/21 08:40 |
| 92551765002 | BB13193 MW-14     | Water  | 07/20/21 10:16 | 07/26/21 08:40 |
| 92551765003 | BB13193 MW-14 MS  | Water  | 07/20/21 10:16 | 07/26/21 08:40 |
| 92551765004 | BB13193 MW-14 MSD | Water  | 07/20/21 10:16 | 07/26/21 08:40 |
| 92551765005 | BB13194 MW-15     | Water  | 07/20/21 11:25 | 07/26/21 08:40 |
| 92551765006 | BB13195 MW-12V    | Water  | 07/20/21 12:32 | 07/26/21 08:40 |
| 92551765007 | BB13196 MW-6      | Water  | 07/20/21 13:57 | 07/26/21 08:40 |
| 92551765008 | BB13197 MW-6 DUP  | Water  | 07/20/21 13:57 | 07/26/21 08:40 |
| 92551765009 | BB13198 MW-8      | Water  | 07/20/21 15:25 | 07/26/21 08:40 |
| 92551765010 | BB13199 FB-2      | Water  | 07/20/21 16:05 | 07/26/21 08:40 |
| 92551765011 | BB13200 MW-12     | Water  | 07/20/21 11:53 | 07/26/21 08:40 |
| 92551765012 | BB13201 MW-10     | Water  | 07/20/21 13:15 | 07/26/21 08:40 |
| 92551765013 | BB13202 MW-7      | Water  | 07/20/21 14:30 | 07/26/21 08:40 |
| 92551765014 | BB13334 MW-5      | Water  | 07/21/21 10:53 | 07/26/21 08:40 |
| 92551765015 | BB13335 MW-16     | Water  | 07/21/21 12:10 | 07/26/21 08:40 |
| 92551765016 | BB13336 MW-16 DUP | Water  | 07/21/21 12:10 | 07/26/21 08:40 |
| 92551765017 | BB13337 MW-17R    | Water  | 07/21/21 13:30 | 07/26/21 08:40 |
| 92551765018 | BB13338 MW-18     | Water  | 07/21/21 14:28 | 07/26/21 08:40 |
| 92551765019 | BB13339 FB-1      | Water  | 07/21/21 15:00 | 07/26/21 08:40 |
| 92551765020 | BB13340 EB-1      | Water  | 07/21/21 15:10 | 07/26/21 08:40 |
| 92551765021 | BB13341 MW-11     | Water  | 07/21/21 11:34 | 07/26/21 08:40 |
| 92551765022 | BB13342 MW-20     | Water  | 07/21/21 12:47 | 07/26/21 08:40 |
| 92551765023 | BB13342 MW-20 MS  | Water  | 07/21/21 12:47 | 07/26/21 08:40 |
| 92551765024 | BB13342 MW-20 MSD | Water  | 07/21/21 12:47 | 07/26/21 08:40 |
| 92551765025 | BB13343 MW-19     | Water  | 07/21/21 14:01 | 07/26/21 08:40 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GORGAS LANDFILL WMWGORLF\_1330  
Pace Project No.: 92551765

| Lab ID      | Sample ID         | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|-------------------|--------------------------|----------|-------------------|------------|
| 92551765001 | BB13192 MW-13     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765002 | BB13193 MW-14     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765003 | BB13193 MW-14 MS  | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
| 92551765004 | BB13193 MW-14 MSD | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
| 92551765005 | BB13194 MW-15     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765006 | BB13195 MW-12V    | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765007 | BB13196 MW-6      | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765008 | BB13197 MW-6 DUP  | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765009 | BB13198 MW-8      | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765010 | BB13199 FB-2      | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765011 | BB13200 MW-12     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765012 | BB13201 MW-10     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765013 | BB13202 MW-7      | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GORGAS LANDFILL WMWGORLF\_1330  
Pace Project No.: 92551765

| Lab ID      | Sample ID         | Method                   | Analysts | Analytes Reported | Laboratory |
|-------------|-------------------|--------------------------|----------|-------------------|------------|
| 92551765014 | BB13334 MW-5      | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765015 | BB13335 MW-16     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765016 | BB13336 MW-16 DUP | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765017 | BB13337 MW-17R    | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765018 | BB13338 MW-18     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765019 | BB13339 FB-1      | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765020 | BB13340 EB-1      | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | JC2      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765021 | BB13341 MW-11     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765022 | BB13342 MW-20     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |
| 92551765023 | BB13342 MW-20 MS  | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92551765024 | BB13342 MW-20 MSD | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
| 92551765025 | BB13343 MW-19     | EPA 9315                 | CLA      | 1                 | PASI-PA    |
|             |                   | EPA 9320                 | VAL      | 1                 | PASI-PA    |
|             |                   | Total Radium Calculation | JAL      | 1                 | PASI-PA    |

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

---

**Method:** EPA 9315

**Description:** 9315 Total Radium

**Client:** Alabama Power

**Date:** September 07, 2021

**General Information:**

25 samples were analyzed for EPA 9315 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

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**Method:** EPA 9320

**Description:** 9320 Radium 228

**Client:** Alabama Power

**Date:** September 07, 2021

**General Information:**

25 samples were analyzed for EPA 9320 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

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**Method:** Total Radium Calculation

**Description:** Total Radium 228+226

**Client:** Alabama Power

**Date:** September 07, 2021

**General Information:**

21 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13192 MW-13**      **Lab ID: 92551765001**      Collected: 07/20/21 09:13      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0567U ± 0.162 (0.401)</b><br><b>C:91% T:NA</b> | pCi/L | 08/26/21 09:02 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.517U ± 0.313 (0.570)</b><br><b>C:85% T:76%</b> | pCi/L | 08/17/21 11:21 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.574U ± 0.475 (0.971)</b>                       | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13193 MW-14**      **Lab ID: 92551765002**      Collected: 07/20/21 10:16      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.246U ± 0.221 (0.401)</b><br><b>C:96% T:NA</b> | pCi/L | 08/26/21 09:02 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.487 ± 0.248 (0.423)</b><br><b>C:93% T:90%</b> | pCi/L | 08/17/21 11:21 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.733U ± 0.469 (0.824)</b>                      | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13193 MW-14 MS**      **Lab ID: 92551765003**      Collected: 07/20/21 10:16      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters | Method                                | Act ± Unc (MDC) Carr Trac                        | Units | Analyzed       | CAS No.    | Qual |
|------------|---------------------------------------|--|-------|----------------|------------|------|
|            | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226 | EPA 9315                              | <b>102.86 %REC ± NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 08/26/21 09:02 | 13982-63-3 |      |
|            | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228 | EPA 9320                              | <b>66.46 %REC ± NA (NA)</b><br><b>C:NA T:NA</b>  | pCi/L | 08/17/21 11:21 | 15262-20-1 |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13193 MW-14 MSD**      **Lab ID: 92551765004**      Collected: 07/20/21 10:16      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method   | Act ± Unc (MDC) Carr Trac  | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|----------|--|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |          |  |       |                |            |      |
| Radium-226                            | EPA 9315 | <b>94.00 %REC 9.00RPD ± NA</b><br><b>(NA)</b><br><b>C:NA T:NA</b>  | pCi/L | 08/26/21 09:02 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |          |  |       |                |            |      |
| Radium-228                            | EPA 9320 | <b>72.55 %REC 8.76 RPD ±</b><br><b>NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 08/17/21 11:21 | 15262-20-1 |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13194 MW-15**      **Lab ID: 92551765005**      Collected: 07/20/21 11:25      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.495 ± 0.298 (0.467)</b><br><b>C:95% T:NA</b>   | pCi/L | 08/26/21 09:03 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.382U ± 0.322 (0.645)</b><br><b>C:79% T:83%</b> | pCi/L | 08/17/21 11:21 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.877U ± 0.620 (1.11)</b>                        | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13195 MW-12V**      **Lab ID: 92551765006**      Collected: 07/20/21 12:32      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.121U ± 0.206 (0.465)</b><br><b>C:94% T:NA</b> | pCi/L | 08/26/21 09:03 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.642 ± 0.285 (0.458)</b><br><b>C:88% T:93%</b> | pCi/L | 08/17/21 11:21 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.763U ± 0.491 (0.923)</b>                      | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13196 MW-6**      **Lab ID: 92551765007**      Collected: 07/20/21 13:57      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|--|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.767 ± 0.334 (0.375)</b><br><b>C:97% T:NA</b>  | pCi/L | 08/26/21 09:05 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.550 ± 0.289 (0.513)</b><br><b>C:83% T:99%</b> | pCi/L | 08/17/21 11:24 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |  |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>1.32 ± 0.623 (0.888)</b>                        | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13197 MW-6 DUP**      **Lab ID: 92551765008**      Collected: 07/20/21 13:57      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.537 ± 0.301 (0.450)</b><br><b>C:96% T:NA</b>   | pCi/L | 08/26/21 09:01 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.270U ± 0.279 (0.578)</b><br><b>C:86% T:83%</b> | pCi/L | 08/17/21 11:25 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.807U ± 0.580 (1.03)</b>                        | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13198 MW-8**      **Lab ID: 92551765009**      Collected: 07/20/21 15:25      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.120U ± 0.183 (0.400)</b><br><b>C:99% T:NA</b>  | pCi/L | 08/26/21 09:01 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.300U ± 0.304 (0.625)</b><br><b>C:78% T:83%</b> | pCi/L | 08/17/21 11:25 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.420U ± 0.487 (1.03)</b>                        | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13199 FB-2**      **Lab ID: 92551765010**      Collected: 07/20/21 16:05      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.261U ± 0.273 (0.558)</b><br><b>C:96% T:NA</b>  | pCi/L | 08/26/21 09:01 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.217U ± 0.281 (0.597)</b><br><b>C:78% T:89%</b> | pCi/L | 08/17/21 11:25 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.478U ± 0.554 (1.16)</b>                        | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13200 MW-12**      **Lab ID: 92551765011**      Collected: 07/20/21 11:53      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.241U ± 0.247 (0.497)</b><br><b>C:98% T:NA</b> | pCi/L | 08/26/21 09:01 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.912 ± 0.407 (0.663)</b><br><b>C:76% T:81%</b> | pCi/L | 08/17/21 11:25 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>1.15U ± 0.654 (1.16)</b>                        | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13201 MW-10**      **Lab ID: 92551765012**      Collected: 07/20/21 13:15      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.160U ± 0.233 (0.511)</b><br><b>C:91% T:NA</b>  | pCi/L | 08/26/21 09:01 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.184U ± 0.278 (0.600)</b><br><b>C:81% T:92%</b> | pCi/L | 08/17/21 11:25 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.344U ± 0.511 (1.11)</b>                        | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330  
Pace Project No.: 92551765

| Parameters  | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---|---------------------------------------|---|-------|----------------|------------|------|
| <b>Sample: BB13202 MW-7</b> <b>Lab ID: 92551765013</b> Collected: 07/20/21 14:30      Received: 07/26/21 08:40      Matrix: Water<br>PWS:      Site ID:      Sample Type: |                                       |   |       |                |            |      |
|   | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226  | EPA 9315                              | <b>0.0281U ± 0.174 (0.451)</b><br><b>C:93% T:NA</b> | pCi/L | 08/26/21 09:00 | 13982-63-3 |      |
|   | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228  | EPA 9320                              | <b>0.328U ± 0.297 (0.598)</b><br><b>C:81% T:88%</b> | pCi/L | 08/17/21 11:25 | 15262-20-1 |      |
|   | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium  | Total Radium Calculation              | <b>0.356U ± 0.471 (1.05)</b>                        | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13334 MW-5**      **Lab ID: 92551765014**      Collected: 07/21/21 10:53      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method                   | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|--------------------------|---|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-226                            | EPA 9315                 | <b>0.373U ± 0.251 (0.389)</b><br><b>C:94% T:NA</b>  | pCi/L | 08/26/21 09:07 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Radium-228                            | EPA 9320                 | <b>0.417U ± 0.301 (0.578)</b><br><b>C:80% T:83%</b> | pCi/L | 08/17/21 11:25 | 15262-20-1 |      |
| Pace Analytical Services - Greensburg |                          |   |       |                |            |      |
| Total Radium                          | Total Radium Calculation | <b>0.790U ± 0.552 (0.967)</b>                       | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13335 MW-16**      **Lab ID: 92551765015**      Collected: 07/21/21 12:10      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0383U ± 0.145 (0.370)</b><br><b>C:97% T:NA</b> | pCi/L | 08/26/21 09:08 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.447U ± 0.279 (0.515)</b><br><b>C:86% T:87%</b> | pCi/L | 08/17/21 11:25 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.485U ± 0.424 (0.885)</b>                       | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13336 MW-16 DUP**      **Lab ID: 92551765016**      Collected: 07/21/21 12:10      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.489 ± 0.265 (0.329)</b><br><b>C:97% T:NA</b>   | pCi/L | 08/26/21 09:08 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.196U ± 0.254 (0.539)</b><br><b>C:83% T:90%</b> | pCi/L | 08/17/21 11:25 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.685U ± 0.519 (0.868)</b>                       | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13337 MW-17R**      **Lab ID: 92551765017**      Collected: 07/21/21 13:30      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.156U ± 0.184 (0.365)</b><br><b>C:97% T:NA</b>  | pCi/L | 08/26/21 09:08 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.564U ± 0.344 (0.629)</b><br><b>C:77% T:81%</b> | pCi/L | 08/17/21 11:26 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.720U ± 0.528 (0.994)</b>                       | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13338 MW-18**      **Lab ID: 92551765018**      Collected: 07/21/21 14:28      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.203U ± 0.252 (0.535)</b><br><b>C:99% T:NA</b>  | pCi/L | 08/26/21 09:08 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.186U ± 0.278 (0.600)</b><br><b>C:78% T:90%</b> | pCi/L | 08/17/21 11:26 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.389U ± 0.530 (1.14)</b>                        | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13339 FB-1**      **Lab ID: 92551765019**      Collected: 07/21/21 15:00      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0854U ± 0.150 (0.336)</b><br><b>C:95% T:NA</b> | pCi/L | 08/26/21 09:08 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.323U ± 0.289 (0.584)</b><br><b>C:78% T:91%</b> | pCi/L | 08/17/21 11:26 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.408U ± 0.439 (0.920)</b>                       | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13340 EB-1**      **Lab ID: 92551765020**      Collected: 07/21/21 15:10      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0386U ± 0.145 (0.373)</b><br><b>C:95% T:NA</b> | pCi/L | 08/26/21 09:08 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.411U ± 0.342 (0.682)</b><br><b>C:78% T:85%</b> | pCi/L | 08/17/21 11:26 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.450U ± 0.487 (1.06)</b>                        | pCi/L | 08/27/21 15:31 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13341 MW-11**      **Lab ID: 92551765021**      Collected: 07/21/21 11:34      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.0437U ± 0.133 (0.335)</b><br><b>C:94% T:NA</b> | pCi/L | 08/26/21 09:11 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.907 ± 0.428 (0.726)</b><br><b>C:69% T:86%</b>  | pCi/L | 08/18/21 14:14 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.951U ± 0.561 (1.06)</b>                        | pCi/L | 08/27/21 15:30 | 7440-14-4  |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13342 MW-20**      **Lab ID: 92551765022**      Collected: 07/21/21 12:47      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                          | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|--|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.277U ± 0.250 (0.471)</b><br><b>C:95% T:NA</b> | pCi/L | 08/26/21 09:11 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>1.20 ± 0.507 (0.802)</b><br><b>C:67% T:81%</b>  | pCi/L | 08/23/21 11:25 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>1.48 ± 0.757 (1.27)</b>                         | pCi/L | 08/27/21 15:30 | 7440-14-4  |      |

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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: GORGAS LANDFILL WMWGORLF\_1330  
Pace Project No.: 92551765

**Sample: BB13342 MW-20 MS**      **Lab ID: 92551765023**      Collected: 07/21/21 12:47      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters | Method                                | Act ± Unc (MDC) Carr Trac                        | Units | Analyzed       | CAS No.    | Qual |
|------------|---------------------------------------|--|-------|----------------|------------|------|
|            | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-226 | EPA 9315                              | <b>100.50 %REC ± NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 08/26/21 09:11 | 13982-63-3 |      |
|            | Pace Analytical Services - Greensburg |  |       |                |            |      |
| Radium-228 | EPA 9320                              | <b>107.23 %REC ± NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 08/23/21 11:25 | 15262-20-1 |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13342 MW-20 MSD**      **Lab ID: 92551765024**      Collected: 07/21/21 12:47      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters                            | Method   | Act ± Unc (MDC) Carr Trac  | Units | Analyzed       | CAS No.    | Qual |
|---------------------------------------|----------|--|-------|----------------|------------|------|
| Pace Analytical Services - Greensburg |          |  |       |                |            |      |
| Radium-226                            | EPA 9315 | <b>100.76 %REC 0.26RPD ±</b><br><b>NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 08/26/21 09:11 | 13982-63-3 |      |
| Pace Analytical Services - Greensburg |          |  |       |                |            |      |
| Radium-228                            | EPA 9320 | <b>98.83 %REC 8.15 RPD ±</b><br><b>NA (NA)</b><br><b>C:NA T:NA</b> | pCi/L | 08/23/21 11:23 | 15262-20-1 |      |

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

**Sample: BB13343 MW-19**      **Lab ID: 92551765025**      Collected: 07/21/21 14:01      Received: 07/26/21 08:40      Matrix: Water  
PWS:      Site ID:      Sample Type:

| Parameters   | Method                                | Act ± Unc (MDC) Carr Trac                           | Units | Analyzed       | CAS No.    | Qual |
|--------------|---------------------------------------|---|-------|----------------|------------|------|
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-226   | EPA 9315                              | <b>0.223U ± 0.235 (0.462)</b><br><b>C:93% T:NA</b>  | pCi/L | 08/26/21 09:11 | 13982-63-3 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Radium-228   | EPA 9320                              | <b>0.406U ± 0.323 (0.634)</b><br><b>C:77% T:85%</b> | pCi/L | 08/18/21 14:17 | 15262-20-1 |      |
|              | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Radium | Total Radium Calculation              | <b>0.629U ± 0.558 (1.10)</b>                        | pCi/L | 08/27/21 15:30 | 7440-14-4  |      |

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

QC Batch: 458506

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92551765001, 92551765002, 92551765003, 92551765004, 92551765005, 92551765006, 92551765007, 92551765008, 92551765009, 92551765010, 92551765011, 92551765012, 92551765013, 92551765014, 92551765015, 92551765016, 92551765017, 92551765018, 92551765019, 92551765020

METHOD BLANK: 2213739

Matrix: Water

Associated Lab Samples: 92551765001, 92551765002, 92551765003, 92551765004, 92551765005, 92551765006, 92551765007, 92551765008, 92551765009, 92551765010, 92551765011, 92551765012, 92551765013, 92551765014, 92551765015, 92551765016, 92551765017, 92551765018, 92551765019, 92551765020

| Parameter  | Act ± Unc (MDC) Carr Trac          | Units | Analyzed       | Qualifiers |
|------------|------------------------------------|-------|----------------|------------|
| Radium-226 | -0.0616 ± 0.197 (0.563) C:99% T:NA | pCi/L | 08/26/21 09:02 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

QC Batch: 459647

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92551765001, 92551765002, 92551765003, 92551765004, 92551765005, 92551765006, 92551765007, 92551765008, 92551765009, 92551765010, 92551765011, 92551765012, 92551765013, 92551765014, 92551765015, 92551765016, 92551765017, 92551765018, 92551765019, 92551765020

METHOD BLANK: 2218980

Matrix: Water

Associated Lab Samples: 92551765001, 92551765002, 92551765003, 92551765004, 92551765005, 92551765006, 92551765007, 92551765008, 92551765009, 92551765010, 92551765011, 92551765012, 92551765013, 92551765014, 92551765015, 92551765016, 92551765017, 92551765018, 92551765019, 92551765020

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.837 ± 0.360 (0.572) C:86% T:84% | pCi/L | 08/17/21 11:21 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

QC Batch: 459648

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92551765021, 92551765022, 92551765023, 92551765024, 92551765025

METHOD BLANK: 2218981

Matrix: Water

Associated Lab Samples: 92551765021, 92551765022, 92551765023, 92551765024, 92551765025

| Parameter  | Act ± Unc (MDC) Carr Trac         | Units | Analyzed       | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.563 ± 0.363 (0.691) C:78% T:96% | pCi/L | 08/18/21 14:14 |            |

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

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|                  |          |                       |                                       |
|------------------|----------|-----------------------|---------------------------------------|
| QC Batch:        | 458508   | Analysis Method:      | EPA 9315                              |
| QC Batch Method: | EPA 9315 | Analysis Description: | 9315 Total Radium                     |
|                  |          | Laboratory:           | Pace Analytical Services - Greensburg |

Associated Lab Samples: 92551765021, 92551765022, 92551765023, 92551765024, 92551765025

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METHOD BLANK: 2213744 Matrix: Water

Associated Lab Samples: 92551765021, 92551765022, 92551765023, 92551765024, 92551765025

| Parameter  | Act ± Unc (MDC) Carr Trac          | Units | Analyzed       | Qualifiers |
|------------|------------------------------------|-------|----------------|------------|
| Radium-226 | 0.00546 ± 0.186 (0.496) C:92% T:NA | pCi/L | 08/26/21 09:10 |            |

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## QUALIFIERS

Project: GORGAS LANDFILL WMWGORLF\_1330  
Pace Project No.: 92551765

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

| Lab ID      | Sample ID         | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------------|-----------------|----------|-------------------|------------------|
| 92551765001 | BB13192 MW-13     | EPA 9315        | 458506   |                   |                  |
| 92551765002 | BB13193 MW-14     | EPA 9315        | 458506   |                   |                  |
| 92551765003 | BB13193 MW-14 MS  | EPA 9315        | 458506   |                   |                  |
| 92551765004 | BB13193 MW-14 MSD | EPA 9315        | 458506   |                   |                  |
| 92551765005 | BB13194 MW-15     | EPA 9315        | 458506   |                   |                  |
| 92551765006 | BB13195 MW-12V    | EPA 9315        | 458506   |                   |                  |
| 92551765007 | BB13196 MW-6      | EPA 9315        | 458506   |                   |                  |
| 92551765008 | BB13197 MW-6 DUP  | EPA 9315        | 458506   |                   |                  |
| 92551765009 | BB13198 MW-8      | EPA 9315        | 458506   |                   |                  |
| 92551765010 | BB13199 FB-2      | EPA 9315        | 458506   |                   |                  |
| 92551765011 | BB13200 MW-12     | EPA 9315        | 458506   |                   |                  |
| 92551765012 | BB13201 MW-10     | EPA 9315        | 458506   |                   |                  |
| 92551765013 | BB13202 MW-7      | EPA 9315        | 458506   |                   |                  |
| 92551765014 | BB13334 MW-5      | EPA 9315        | 458506   |                   |                  |
| 92551765015 | BB13335 MW-16     | EPA 9315        | 458506   |                   |                  |
| 92551765016 | BB13336 MW-16 DUP | EPA 9315        | 458506   |                   |                  |
| 92551765017 | BB13337 MW-17R    | EPA 9315        | 458506   |                   |                  |
| 92551765018 | BB13338 MW-18     | EPA 9315        | 458506   |                   |                  |
| 92551765019 | BB13339 FB-1      | EPA 9315        | 458506   |                   |                  |
| 92551765020 | BB13340 EB-1      | EPA 9315        | 458506   |                   |                  |
| 92551765021 | BB13341 MW-11     | EPA 9315        | 458508   |                   |                  |
| 92551765022 | BB13342 MW-20     | EPA 9315        | 458508   |                   |                  |
| 92551765023 | BB13342 MW-20 MS  | EPA 9315        | 458508   |                   |                  |
| 92551765024 | BB13342 MW-20 MSD | EPA 9315        | 458508   |                   |                  |
| 92551765025 | BB13343 MW-19     | EPA 9315        | 458508   |                   |                  |
| 92551765001 | BB13192 MW-13     | EPA 9320        | 459647   |                   |                  |
| 92551765002 | BB13193 MW-14     | EPA 9320        | 459647   |                   |                  |
| 92551765003 | BB13193 MW-14 MS  | EPA 9320        | 459647   |                   |                  |
| 92551765004 | BB13193 MW-14 MSD | EPA 9320        | 459647   |                   |                  |
| 92551765005 | BB13194 MW-15     | EPA 9320        | 459647   |                   |                  |
| 92551765006 | BB13195 MW-12V    | EPA 9320        | 459647   |                   |                  |
| 92551765007 | BB13196 MW-6      | EPA 9320        | 459647   |                   |                  |
| 92551765008 | BB13197 MW-6 DUP  | EPA 9320        | 459647   |                   |                  |
| 92551765009 | BB13198 MW-8      | EPA 9320        | 459647   |                   |                  |
| 92551765010 | BB13199 FB-2      | EPA 9320        | 459647   |                   |                  |
| 92551765011 | BB13200 MW-12     | EPA 9320        | 459647   |                   |                  |
| 92551765012 | BB13201 MW-10     | EPA 9320        | 459647   |                   |                  |
| 92551765013 | BB13202 MW-7      | EPA 9320        | 459647   |                   |                  |
| 92551765014 | BB13334 MW-5      | EPA 9320        | 459647   |                   |                  |
| 92551765015 | BB13335 MW-16     | EPA 9320        | 459647   |                   |                  |
| 92551765016 | BB13336 MW-16 DUP | EPA 9320        | 459647   |                   |                  |
| 92551765017 | BB13337 MW-17R    | EPA 9320        | 459647   |                   |                  |
| 92551765018 | BB13338 MW-18     | EPA 9320        | 459647   |                   |                  |
| 92551765019 | BB13339 FB-1      | EPA 9320        | 459647   |                   |                  |
| 92551765020 | BB13340 EB-1      | EPA 9320        | 459647   |                   |                  |
| 92551765021 | BB13341 MW-11     | EPA 9320        | 459648   |                   |                  |
| 92551765022 | BB13342 MW-20     | EPA 9320        | 459648   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GORGAS LANDFILL WMWGORLF\_1330

Pace Project No.: 92551765

| Lab ID      | Sample ID         | QC Batch Method          | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------------|--------------------------|----------|-------------------|------------------|
| 92551765023 | BB13342 MW-20 MS  | EPA 9320                 | 459648   |                   |                  |
| 92551765024 | BB13342 MW-20 MSD | EPA 9320                 | 459648   |                   |                  |
| 92551765025 | BB13343 MW-19     | EPA 9320                 | 459648   |                   |                  |
| 92551765001 | BB13192 MW-13     | Total Radium Calculation | 462044   |                   |                  |
| 92551765002 | BB13193 MW-14     | Total Radium Calculation | 462044   |                   |                  |
| 92551765005 | BB13194 MW-15     | Total Radium Calculation | 462044   |                   |                  |
| 92551765006 | BB13195 MW-12V    | Total Radium Calculation | 462044   |                   |                  |
| 92551765007 | BB13196 MW-6      | Total Radium Calculation | 462044   |                   |                  |
| 92551765008 | BB13197 MW-6 DUP  | Total Radium Calculation | 462044   |                   |                  |
| 92551765009 | BB13198 MW-8      | Total Radium Calculation | 462044   |                   |                  |
| 92551765010 | BB13199 FB-2      | Total Radium Calculation | 462044   |                   |                  |
| 92551765011 | BB13200 MW-12     | Total Radium Calculation | 462044   |                   |                  |
| 92551765012 | BB13201 MW-10     | Total Radium Calculation | 462044   |                   |                  |
| 92551765013 | BB13202 MW-7      | Total Radium Calculation | 462044   |                   |                  |
| 92551765014 | BB13334 MW-5      | Total Radium Calculation | 462044   |                   |                  |
| 92551765015 | BB13335 MW-16     | Total Radium Calculation | 462044   |                   |                  |
| 92551765016 | BB13336 MW-16 DUP | Total Radium Calculation | 462044   |                   |                  |
| 92551765017 | BB13337 MW-17R    | Total Radium Calculation | 462044   |                   |                  |
| 92551765018 | BB13338 MW-18     | Total Radium Calculation | 462044   |                   |                  |
| 92551765019 | BB13339 FB-1      | Total Radium Calculation | 462044   |                   |                  |
| 92551765020 | BB13340 EB-1      | Total Radium Calculation | 462044   |                   |                  |
| 92551765021 | BB13341 MW-11     | Total Radium Calculation | 462042   |                   |                  |
| 92551765022 | BB13342 MW-20     | Total Radium Calculation | 462042   |                   |                  |
| 92551765025 | BB13343 MW-19     | Total Radium Calculation | 462042   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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Client Name: Alabama Power Co

WO#: 92551765



92551765

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 5140 3411 6526

LIMS Login

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Thermometer Used \_\_\_\_\_    Type of Ice: Wet Blue None

Cooler Temperature Observed Temp \_\_\_\_\_ °C    Correction Factor: \_\_\_\_\_ °C    Final Temp: \_\_\_\_\_ °C  
Temp should be above freezing to 6°C

| Comments:  | Yes                                 | No                                  | N/A                                 | pH paper Lot#               | Date and Initials of person examining contents: |  |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------|---|--|
|  |                                     |                                     |                                     | 1003201                     | AL 7/26/21                                      |  |
| Chain of Custody Present:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 1.                          |   |  |
| Chain of Custody Filled Out:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 2.                          |   |  |
| Chain of Custody Relinquished:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 3.                          |   |  |
| Sampler Name & Signature on COC:   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 4.                          | no information                                  |  |
| Sample Labels match COC:<br>-Includes date/time/ID      Matrix: <u>WT</u>  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 5.                          |   |  |
| Samples Arrived within Hold Time:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 6.                          |   |  |
| Short Hold Time Analysis (<72hr remaining):  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 7.                          |   |  |
| Rush Turn Around Time Requested:   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 8.                          |   |  |
| Sufficient Volume: <u>11/20/21</u>   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 9.                          | 1 liter received for 220/228 marked LV          |  |
| Correct Containers Used:<br>-Pace Containers Used:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 10.                         |   |  |
| Containers Intact:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 11.                         |   |  |
| Orthophosphate field filtered  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 12.                         |   |  |
| Hex.Cr Aqueous sample field filtered   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 13.                         |   |  |
| Organic Samples checked for dechlorination:  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 14.                         |   |  |
| Filtered volume received for Dissolved tests   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 15.                         |   |  |
| All containers have been checked for preservation.<br>exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon,<br>Non-aqueous matrix | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 16.                         |   |  |
| All containers meet method preservation requirements.  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | Initial when completed      | SE  | Date/time of preservation              |
|  |                                     |                                     |                                     | Lot # of added preservative |   |  |
| Headspace in VOA Vials (>6mm):   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 17.                         |   |  |
| Trip Blank Present:  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 18.                         |   |  |
| Trip Blank Custody Seals Present   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                             |   |  |
| Rad Samples Screened < 0.5 mrem/hr   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | Initial when completed      | SE  | Date: 7/26/21    Survey Meter SN: 1503 |

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

page 2 missing sample "BB13202"  
pages 3 & 4 no samples received

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace NC

Project # 30433379

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: TORN

|            |            |
|------------|------------|
| Label      | <u>Rjm</u> |
| LIMS Login | <u>Rjm</u> |

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Thermometer Used \_\_\_\_\_    Type of Ice: Wet Blue None

Cooler Temperature \_\_\_\_\_    Observed Temp \_\_\_\_\_ °C    Correction Factor: \_\_\_\_\_ °C    Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 6°C

|               |   |
|---------------|---|
| pH paper Lot# | Date and Initials of person examining contents: <u>Rjm 9-7-21</u> |
|---------------|---|

Comments:

|   | Yes | No | N/A |   |
|---|-----|----|-----|---|
| Chain of Custody Present:   | /   |    |     | 1.  |
| Chain of Custody Filled Out:  | /   |    |     | 2.  |
| Chain of Custody Relinquished:  | /   |    |     | 3.  |
| Sampler Name & Signature on COC:  |     | /  |     | 4.  |
| Sample Labels match COC:  | /   |    |     | 5.  |
| -Includes date/time/ID      Matrix: <u>WT</u>                             |     |    |     |   |
| Samples Arrived within Hold Time:   | /   |    |     | 6.  |
| Short Hold Time Analysis (<72hr remaining):                               |     | /  |     | 7.  |
| Rush Turn Around Time Requested:  |     | /  |     | 8.  |
| Sufficient Volume:  | /   |    |     | 9.  |
| Correct Containers Used:  | /   |    |     | 10.   |
| -Pace Containers Used:  | /   |    |     |   |
| Containers Intact:  | /   |    |     | 11.   |
| Orthophosphate field filtered   |     |    | /   | 12.   |
| Hex Cr Aqueous sample field filtered                                      |     |    | /   | 13.   |
| Organic Samples checked for dechlorination:                               |     |    | /   | 14.   |
| Filtered volume received for Dissolved tests                              |     |    | /   | 15.   |
| All containers have been checked for preservation.                        | /   |    |     | 16.   |
| exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix |     |    |     | <u>PH&lt;2</u>  |
| All containers meet method preservation requirements.                     | /   |    |     | Initial when completed: <u>Rjm</u> Date/time of preservation: _____                 |
|   |     |    |     | Lot # of added preservative: _____  |
| Headspace in VOA Vials (>6mm):  |     |    | /   | 17.   |
| Trip Blank Present:   |     |    | /   | 18.   |
| Trip Blank Custody Seals Present  |     |    | /   |   |
| Rad Samples Screened < 0.5 mrem/hr  | /   |    |     | Initial when completed: <u>Rjm</u> Date: <u>9-7-21</u> Survey Meter SN: <u>1583</u> |

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_    Date/Time: \_\_\_\_\_    Contacted By: \_\_\_\_\_

Comments/ Resolution: 2 cooler Sec for VOA# 30433379

Add on Revd Missing Samples    Revd 7/28/21

Pages 3 & 4 as well as (BB13202) page 2

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.



## CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| Section A                           |                            | Section B                            |                               | Section C                         |                            |
|-------------------------------------|----------------------------|--------------------------------------|-------------------------------|-----------------------------------|----------------------------|
| <b>Required Client Information:</b> |                            | <b>Required Project Information:</b> |                               | <b>Invoice Information:</b>       |                            |
| Company:                            | Alabama Power Company      | Report To:                           | Laura Mickitt                 | Attention:                        | Laura Mickitt              |
| Address:                            | 744 Highway 87 GSC Bldg #8 | Copy To:                             | Brooke Caton & Renee Jermigan | Company Name:                     | Alabama Power Co.          |
|                                     | Calera, AL 35040           |                                      |                               | Address:                          | 744 Highway 87 GSC Bldg #8 |
| Email To:                           | lbmidkitt@southemco.com    | Purchase Order #:                    | APC10700668                   | Page Quote:                       | CCR                        |
| Phone:                              | 205-684-5197               | Project Name:                        | Plant Gorgas Landfill         | Pace Project Manager:             | Kevin Herring@pacelabs.com |
| Requested Due Date:                 | 28 days                    | Project Number:                      | WVMGORLF 1330                 | Pace Profile #:                   | 13805                      |
|                                     |                            |                                      |                               | Requested Analysis Filtered (Y/N) | AL                         |
|                                     |                            |                                      |                               | State / Location                  |                            |
|                                     |                            |                                      |                               | Regulatory Agency                 |                            |

| ITEM #                     | MATRIX<br>One Character per box.<br>(A-Z, 0-9 /, -)<br>Sample ids must be unique | MATRIX CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED                     |          | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives   | Analyses Test   | Residual Chlorine (Y/N) | SAMPLE CONDITIONS     |                             |                      |  |  |  |  |
|----------------------------|--|-------------|-----------------------------|-------------------------------|----------|---------------------------|-----------------|---|---|-------------------------|-----------------------|-----------------------------|----------------------|--|--|--|--|
|                            |  |             |                             | START DATE                    | END DATE |                           |                 |   |   |                         | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |  |  |  |  |
| 1                          | BB13192  | MM-13       | GM/G                        | 7/20/2021                     | 9:13     |                           | 1               | Unpreserved<br>H2SO4<br>HNO3<br>HCl<br>NaOH<br>Na2S2O3<br>Methanol<br>Other | EPA 9315<br>EPA 9320<br>Total Radium Sum<br>Matrix Spike/Matrix Spike D |                         |                       |                             |                      |  |  |  |  |
| 2                          | BB13193  | MM-14       | GM/G                        | 7/20/2021                     | 10:16    |                           | 3               |   |   |                         |                       |                             |                      |  |  |  |  |
| 3                          | BB13194  | MM-15       | GM/G                        | 7/20/2021                     | 11:25    |                           | 1               |   |   |                         |                       |                             |                      |  |  |  |  |
| 4                          | BB13195  | MM-12V      | GM/G                        | 7/20/2021                     | 12:32    |                           | 1               |   |   |                         |                       |                             |                      |  |  |  |  |
| 5                          | BB13195  | MM-6        | GM/G                        | 7/20/2021                     | 13:57    |                           | 1               |   |   |                         |                       |                             |                      |  |  |  |  |
| 6                          | BB13197  | MM-6 DUP    | GM/G                        | 7/20/2021                     | 13:57    |                           | 1               |   |   |                         |                       |                             |                      |  |  |  |  |
| 7                          | BB13198  | MM-6        | GM/G                        | 7/20/2021                     | 15:25    |                           | 1               |   |   |                         |                       |                             |                      |  |  |  |  |
| 8                          | BB13199  | FB-2        | GM/G                        | 7/20/2021                     | 16:05    |                           | 1               |   |   |                         |                       |                             |                      |  |  |  |  |
| 9                          |  |             |                             |                               |          |                           |                 |   |   |                         |                       |                             |                      |  |  |  |  |
| 10                         |  |             |                             |                               |          |                           |                 |   |   |                         |                       |                             |                      |  |  |  |  |
| 11                         |  |             |                             |                               |          |                           |                 |   |   |                         |                       |                             |                      |  |  |  |  |
| 12                         |  |             |                             |                               |          |                           |                 |   |   |                         |                       |                             |                      |  |  |  |  |
| ADDITIONAL COMMENTS        |  |             |                             | RELINQUISHED BY / AFFILIATION |          | DATE                      | TIME            | ACCEPTED BY / AFFILIATION   |   |                         | DATE                  | TIME                        |                      |  |  |  |  |
|                            |  |             |                             | Laura Mickitt / APC GTL       |          | 7/22/2021                 | 11:45           | <i>Laura Mickitt</i>  |   |                         | 7/26/21               | 0840                        |                      |  |  |  |  |
| SAMPLER NAME AND SIGNATURE |  |             |                             |                               |          |                           |                 |   |   |                         |                       |                             | TEMP In C            |  |  |  |  |
| PRINT Name of SAMPLER:     |  |             |                             |                               |          |                           |                 |   |   |                         |                       |                             | -                    |  |  |  |  |
| SIGNATURE of SAMPLER:      |  |             |                             |                               |          |                           |                 |   |   |                         |                       |                             | N                    |  |  |  |  |
|                            |  |             |                             |                               |          |                           |                 |   |   |                         |                       |                             | Y                    |  |  |  |  |
|                            |  |             |                             |                               |          |                           |                 |   |   |                         |                       |                             | Y                    |  |  |  |  |

SAMPLER NAME AND SIGNATURE: \_\_\_\_\_  
 PRINT Name of SAMPLER: \_\_\_\_\_  
 SIGNATURE of SAMPLER: \_\_\_\_\_  
 DATE Signed: \_\_\_\_\_

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A  
 Required Client Information:  
 Company: Alabama Power Company  
 Address: 744 Highway 87 GSC Bldg #8  
 City: Calera, AL 35040  
 Phone: 205-664-6197 Fax: 205-664-6197  
 Email To: lbmidkiff@southemco.com  
 Requested Due Date: 28 days

Section B  
 Required Project Information:  
 Report To: Laura Midkiff  
 Copy To: Brooke Caton & Renee Jernigan  
 Purchase Order #: APC10700668  
 Project Name: Plant Gorgas Landfill  
 Project Number: WMMWGORLP 1330

Section C  
 Invoice Information:  
 Attention: Laura Midkiff  
 Company Name: Alabama Power Co  
 Address: 744 Highway 87 GSC Bldg #8  
 City: Calera, AL 35040  
 State: AL  
 Invoice Number: 13805  
 Date Issued: 7/22/2021  
 Requested Analysis Filtered (Y/N): AL

| ITEM # | SAMPLE ID<br>One Character per box.<br>(A-Z, 0-9 /, -)<br>Sample IDs must be unique | MATRIX<br>Drinking Water<br>Wastewater<br>Municipal Water<br>Pretreat<br>Surface<br>Oil<br>Wipe<br>Air<br>Other<br>Tissue | CODE<br>DW/<br>WW/<br>P<br>SL<br>WP<br>AR<br>OT<br>TS | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED  |          | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analyses Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | SAMPLE CONDITIONS |
|--------|---|---|---|---------------------------------------|-----------------------------|------------|----------|---------------------------|-----------------|---------------|---------------|-----------------------------------|-------------------------|-------------------|
|        |   |   |   |                                       |                             | START DATE | END DATE |                           |                 |               |               |                                   |                         |                   |
| 1      | BB13200   |   |   | GM/G                                  |                             | 7/20/2021  | 11:53    | 1                         | Unpreserved     |               |               |                                   |                         | 001               |
| 2      | BB13201   |   |   | GM/G                                  |                             | 7/20/2021  | 13:15    | 1                         | H2SO4           |               |               |                                   |                         | 002               |
| 3      | BB13202   |   |   | GM/G                                  |                             | 7/20/2021  | 14:30    | 1                         | HNO3            |               |               |                                   |                         | 003               |
| 4      |   |   |   |                                       |                             |            |          |                           | HCl             |               |               |                                   |                         |                   |
| 5      |   |   |   |                                       |                             |            |          |                           | NaOH            |               |               |                                   |                         |                   |
| 6      |   |   |   |                                       |                             |            |          |                           | Na2S2O3         |               |               |                                   |                         |                   |
| 7      |   |   |   |                                       |                             |            |          |                           | Methanol        |               |               |                                   |                         |                   |
| 8      |   |   |   |                                       |                             |            |          |                           | Other           |               |               |                                   |                         |                   |
| 9      |   |   |   |                                       |                             |            |          |                           |                 |               |               |                                   |                         |                   |
| 10     |   |   |   |                                       |                             |            |          |                           |                 |               |               |                                   |                         |                   |
| 11     |   |   |   |                                       |                             |            |          |                           |                 |               |               |                                   |                         |                   |
| 12     |   |   |   |                                       |                             |            |          |                           |                 |               |               |                                   |                         |                   |

ADDITIONAL COMMENTS: Relinquished by Affiliation

RELINQUISHED BY / AFFILIATION: Laura Midkiff/ APC GTL

DATE: 7/22/2021

TIME: 11:45

ACCEPTED BY / AFFILIATION: *[Signature]*

DATE: 7/21/21

TIME: 08:40

TEMP in C: -

Received on Ice (Y/N): N

Custody Sealed Cooler (Y/N): Y

Samples Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE: *[Signature]*

PRINT Name of SAMPLER: Laura Midkiff

SIGNATURE of SAMPLER: *[Signature]*

DATE Signed: 7/21/21

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

|  |  |  |                             |
|--|--|--|-----------------------------|
| <b>Section A</b><br>Required Client Information: | <b>Section B</b><br>Requested Project Information: | <b>Section C</b><br>Invoice Information: | <b>Page :</b> 3 <b>Of</b> 4 |
|--|--|--|-----------------------------|

|   |   |  |                    |
|---|---|--|--------------------|
| Company: Alabama Power Company                          | Report To: Laura Midkiff                | Attention: Laura Midkiff                             |                    |
| Address: 744 Highway 87 GSC Bldg #8<br>Calera, AL 35004 | Copy To: Brooke Catton & Renee Jernigan | Company Name: Alabama Power Co.                      | Regulatory Agency: |
| Email To: lbmidkiff@southernco.com                      | Purchase Order #: APC10700668           | Address: 744 Highway 87 GSC Bldg #8                  | State/Location: AL |
| Phone: 205-664-6197 Fax:                                | Project Name: Plant Gorges Landfill     | Face Quote: CCR                                      |                    |
| Requested Due Date: 28 days                             | Project Number: WMMWGORLF 1330          | Face Project Manager: Kevin.Herrington@bascelabs.com |                    |
|   |   | Face Profile #: 13805                                |                    |

| ITEM # | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS |     |             |       |      |     |      |         |          | Analyse Test |          | Residual Chlorine (Y/N) |       |
|--------|---------------------------------------|-----------------------------|-----------|------|---------------------------|-----------------|-----|-------------|-------|------|-----|------|---------|----------|--------------|----------|-------------------------|-------|
|        |                                       |                             | DATE      | TIME |                           | Preservatives   |     |             |       |      |     |      |         |          | EPA 9315     | EPA 9320 |                         |       |
|        |                                       |                             |           |      |                           | START           | END | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol |              |          |                         | Other |
| 1      | BB13334                               | MM-5                        |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         | 001   |
| 2      | BB13335                               | MM-16                       |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         | 002   |
| 3      | BB13336                               | MM-16 DUP                   |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         | 003   |
| 4      | BB13337                               | MM-17R                      |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         | 004   |
| 5      | BB13338                               | MM-18                       |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         | 005   |
| 6      | BB13339                               | FB-1                        |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         | 006   |
| 7      | BB13340                               | EB-1                        |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         | 007   |
| 8      |                                       |                             |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         |       |
| 9      |                                       |                             |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         |       |
| 10     |                                       |                             |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         |       |
| 11     |                                       |                             |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         |       |
| 12     |                                       |                             |           |      |                           |                 |     |             |       |      |     |      |         |          |              |          |                         |       |

| ADDITIONAL COMMENTS |  | RELINQUISHED BY/ AFFILIATION |  | DATE      |  | TIME  |  | ACCEPTED BY/ AFFILIATION |  | DATE    |  | TIME |  | SAMPLE CONDITIONS   |  |
|---------------------|--|------------------------------|--|-----------|--|-------|--|--------------------------|--|---------|--|------|--|---|--|
|                     |  | Laura Midkiff/ APC GTL       |  | 7/22/2021 |  | 11:45 |  | Gulfcoast                |  | 7/26/21 |  | 0800 |  | TEMP In C: -<br>Received on Ice (Y/N): N<br>Custody Sealed Cooler (Y/N):<br>Samples Intact (Y/N): |  |

**SAMPLER NAME AND SIGNATURE:**  
PRINT Name of SAMPLER:  
SIGNATURE OF SAMPLER: \_\_\_\_\_  
DATE signed: \_\_\_\_\_

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A      Section B      Section C      Invoice Information      Page : 4 Of 4

**Required Client Information:**  
 Company: Alabama Power Company  
 Address: 744 Highway 87 GSC Bldg #8  
 City: Calera, AL 35040  
 Phone: 205-664-6197 Fax:             
 Requested Due Date: 28 days  
**Required Project Information:**  
 Report To: Laura Midkiff  
 Copy To: Brooke Caton & Renee Jernigan  
 Project Name: Plant Gorgas Landfill  
 Project Number: WMWGORLRF 1330  
**Invoice Information:**  
 Attention: Laura Midkiff  
 Company Name: Alabama Power Co.  
 Address: 744 Highway 87 GSC Bldg #8  
 City: Calera, AL 35040  
 State: AL  
 Zip: 35040  
 Rate Profile #: 13805  
 Pace Profile #:             
 Pace Order: APC10700668  
 Purchase Order #:             
 Requested Analysis Filtered (Y/N):           

| ITEM #   | SAMPLE ID<br><small>One Character per box.<br/>(A-Z, 0-9 /, -)<br/>Sample IDs must be unique</small> | MATRIX<br><small>Drinking Water<br/>Water<br/>Waste Water<br/>Product<br/>Soil/Solid<br/>Oil<br/>Wipe<br/>Air<br/>Other<br/>Tissue</small> | CODE<br><small>DW<br/>WT<br/>WW<br/>P<br/>SL<br/>OL<br/>WP<br/>AR<br/>OT<br/>TS</small> | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED                 |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |       |                   |     |      |         |              |       |          |          | Analyses Test | Residual Chlorine (Y/N) | SAMPLE CONDITIONS |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
|--|--|--|---|---------------------------------------|-----------------------------|---------------------------|------|---------------------------|-----------------|---------------|-------|-------------------|-----|------|---------|--------------|-------|----------|----------|---------------|-------------------------|-------------------|-----------------------------|-----------------------|-----------------------------|----------------------|----|----|----|--|--|--|--|--|--|--|
|  |  |  |   |                                       |                             | START                     | END  |                           |                 | Unpreserved   | H2SO4 | HNO3              | HCl | NaOH | Na2S2O3 | Methanol     | Other | EPA 9315 | EPA 9320 |               |                         | Total Radium Sum  | Matrix Spike/Matrix Spike D | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |    |    |    |  |  |  |  |  |  |  |
|  |  |  |   |                                       |                             | DATE                      | TIME |                           |                 | DATE          | TIME  | 1                 | 2   | 3    | 4       | 5            | 6     | 7        | 8        |               |                         | 9                 | 10                          | 11                    | 12                          | 13                   | 14 | 15 | 16 |  |  |  |  |  |  |  |
| 1  | BB13941  | MW-11  | GM/G  |                                       | G                           |                           |      |                           | 1               | X             |       |                   |     |      |         |              |       | X        |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 2  | BB13942  | MW-20  | GM/G  |                                       | G                           |                           |      |                           | 3               | X             |       |                   |     |      |         |              |       | X        |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 3  | BB13943  | MW-19  | GM/G  |                                       | C                           |                           |      |                           | 1               |               | X     |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 4  |  |  |   |                                       |                             |                           |      |                           |                 |               |       |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 5  |  |  |   |                                       |                             |                           |      |                           |                 |               |       |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 6  |  |  |   |                                       |                             |                           |      |                           |                 |               |       |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 7  |  |  |   |                                       |                             |                           |      |                           |                 |               |       |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 8  |  |  |   |                                       |                             |                           |      |                           |                 |               |       |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 9  |  |  |   |                                       |                             |                           |      |                           |                 |               |       |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 10   |  |  |   |                                       |                             |                           |      |                           |                 |               |       |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 11   |  |  |   |                                       |                             |                           |      |                           |                 |               |       |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| 12   |  |  |   |                                       |                             |                           |      |                           |                 |               |       |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| ADDITIONAL COMMENTS  |  | RETROUSHED BY / AFFILIATION  |   | DATE                                  | TIME                        | ACCEPTED BY / AFFILIATION |      | DATE                      | TIME            | TEMP In C     |       | SAMPLE CONDITIONS |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
|  |  | Laura Midkiff APC GTL  |   | 7/22/2021                             | 11:45                       | [Signature]               |      | 7/30/21                   | 09:40           |               |       |                   |     |      |         |              |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |
| <b>SAMPLER NAME AND SIGNATURE</b><br>PRINT NAME of SAMPLER:<br>SIGNATURE of SAMPLER: |  |  |   |                                       |                             |                           |      |                           |                 |               |       |                   |     |      |         | DATE Signed: |       |          |          |               |                         |                   |                             |                       |                             |                      |    |    |    |  |  |  |  |  |  |  |

# Quality Control Sample Performance Assessment

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 8/13/2021  
Worklist: 62095  
Matrix: WT



| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2218981 |
| MB concentration:                   | 0.563   |
| MB 2 Sigma CSU:                     | 0.363   |
| MB MDC:                             | 0.691   |
| MB Numerical Performance Indicator: | 3.04    |
| MB Status vs Numerical Indicator:   | Fail*   |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |           |
|---|-----------|
| LCSID (Y or N)?                               | N         |
| LCS62095                                      | LCS62095  |
| Count Date:                                   | 8/18/2021 |
| Spike I.D.:                                   | 21-003    |
| Decay Corrected Spike Concentration (pCi/mL): | 36.527    |
| Volume Used (mL):                             | 0.10      |
| Aliquot Volume (L, g, F):                     | 0.816     |
| Target Conc. (pCi/L, g, F):                   | 4.477     |
| Uncertainty (Calculated):                     | 0.219     |
| Result (pCi/L, g, F):                         | 2.696     |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 0.722     |
| Numerical Performance Indicator:              | -4.63     |
| Percent Recovery:                             | 60.22%    |
| Status vs Numerical Indicator:                | N/A       |
| Status vs Recovery:                           | Pass      |
| Upper % Recovery Limits:                      | 135%      |
| Lower % Recovery Limits:                      | 60%       |

| Duplicate Sample Assessment                        |   |
|--|---|
| Sample I.D.:                                       | Enter Duplicate sample IDs if other than LCS/LCSD in the space below. |
| Duplicate Sample I.D.:                             |   |
| Sample Result (pCi/L, g, F):                       |   |
| Sample Result 2 Sigma CSU (pCi/L, g, F):           |   |
| Sample Duplicate Result (pCi/L, g, F):             |   |
| Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): |   |
| Are sample and/or duplicate results below RL?      | See Below #   |
| Duplicate Numerical Performance Indicator:         |   |
| Duplicate RPD:                                     |   |
| Duplicate Status vs Numerical Indicator:           |   |
| Duplicate Status vs RPD:                           |   |
| % RPD Limit:                                       |   |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

\*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable, otherwise this batch must be re-prepped.

\*\*Batch must be re-prepped due to unacceptable precision.

*8/19/21*

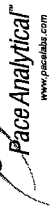
| Sample Matrix Spike Control Assessment                   |             |
|--|-------------|
| Sample Collection Date:                                  | 7/27/2021   |
| Sample I.D.:   | 92551765022 |
| Sample MS I.D.:  | 92551765023 |
| Sample MSD I.D.:   | 92551765024 |
| Spike I.D.:  | 21-003      |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):     | 36.866      |
| Spike Volume Used in MS (mL):                            | 0.20        |
| Spike Volume Used in MSD (mL):                           | 0.20        |
| MS Aliquot (L, g, F):                                    | 0.866       |
| MS Target Conc. (pCi/L, g, F):                           | 8.320       |
| MSD Aliquot (L, g, F):                                   | 0.896       |
| MSD Target Conc. (pCi/L, g, F):                          | 8.225       |
| MS Spike Uncertainty (calculated):                       | 0.408       |
| MSD Spike Uncertainty (calculated):                      | 0.403       |
| Sample Result 2 Sigma CSU (pCi/L, g, F):                 | 0.978       |
| Sample Matrix Spike Result:                              | 0.404       |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):           | 9.966       |
| Sample Matrix Spike Duplicate Result:                    | 1.975       |
| Sample Matrix Spike Duplicate Result:                    | 5.491       |
| Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): | 1.172       |
| MS Numerical Performance Indicator:                      | 0.637       |
| MSD Numerical Performance Indicator:                     | -5.582      |
| MS Percent Recovery:                                     | 108.03%     |
| MSD Percent Recovery:                                    | 54.86%      |
| MS Status vs Numerical Indicator:                        | Pass        |
| MSD Status vs Numerical Indicator:                       | Fail***     |
| MS Status vs Recovery:                                   | Pass        |
| MSD Status vs Recovery:                                  | MSD Low**** |
| MS/MSD Upper % Recovery Limits:                          | 135%        |
| MS/MSD Lower % Recovery Limits:                          | 60%         |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment   |             |
|---|-------------|
| Sample I.D.:  | 92551765022 |
| Sample MS I.D.:   | 92551765023 |
| Sample MSD I.D.:  | 92551765024 |
| Spike I.D.:   | 21-003      |
| Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):          | 9.966       |
| Sample Matrix Spike Duplicate Result:                   | 1.975       |
| Sample Matrix Spike Duplicate Result:                   | 5.491       |
| Duplicate Numerical Performance Indicator:              | 1.172       |
| Duplicate Numerical Performance Indicator:              | 3.820       |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD: | 65.28%      |
| MS/MSD Duplicate Status vs Numerical Indicator:         | Fail***     |
| MS/MSD Duplicate Status vs RPD:                         | Fail***     |
| % RPD Limit:  | 36%         |

*MSB < MDC, Pass*

*RI and Reanalyze ROS set only. 8/24/21*

# Quality Control Sample Performance Assessment



**Analyst: Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: JC2  
Date: 8/13/2021  
Worklist: 62094  
Matrix: WT

**Method Blank Assessment**

MB Sample ID: 2218980  
MB concentration: 0.837  
M/B 2 Sigma CSU: 0.360  
MB MDC: 0.572  
MB Numerical Performance Indicator: 4.55  
MB Status vs Numerical Indicator: Fail\*  
MB Status vs. MDC: See Comment\*

**Laboratory Control Sample Assessment**

| LCS#  | (Y or N)? | N        |
|---|-----------|----------|
| LCS62094                                      |           | LCS62094 |
| Count Date:                                   | 8/17/2021 |          |
| Spike I.D.:                                   | 21-003    |          |
| Decay Corrected Spike Concentration (pCi/mL): | 36.540    |          |
| Volume Used (mL):                             | 0.10      |          |
| Aliquot Volume (L, g, F):                     | 0.831     |          |
| Target Conc. (pCi/L, g, F):                   | 4.399     |          |
| Uncertainty (Calculated):                     | 0.216     |          |
| Result (pCi/L, g, F):                         | 3.038     |          |
| LCS/LCSD 2 Sigma CSU (pCi/L, g, F):           | 0.805     |          |
| Numerical Performance Indicator:              | -3.20     |          |
| Percent Recovery:                             | 69.06%    |          |
| Status vs Numerical Indicator:                | N/A       |          |
| Status vs Recovery:                           | Pass      |          |
| Upper % Recovery Limits:                      | 135%      |          |
| Lower % Recovery Limits:                      | 60%       |          |

**Duplicate Sample Assessment**

Sample I.D.:  
Duplicate Sample I.D.:  
Sample Result (pCi/L, g, F):  
Sample Duplicate Result (pCi/L, g, F):  
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):  
Are sample and/or duplicate results below RL?  
Duplicate Numerical Performance Indicator:  
Duplicate RPD:  
Duplicate Status vs Numerical Indicator:  
Duplicate Status vs RPD:  
% RPD Limit:

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

See Below ##

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

**Sample Matrix Spike Control Assessment**

Sample Collection Date: 7/20/2021  
Sample I.D.: 92551765002  
Sample MS I.D.: 92551765003  
Sample MSD I.D.: 92551765004

Spike I.D.: 21-003  
MS/MSD Decay Corrected Spike Concentration (pCi/mL): 36.880  
Spike Volume Used in MS (mL): 0.20  
MS Aliquot (L, g, F): 0.913  
MS Target Conc. (pCi/L, g, F): 8.077  
MSD Aliquot (L, g, F): 0.853  
MSD Target Conc. (pCi/L, g, F): 8.644  
MS Spike Uncertainty (calculated): 0.396  
MSD Spike Uncertainty (calculated): 0.424

Sample Result 2 Sigma CSU (pCi/L, g, F): 0.487  
Sample Matrix Spike Result: 0.248  
Sample Matrix Spike Result: 5.855  
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): 1.172  
Sample Matrix Spike Duplicate Result: 6.758  
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): 1.365  
MS Numerical Performance Indicator: -4.209  
MSD Numerical Performance Indicator: -3.206  
MS Percent Recovery: 66.46%  
MSD Percent Recovery: 72.55%  
MS Status vs Numerical Indicator: Fail\*\*\*  
MSD Status vs Numerical Indicator: Fail\*\*\*  
MS Status vs Recovery: Pass  
MSD Status vs Recovery: Pass  
MS/MSD Upper % Recovery Limits: 135%  
MS/MSD Lower % Recovery Limits: 60%

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

Sample I.D.: 92551765002  
Sample MS I.D.: 92551765003  
Sample MSD I.D.: 92551765004

Sample Matrix Spike Result: 5.855  
Sample Matrix Spike Duplicate Result: 1.172  
Sample Matrix Spike Duplicate Result: 6.758  
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): 1.365  
Duplicate Numerical Performance Indicator: -0.984  
(Based on the Percent Recoveries) MS/MSD Duplicate RPD: 8.76%  
MS/MSD Duplicate Status vs Numerical Indicator: Pass  
MS/MSD Duplicate Status vs RPD: Pass  
% RPD Limit: 36%

*MS passed % KEC*  
*Criteria*

# Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226  
Analyst: CLA  
Date: 8/4/2021  
Worklist: 61909  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2213739 |
| MB concentration:                   | -0.062  |
| MB Counting Uncertainty:            | 0.197   |
| MB MDC:                             | 0.563   |
| MB Numerical Performance Indicator: | -0.61   |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |  | LCSD (Y or N)? | Y         |
|---|--|----------------|-----------|
| Count Date:                                   |  | LCSD61909      | 8/26/2021 |
| Spike I.D.:                                   |  | 19-033         | 19-033    |
| Decay Corrected Spike Concentration (pCi/mL): |  | 24.035         | 24.035    |
| Volume Used (mL):                             |  | 0.10           | 0.10      |
| Aliquot Volume (L, g, F):                     |  | 0.202          | 0.207     |
| Target Conc. (pCi/L, g, F):                   |  | 11.882         | 11.586    |
| Uncertainty (Calculated):                     |  | 0.143          | 0.139     |
| Result (pCi/L, g, F):                         |  | 12.299         | 12.766    |
| LCSD/LCSD Counting Uncertainty (pCi/L, g, F): |  | 1.198          | 1.195     |
| Numerical Performance Indicator:              |  | 0.68           | 1.92      |
| Percent Recovery:                             |  | 103.51%        | 110.18%   |
| Status vs Numerical Indicator:                |  | N/A            | N/A       |
| Status vs Recovery:                           |  | Pass           | Pass      |
| Upper % Recovery Limits:                      |  | 125%           | 125%      |
| Lower % Recovery Limits:                      |  | 75%            | 75%       |

| Duplicate Sample Assessment                                 |           |
|---|-----------|
| Sample I.D.:  | LCS61909  |
| Duplicate Sample I.D.:                                      | LCSD61909 |
| Sample Result (pCi/L, g, F):                                | 12.299    |
| Sample Result Counting Uncertainty (pCi/L, g, F):           | 1.198     |
| Sample Duplicate Result (pCi/L, g, F):                      | 12.766    |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): | 1.195     |
| Are sample and/or duplicate results below RL?               | NO        |
| Duplicate Numerical Performance Indicator:                  | -0.540    |
| Duplicate Percent Recoveries (Duplicate RPD):               | 6.24%     |
| Duplicate Status vs Numerical Indicator:                    | N/A       |
| Duplicate Status vs RPD:                                    | Pass      |
| % RPD Limit:  | 25%       |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

| Sample Matrix Spike Control Assessment                            |  | MS/MSD 1    | MS/MSD 2 |
|---|--|-------------|----------|
| Sample Collection Date:   |  | 7/20/2021   |          |
| Sample I.D.:  |  | 92551765002 |          |
| Sample MS I.D.:   |  | 92551765003 |          |
| Sample MSD I.D.:  |  | 92551765004 |          |
| Spike I.D.:   |  | 19-033      |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):              |  | 24.036      |          |
| Spike Volume Used in MS (mL):                                     |  | 0.20        |          |
| Spike Volume Used in MSD (mL):                                    |  | 0.20        |          |
| MS Aliquot (L, g, F):   |  | 0.202       |          |
| MS Target Conc. (pCi/L, g, F):                                    |  | 23.784      |          |
| MSD Aliquot (L, g, F):  |  | 0.203       |          |
| MSD Target Conc. (pCi/L, g, F):                                   |  | 23.727      |          |
| MS Spike Uncertainty (calculated):                                |  | 0.285       |          |
| MSD Spike Uncertainty (calculated):                               |  | 0.285       |          |
| Sample Result:  |  | 0.246       |          |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 |  | 0.218       |          |
| Sample Matrix Spike Result:                                       |  | 24.711      |          |
| Sample Matrix Spike Duplicate Result:                             |  | 22.551      |          |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): |  | 1.557       |          |
| MS Numerical Performance Indicator:                               |  | 0.798       |          |
| MSD Numerical Performance Indicator:                              |  | -1.746      |          |
| MS Percent Recovery:  |  | 102.86%     |          |
| MSD Percent Recovery:   |  | 94.00%      |          |
| MS Status vs Numerical Indicator:                                 |  | N/A         |          |
| MSD Status vs Numerical Indicator:                                |  | N/A         |          |
| MS Status vs Recovery:  |  | Pass        |          |
| MSD Status vs Recovery:   |  | Pass        |          |
| MS/MSD Upper % Recovery Limits:                                   |  | 125%        |          |
| MS/MSD Lower % Recovery Limits:                                   |  | 75%         |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |             |
|---|-------------|
| Sample I.D.:  | 92551765002 |
| Sample MS I.D.:   | 92551765003 |
| Sample MSD I.D.:  | 92551765004 |
| Sample Matrix Spike Result:                                       | 24.711      |
| Sample Matrix Spike Duplicate Result:                             | 1.634       |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): | 22.551      |
| Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F): | 1.557       |
| Duplicate Numerical Performance Indicator:                        | 1.876       |
| Duplicate Percent Recoveries (Duplicate RPD):                     | 9.00%       |
| Duplicate Status vs Numerical Indicator:                          | N/A         |
| Duplicate Status vs RPD:  | Pass        |
| % RPD Limit:  | 25%         |

FOR FILES MW

VAM 8/20/21

# Quality Control Sample Performance Assessment



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: CLA  
Date: 8/4/2021  
Worklist: 61910  
Matrix: DW

| Method Blank Assessment             |         |
|-------------------------------------|---------|
| MB Sample ID                        | 2213744 |
| MB concentration:                   | 0.005   |
| MB Counting Uncertainty:            | 0.186   |
| MB MDC:                             | 0.496   |
| MB Numerical Performance Indicator: | 0.06    |
| MB Status vs Numerical Indicator:   | N/A     |
| MB Status vs. MDC:                  | Pass    |

| Laboratory Control Sample Assessment          |        | LCS (Y or N)? | N         |
|---|--------|---------------|-----------|
| Count Date:                                   |        | LCS61910      | LCSD61910 |
| Spike I.D.:                                   | 19-033 |               |           |
| Decay Corrected Spike Concentration (pCi/mL): | 24.035 |               |           |
| Volume Used (mL):                             | 0.10   |               |           |
| Aliquot Volume (L, g, F):                     | 0.210  |               |           |
| Target Conc. (pCi/L, g, F):                   | 11.451 |               |           |
| Uncertainty (Calculated):                     | 0.137  |               |           |
| Result (pCi/L, g, F):                         | 11.208 |               |           |
| LCS/LCSD Counting Uncertainty (pCi/L, g, F):  | 1.114  |               |           |
| Numerical Performance Indicator:              | -0.42  |               |           |
| Percent Recovery:                             | 97.86% |               |           |
| Status vs Numerical Indicator:                | N/A    |               |           |
| Status vs Recovery:                           | Pass   |               |           |
| Upper % Recovery Limits:                      | 125%   |               |           |
| Lower % Recovery Limits:                      | 75%    |               |           |

| Duplicate Sample Assessment                                 |              |
|---|--------------|
| Sample I.D.:  |              |
| Duplicate Sample I.D.:                                      |              |
| Sample Result (pCi/L, g, F):                                |              |
| Sample Duplicate Result (pCi/L, g, F):                      |              |
| Sample Result Counting Uncertainty (pCi/L, g, F):           |              |
| Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): |              |
| Are sample and/or duplicate results below RL?               | See Below ## |
| Duplicate Numerical Performance Indicator:                  |              |
| Duplicate RPD:  |              |
| Duplicate Status vs Numerical Indicator:                    |              |
| Duplicate Status vs RPD:                                    |              |
| % RPD Limit:  |              |

| Sample Matrix Spike Control Assessment                            |             | MS/MSD 1 | MS/MSD 2 |
|---|-------------|----------|----------|
| Sample Collection Date:   | 7/21/2021   |          |          |
| Sample I.D.:  | 92551765022 |          |          |
| Sample MS I.D.:   | 92551765023 |          |          |
| Sample MSD I.D.:  | 92551765024 |          |          |
| Spike I.D.:   | 19-033      |          |          |
| MS/MSD Decay Corrected Spike Concentration (pCi/mL):              | 24.036      |          |          |
| Spike Volume Used in MS (mL):                                     | 0.20        |          |          |
| Spike Volume Used in MSD (mL):                                    | 0.20        |          |          |
| MS Aliquot (L, g, F):   | 0.205       |          |          |
| MS Target Conc. (pCi/L, g, F):                                    | 23.464      |          |          |
| MSD Aliquot (L, g, F):  | 0.204       |          |          |
| MSD Target Conc. (pCi/L, g, F):                                   | 23.564      |          |          |
| MS Spike Uncertainty (calculated):                                | 0.282       |          |          |
| MSD Spike Uncertainty (calculated):                               | 0.283       |          |          |
| Sample Result:  | 0.277       |          |          |
| Sample Result Counting Uncertainty (pCi/L, g, F):                 | 0.246       |          |          |
| Sample Matrix Spike Result:                                       | 23.858      |          |          |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           | 1.626       |          |          |
| Sample Matrix Spike Duplicate Result:                             | 24.021      |          |          |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): | 1.643       |          |          |
| MS Numerical Performance Indicator:                               | 0.137       |          |          |
| MSD Numerical Performance Indicator:                              | 0.209       |          |          |
| MS Percent Recovery:  | 100.50%     |          |          |
| MSD Percent Recovery:   | 100.76%     |          |          |
| MS Status vs Numerical Indicator:                                 | N/A         |          |          |
| MSD Status vs Numerical Indicator:                                | N/A         |          |          |
| MS Status vs Recovery:  | Pass        |          |          |
| MSD Status vs Recovery:   | Pass        |          |          |
| MS/MSD Upper % Recovery Limits:                                   | 125%        |          |          |
| MS/MSD Lower % Recovery Limits:                                   | 75%         |          |          |

| Matrix Spike/Matrix Spike Duplicate Sample Assessment             |             |
|---|-------------|
| Sample I.D.:  | 92551765022 |
| Sample MS I.D.:   | 92551765023 |
| Sample MSD I.D.:  | 92551765024 |
| Sample Matrix Spike Result:                                       | 23.858      |
| Matrix Spike Result Counting Uncertainty (pCi/L, g, F):           | 1.626       |
| Sample Matrix Spike Duplicate Result:                             | 24.021      |
| Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): | 1.643       |
| Duplicate Numerical Performance Indicator:                        | -0.139      |
| (Based on the Percent Recoveries) MS/MSD Duplicate RPD:           | 0.26%       |
| MS/MSD Duplicate Status vs Numerical Indicator:                   | N/A         |
| MS/MSD Duplicate Status vs RPD:                                   | Pass        |
| % RPD Limit:  | 25%         |

## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten notes: *191910 MD* and *191910 MD*

Handwritten signature: *191910 MD*



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## ***Field Case Narrative***



## **Plant Gorgas Landfill**

### **2021 Compliance Event 2**

All samples were collected using methods defined in Alabama Power's Water Field Group Low-Flow Groundwater Sampling Procedure and the associated site-specific Sampling and Analysis Plan (SAP).

Rainy conditions were present when sampling wells MW-12V, MW-6 and MW-10.

Suspected iron bacteria appeared to be present during initial pumping of wells MW-8 and MW-19.

Field quality control procedures were performed as follows:

- Blanks and Sample Duplicates were collected as described in the SAP.
- Calibration verifications for all required field parameters were performed daily, before and after sample collection.

## Field Data

| Parameter                     | Value                         | Units  | Data Time             | PH   | Q | ORP    | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW   |
|-------------------------------|-------------------------------|--------|-----------------------|------|---|--------|---|---------|---|------|---|-------|---|------|---|-------|
| Comment                       | Sampled @ 1045                |        | 7/12/2021 10:21:00 AM | 5.16 |   | 125.24 |   | 2085.65 |   | 1.59 |   | 19.88 |   | 0.4  |   | 93.03 |
| Test Type                     | Low-Flow Test                 |        | 7/12/2021 10:26:00 AM | 5.14 |   | 131.56 |   | 2216.54 |   | 1.20 |   | 19.84 |   | 0.38 |   | 93.18 |
| Test Date / Time              | 2021-07-12 10:16:44           |        | 7/12/2021 10:31:00 AM | 5.14 |   | 129.67 |   | 2255.92 |   | 0.89 |   | 19.86 |   | 0.1  |   | 93.31 |
| Operator Name                 | TJ Daugherty                  |        | 7/12/2021 10:36:00 AM | 5.13 |   | 129.53 |   | 2263.63 |   | 0.83 |   | 19.82 |   | 0.5  |   | 93.31 |
| Tubing Type                   | PE                            |        | 7/12/2021 10:41:00 AM | 5.13 |   | 128.99 |   | 2271.93 |   | 0.79 |   | 19.83 |   | 0.22 |   | 93.31 |
| Project                       | Gorgas Pooled Upgradient      |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Initial Depth to Water        | 90.71                         | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Flow Cell Volume              | 130                           | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Final Draw Down               | 2.6                           | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Estimated Total Volume Pumped | 12500                         | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Tubing Inner Diameter         | 0.25                          | in     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Tubing Length                 | 108                           | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Pump Type                     | Geotech Bladder               |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Pump Volume                   | 105                           | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Flow Rate                     | 500                           | ml/min |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Final Flow Rate               | 500                           | ml/min |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Pump Intake From TOC          | 103                           | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Location Name                 | Gorgas Pooled Upgradient MW-1 |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Well Diameter                 | 2                             | in     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Casing Type                   | PVC                           |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Screen Length                 | 10                            | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Total Depth                   | 108.13                        | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Time Offset                   | -05:00:00                     |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Top of Screen                 | 98.13                         | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Device Model                  | Aqua TROLL 600                |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Device SN                     | 678330                        |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |

## Field Data

| Parameter                     | Value                         | Units  | Data Time             | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW   |
|-------------------------------|-------------------------------|--------|-----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|-------|
| Comment                       | Sampled @ 1148                |        | 7/12/2021 11:30:00 AM | 6.11 |   | 80.17 |   | 1694.47 |   | 0.29 |   | 19.43 |   | 12.2 |   | 84.42 |
| Test Type                     | Low-Flow Test                 |        | 7/12/2021 11:35:00 AM | 6.15 |   | 75.96 |   | 1672.37 |   | 0.16 |   | 19.42 |   | 2.61 |   | 84.42 |
| Test Date / Time              | 2021-07-12 11:25:09           |        | 7/12/2021 11:40:00 AM | 6.16 |   | 71.05 |   | 1678.19 |   | 0.13 |   | 19.36 |   | 2.48 |   | 84.42 |
| Operator Name                 | TJ Daugherty                  |        | 7/12/2021 11:45:00 AM | 6.16 |   | 67.46 |   | 1676.05 |   | 0.12 |   | 19.38 |   | 1.43 |   | 84.42 |
| Tubing Type                   | PE                            |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Project                       | Gorgas Pooled Upgradient      |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Initial Depth to Water        | 84.37                         | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Cell Volume              | 130                           | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Draw Down               | 0.05                          | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Estimated Total Volume Pumped | 10000                         | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Inner Diameter         | 0.25                          | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Length                 | 95                            | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Type                     | Geotech Bladder               |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Volume                   | 105                           | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Rate                     | 500                           | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Flow Rate               | 500                           | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Intake From TOC          | 89                            | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Location Name                 | Gorgas Pooled Upgradient MW-2 |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Well Diameter                 | 2                             | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Casing Type                   | PVC                           |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Screen Length                 | 10                            | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Total Depth                   | 94.25                         | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Time Offset                   | -05:00:00                     |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Top of Screen                 | 84.25                         | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device Model                  | Aqua TROLL 600                |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device SN                     | 678330                        |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |

## Field Data

| Parameter                     | Value                         | Units  | Data Time             | PH   | Q | ORP    | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW    |
|-------------------------------|-------------------------------|--------|-----------------------|------|---|--------|---|---------|---|------|---|-------|---|------|---|--------|
| Comment                       | Sampled @ 1253                |        | 7/12/2021 12:29:00 PM | 6.44 |   | 83.07  |   | 4025.30 |   | 8.31 |   | 25.29 |   | 1.02 |   | 109.81 |
| Test Type                     | Low-Flow Test                 |        | 7/12/2021 12:34:00 PM | 5.93 |   | 95.79  |   | 3615.17 |   | 7.19 |   | 25.38 |   | 1.53 |   | 109.91 |
| Test Date / Time              | 2021-07-12 12:24:51           |        | 7/12/2021 12:39:00 PM | 5.86 |   | 99.55  |   | 3340.75 |   | 6.78 |   | 25.50 |   | 2.25 |   | 109.99 |
| Operator Name                 | TJ Daugherty                  |        | 7/12/2021 12:44:00 PM | 5.86 |   | 101.49 |   | 3302.36 |   | 6.84 |   | 25.57 |   | 1.49 |   | 110.11 |
| Tubing Type                   | PE                            |        | 7/12/2021 12:49:00 PM | 5.86 |   | 103.13 |   | 3288.64 |   | 6.87 |   | 25.58 |   | 1.31 |   | 110.2  |
| Project                       | Gorgas Pooled Upgradient      |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Initial Depth to Water        | 104.36                        | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Flow Cell Volume              | 130                           | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Final Draw Down               | 5.84                          | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Estimated Total Volume Pumped | 2500                          | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Tubing Inner Diameter         | 0.25                          | in     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Tubing Length                 | 119                           | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Type                     | Geotech Bladder               |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Volume                   | 105                           | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Flow Rate                     | 100                           | ml/min |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Final Flow Rate               | 100                           | ml/min |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Intake From TOC          | 114                           | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Location Name                 | Gorgas Pooled Upgradient MW-3 |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Well Diameter                 | 2                             | in     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Casing Type                   | PVC                           |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Screen Length                 | 10                            | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Total Depth                   | 118.92                        | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Time Offset                   | -05:00:00                     |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Top of Screen                 | 108.92                        | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Device Model                  | Aqua TROLL 600                |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Device SN                     | 678330                        |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |

## Field Data

| Parameter                     | Value                         | Units  | Data Time            | PH   | Q | ORP    | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW    |
|-------------------------------|-------------------------------|--------|----------------------|------|---|--------|---|---------|---|------|---|-------|---|------|---|--------|
| Comment                       | Sampled @ 1435                |        | 7/12/2021 2:11:00 PM | 5.97 |   | 122.05 |   | 3017.04 |   | 1.87 |   | 21.48 |   | 3.16 |   | 116.36 |
| Test Type                     | Low-Flow Test                 |        | 7/12/2021 2:16:00 PM | 5.96 |   | 119.22 |   | 2996.30 |   | 1.97 |   | 20.91 |   | 2.43 |   | 116.36 |
| Test Date / Time              | 2021-07-12 14:06:13           |        | 7/12/2021 2:21:00 PM | 5.99 |   | 118.37 |   | 2987.14 |   | 2.20 |   | 20.79 |   | 1.87 |   | 116.36 |
| Operator Name                 | TJ Daugherty                  |        | 7/12/2021 2:26:00 PM | 6.04 |   | 116.26 |   | 2984.85 |   | 2.28 |   | 21.19 |   | 0.85 |   | 116.36 |
| Tubing Type                   | PE                            |        | 7/12/2021 2:31:00 PM | 6.06 |   | 114.08 |   | 2977.13 |   | 2.28 |   | 21.22 |   | 0.66 |   | 116.36 |
| Project                       | Gorgas Pooled Upgradient      |        |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Initial Depth to Water        | 116.33                        | ft     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Flow Cell Volume              | 130                           | ml     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Final Draw Down               | 0.03                          | ft     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Estimated Total Volume Pumped | 10000                         | ml     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Tubing Inner Diameter         | 0.25                          | in     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Tubing Length                 | 129                           | ft     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Type                     | Geotech Bladder               |        |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Volume                   | 105                           | ml     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Flow Rate                     | 400                           | ml/min |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Final Flow Rate               | 400                           | ml/min |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Intake From TOC          | 124                           | ft     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Location Name                 | Gorgas Pooled Upgradient MW-4 |        |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Well Diameter                 | 2                             | in     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Casing Type                   | PVC                           |        |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Screen Length                 | 10                            | ft     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Total Depth                   | 128.75                        | ft     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Time Offset                   | -05:00:00                     |        |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Top of Screen                 | 118.75                        | ft     |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Device Model                  | Aqua TROLL 600                |        |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Device SN                     | 678330                        |        |                      |      |   |        |   |         |   |      |   |       |   |      |   |        |

## Field Data

| Parameter                     | Value                | Units  | Data Time             | PH   | Q | ORP    | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW    |
|-------------------------------|----------------------|--------|-----------------------|------|---|--------|---|---------|---|------|---|-------|---|------|---|--------|
| Comment                       | Sampled @ 1053       |        | 7/21/2021 10:34:00 AM | 6.46 |   | 130.21 |   | 3101.85 |   | 1.35 |   | 22.61 |   | 7.55 |   | 125.94 |
| Test Type                     | Low-Flow Test        |        | 7/21/2021 10:39:00 AM | 6.42 |   | 118.86 |   | 3083.70 |   | 0.85 |   | 22.82 |   | 5.43 |   | 126.04 |
| Test Date / Time              | 2021-07-21 10:29:02  |        | 7/21/2021 10:44:00 AM | 6.40 |   | 111.02 |   | 3099.52 |   | 0.74 |   | 22.37 |   | 5.26 |   | 126.13 |
| Operator Name                 | TJ Daugherty         |        | 7/21/2021 10:49:00 AM | 6.40 |   | 105.22 |   | 3105.06 |   | 0.70 |   | 22.24 |   | 2.99 |   | 126.16 |
| Tubing Type                   | PE                   |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Project                       | Gorgas Landfill      |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Initial Depth to Water        | 125.87               | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Flow Cell Volume              | 130                  | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Final Draw Down               | 0.29                 | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Estimated Total Volume Pumped | 3200                 | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Tubing Inner Diameter         | 0.17                 | in     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Tubing Length                 | 137                  | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Type                     | QED Bladder          |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Volume                   | 130                  | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Flow Rate                     | 160                  | ml/min |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Final Flow Rate               | 160                  | ml/min |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Intake From TOC          | 132.5                | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Location Name                 | Gorgas Landfill MW-5 |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Well Diameter                 | 2                    | in     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Casing Type                   | PVC                  |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Screen Length                 | 10                   | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Total Depth                   | 137.2                | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Time Offset                   | -05:00:00            |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Top of Screen                 | 127.2                | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Device Model                  | Aqua TROLL 600       |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Device SN                     | 678330               |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |

## Field Data

| Parameter                     | Value                | Units  | Data Time            | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW   |
|-------------------------------|----------------------|--------|----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|-------|
| Comment                       | Sampled @ 1357       |        | 7/20/2021 1:39:00 PM | 6.06 |   | 11.54 |   | 3085.93 |   | 0.16 |   | 20.81 |   | 2.76 |   | 99.54 |
| Test Type                     | Low-Flow Test        |        | 7/20/2021 1:44:00 PM | 6.05 |   | 10.38 |   | 3079.5  |   | 0.13 |   | 21.02 |   | 1.69 |   | 99.54 |
| Test Date / Time              | 2021-07-20 13:34:01  |        | 7/20/2021 1:49:00 PM | 6.05 |   | 12.77 |   | 3042.22 |   | 0.12 |   | 21.02 |   | 1.56 |   | 99.54 |
| Operator Name                 | Dallas Gentry        |        | 7/20/2021 1:54:00 PM | 5.99 |   | 19.00 |   | 3020.13 |   | 0.11 |   | 21.06 |   | 1.09 |   | 99.54 |
| Tubing Type                   | PE                   |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Project                       | Gorgas Landfill      |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Initial Depth to Water        | 99.13                | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Cell Volume              | 130                  | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Draw Down               | 0.41                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Estimated Total Volume Pumped | 10000                | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Inner Diameter         | 0.25                 | in     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Length                 | 130                  | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Type                     | Geotech Bladder      |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Volume                   | 105                  | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Rate                     | 500                  | ml/min |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Flow Rate               | 500                  | ml/min |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Intake From TOC          | 125                  | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Location Name                 | Gorgas Landfill MW-6 |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Well Diameter                 | 2                    | in     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Casing Type                   | PVC                  |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Screen Length                 | 10                   | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Total Depth                   | 128.81               | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Time Offset                   | -05:00:00            |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Top of Screen                 | 118.81               | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device Model                  | Aqua TROLL 600       |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device SN                     | 678400               |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |

## Field Data

| Parameter                     | Value                | Units  | Data Time            | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW  |
|-------------------------------|----------------------|--------|----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|------|
| Comment                       | Sampled @ 1430       |        | 7/20/2021 2:12:00 PM | 6.59 |   | 15.47 |   | 2333.02 |   | 1.11 |   | 20.67 |   | 0.94 |   | 56.9 |
| Test Type                     | Low-Flow Test        |        | 7/20/2021 2:17:00 PM | 6.59 |   | 12.20 |   | 2274.92 |   | 0.99 |   | 20.63 |   | 1.71 |   | 56.9 |
| Test Date / Time              | 2021-07-20 14:07:08  |        | 7/20/2021 2:22:00 PM | 6.59 |   | 10.09 |   | 2233.43 |   | 0.97 |   | 20.53 |   | 1.33 |   | 56.9 |
| Operator Name                 | TJ Daugherty         |        | 7/20/2021 2:27:00 PM | 6.58 |   | 8.92  |   | 2199.04 |   | 0.98 |   | 20.48 |   | 1.57 |   | 56.9 |
| Tubing Type                   | PE                   |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Project                       | Gorgas Landfill      |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Initial Depth to Water        | 56.64                | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Flow Cell Volume              | 130                  | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Final Draw Down               | 0.26                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Estimated Total Volume Pumped | 10000                | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Tubing Inner Diameter         | 0.25                 | in     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Tubing Length                 | 73.5                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Pump Type                     | Geotech Bladder      |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Pump Volume                   | 105                  | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Flow Rate                     | 500                  | ml/min |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Final Flow Rate               | 500                  | ml/min |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Pump Intake From TOC          | 68.5                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Location Name                 | Gorgas Landfill MW-7 |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Well Diameter                 | 2                    | in     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Casing Type                   | PVC                  |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Screen Length                 | 10                   | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Total Depth                   | 73.63                | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Time Offset                   | -05:00:00            |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Top of Screen                 | 63.63                | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Device Model                  | Aqua TROLL 600       |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |
| Device SN                     | 678330               |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |      |



## Field Data

| Parameter                     | Value                | Units  | Data Time            | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb  | Q | DTW   |
|-------------------------------|----------------------|--------|----------------------|------|---|-------|---|---------|---|------|---|-------|---|-------|---|-------|
| Comment                       | Sampled @ 1525       |        | 7/20/2021 2:47:00 PM | 6.87 |   | 30.79 |   | 2512.83 |   | 6.25 |   | 24.29 |   | 0.48  |   | 63.64 |
| Test Type                     | Low-Flow Test        |        | 7/20/2021 2:52:00 PM | 6.62 |   | 17.11 |   | 2534.76 |   | 1.83 |   | 23.45 |   | 1.04  |   | 64.03 |
| Test Date / Time              | 2021-07-20 14:42:02  |        | 7/20/2021 2:57:00 PM | 6.60 |   | 14.89 |   | 2532.07 |   | 0.94 |   | 23.30 |   | 6.95  |   | 64.29 |
| Operator Name                 | Dallas Gentry        |        | 7/20/2021 3:02:00 PM | 6.60 |   | 15.23 |   | 2521.81 |   | 0.71 |   | 23.27 |   | 10.36 |   | 64.5  |
| Tubing Type                   | PE                   |        | 7/20/2021 3:07:00 PM | 6.61 |   | 14.45 |   | 2511.83 |   | 0.58 |   | 23.14 |   | 11.7  |   | 64.75 |
| Project                       | Gorgas Landfill      |        | 7/20/2021 3:12:00 PM | 6.62 |   | 13.29 |   | 2506.52 |   | 0.51 |   | 22.99 |   | 11.23 |   | 64.95 |
| Initial Depth to Water        | 62.84                | ft     | 7/20/2021 3:17:00 PM | 6.63 |   | 12.50 |   | 2502.96 |   | 0.47 |   | 22.70 |   | 7.26  |   | 65.09 |
| Flow Cell Volume              | 130                  | ml     | 7/20/2021 3:22:00 PM | 6.64 |   | 11.72 |   | 2503.35 |   | 0.44 |   | 22.63 |   | 6.59  |   | 65.19 |
| Final Draw Down               | 2.35                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Estimated Total Volume Pumped | 4000                 | ml     |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Tubing Inner Diameter         | 0.25                 | in     |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Tubing Length                 | 72                   | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Pump Type                     | Geotech Bladder      |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Pump Volume                   | 105                  | ml     |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Flow Rate                     | 100                  | ml/min |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Final Flow Rate               | 100                  | ml/min |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Pump Intake From TOC          | 67                   | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Location Name                 | Gorgas Landfill MW-8 |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Well Diameter                 | 2                    | in     |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Casing Type                   | PVC                  |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Screen Length                 | 10                   | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Total Depth                   | 72.24                | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Time Offset                   | -05:00:00            |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Top of Screen                 | 62.24                | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Device Model                  | Aqua TROLL 600       |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |
| Device SN                     | 678400               |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |       |

## Field Data

| Parameter                     | Value                 | Units  | Data Time             | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW   |
|-------------------------------|-----------------------|--------|-----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|-------|
| Comment                       | Sampled @ 1315        |        | 7/20/2021 12:51:00 PM | 6.51 |   | -1.64 |   | 1219.39 |   | 0.93 |   | 20.88 |   | 9.75 |   | 86.29 |
| Test Type                     | Low-Flow Test         |        | 7/20/2021 12:56:00 PM | 6.50 |   | -4.88 |   | 1218.35 |   | 0.64 |   | 20.79 |   | 11.7 |   | 86.84 |
| Test Date / Time              | 2021-07-20 12:46:34   |        | 7/20/2021 1:01:00 PM  | 6.49 |   | -6.00 |   | 1225.99 |   | 0.56 |   | 20.80 |   | 9.44 |   | 87.36 |
| Operator Name                 | TJ Daugherty          |        | 7/20/2021 1:06:00 PM  | 6.48 |   | -5.73 |   | 1241.94 |   | 0.60 |   | 20.60 |   | 9.65 |   | 87.51 |
| Tubing Type                   | PE                    |        | 7/20/2021 1:11:00 PM  | 6.46 |   | -4.57 |   | 1257.92 |   | 0.64 |   | 20.67 |   | 5.42 |   | 87.64 |
| Project                       | Gorgas Landfill       |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Initial Depth to Water        | 84.46                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Cell Volume              | 130                   | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Draw Down               | 3.18                  | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Estimated Total Volume Pumped | 5000                  | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Inner Diameter         | 0.25                  | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Length                 | 104                   | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Type                     | Geotech Bladder       |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Volume                   | 105                   | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Rate                     | 200                   | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Flow Rate               | 200                   | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Intake From TOC          | 98.8                  | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Location Name                 | Gorgas Landfill MW-10 |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Well Diameter                 | 2                     | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Casing Type                   | PVC                   |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Screen Length                 | 20                    | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Total Depth                   | 108.75                | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Time Offset                   | -05:00:00             |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Top of Screen                 | 88.75                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device Model                  | Aqua TROLL 600        |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device SN                     | 678330                |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |

## Field Data

| Parameter                     | Value                 | Units  | Data Time             | PH   | Q | ORP    | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW    |
|-------------------------------|-----------------------|--------|-----------------------|------|---|--------|---|---------|---|------|---|-------|---|------|---|--------|
| Comment                       | Sampled @ 1134        |        | 7/21/2021 10:51:00 AM | 6.70 |   | -67.32 |   | 2638.74 |   | 0.30 |   | 21.32 |   | 0.79 |   | 104.97 |
| Test Type                     | Low-Flow Test         |        | 7/21/2021 10:56:00 AM | 6.71 |   | -67.18 |   | 2597.02 |   | 0.20 |   | 21.36 |   | 0.57 |   | 108.02 |
| Test Date / Time              | 2021-07-21 10:46:21   |        | 7/21/2021 11:01:00 AM | 6.73 |   | -69.90 |   | 2588.14 |   | 0.31 |   | 22.73 |   | 0.52 |   | 108.28 |
| Operator Name                 | Dallas Gentry         |        | 7/21/2021 11:06:00 AM | 6.74 |   | -71.12 |   | 2583.23 |   | 0.41 |   | 23.02 |   | 0.56 |   | 108.47 |
| Tubing Type                   | PE                    |        | 7/21/2021 11:11:00 AM | 6.75 |   | -70.63 |   | 2574.79 |   | 0.44 |   | 23.22 |   | 0.64 |   | 108.66 |
| Project                       | Gorgas Landfill       |        | 7/21/2021 11:16:00 AM | 6.75 |   | -70.34 |   | 2572.29 |   | 0.43 |   | 23.37 |   | 0.81 |   | 108.82 |
| Initial Depth to Water        | 101.48                | ft     | 7/21/2021 11:21:00 AM | 6.75 |   | -70.98 |   | 2568.03 |   | 0.41 |   | 23.11 |   | 0.83 |   | 108.98 |
| Flow Cell Volume              | 130                   | ml     | 7/21/2021 11:26:00 AM | 6.74 |   | -72.78 |   | 2560.61 |   | 0.40 |   | 22.68 |   | 0.64 |   | 109.13 |
| Final Draw Down               | 7.77                  | ft     | 7/21/2021 11:31:00 AM | 6.74 |   | -76.30 |   | 2560.30 |   | 0.39 |   | 22.57 |   | 0.68 |   | 109.25 |
| Estimated Total Volume Pumped | 9000                  | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Tubing Inner Diameter         | 0.25                  | in     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Tubing Length                 | 135.5                 | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Type                     | Geotech Bladder       |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Volume                   | 105                   | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Flow Rate                     | 400                   | ml/min |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Final Flow Rate               | 100                   | ml/min |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Pump Intake From TOC          | 130.5                 | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Location Name                 | Gorgas Landfill MW-11 |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Well Diameter                 | 2                     | in     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Casing Type                   | PVC                   |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Screen Length                 | 10                    | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Total Depth                   | 135.74                | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Time Offset                   | -05:00:00             |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Top of Screen                 | 125.74                | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Device Model                  | Aqua TROLL 600        |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |
| Device SN                     | 678400                |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |        |

## Field Data

| Parameter                     | Value                 | Units  | Data Time             | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW    |
|-------------------------------|-----------------------|--------|-----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|--------|
| Comment                       | Sampled @ 1153        |        | 7/20/2021 11:35:00 AM | 5.48 |   | 24.26 |   | 3190.77 |   | 1.10 |   | 22.92 |   | 7.98 |   | 154.91 |
| Test Type                     | Low-Flow Test         |        | 7/20/2021 11:40:00 AM | 5.49 |   | 24.86 |   | 3171.25 |   | 0.97 |   | 22.96 |   | 7.41 |   | 154.91 |
| Test Date / Time              | 2021-07-20 11:30:16   |        | 7/20/2021 11:45:00 AM | 5.50 |   | 25.37 |   | 3173.09 |   | 0.93 |   | 22.78 |   | 4.88 |   | 154.91 |
| Operator Name                 | TJ Daugherty          |        | 7/20/2021 11:50:00 AM | 5.53 |   | 25.95 |   | 3168.03 |   | 0.90 |   | 22.65 |   | 4.23 |   | 154.91 |
| Tubing Type                   | PE                    |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Project                       | Gorgas Landfill       |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Initial Depth to Water        | 154.82                | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Flow Cell Volume              | 130                   | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Final Draw Down               | 0.09                  | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Estimated Total Volume Pumped | 4500                  | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Tubing Inner Diameter         | 0.17                  | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Tubing Length                 | 169.5                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Pump Type                     | QED Bladder           |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Pump Volume                   | 130                   | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Flow Rate                     | 225                   | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Final Flow Rate               | 225                   | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Pump Intake From TOC          | 164.5                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Location Name                 | Gorgas Landfill MW-12 |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Well Diameter                 | 2                     | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Casing Type                   | PVC                   |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Screen Length                 | 10                    | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Total Depth                   | 169.47                | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Time Offset                   | -05:00:00             |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Top of Screen                 | 159.47                | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Device Model                  | Aqua TROLL 600        |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Device SN                     | 678330                |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |        |

## Field Data

| Parameter                     | Value                  | Units  | Data Time             | PH   | Q | ORP     | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW    |
|-------------------------------|------------------------|--------|-----------------------|------|---|---------|---|---------|---|------|---|-------|---|------|---|--------|
| Comment                       | Sampled @ 1232         |        | 7/20/2021 12:09:00 PM | 6.84 |   | -141.80 |   | 2537.18 |   | 0.80 |   | 22.45 |   | 6.36 |   | 156.26 |
| Test Type                     | Low-Flow Test          |        | 7/20/2021 12:14:00 PM | 6.81 |   | -117.64 |   | 2533.59 |   | 0.38 |   | 22.29 |   | 1.66 |   | 156.64 |
| Test Date / Time              | 2021-07-20 12:04:07    |        | 7/20/2021 12:19:00 PM | 6.82 |   | -110.68 |   | 2532.41 |   | 0.33 |   | 22.13 |   | 1.56 |   | 156.9  |
| Operator Name                 | Dallas Gentry          |        | 7/20/2021 12:24:00 PM | 6.83 |   | -102.81 |   | 2519.32 |   | 0.71 |   | 23.00 |   | 1.72 |   | 157.08 |
| Tubing Type                   | PE                     |        | 7/20/2021 12:29:00 PM | 6.84 |   | -99.89  |   | 2516.11 |   | 0.47 |   | 22.91 |   | 1.48 |   | 157.18 |
| Project                       | Gorgas Landfill        |        |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Initial Depth to Water        | 155.32                 | ft     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Flow Cell Volume              | 130                    | ml     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Final Draw Down               | 1.86                   | ft     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Estimated Total Volume Pumped | 5250                   | ml     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Tubing Inner Diameter         | 0.17                   | in     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Tubing Length                 | 207                    | ft     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Pump Type                     | QED Bladder            |        |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Pump Volume                   | 130                    | ml     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Flow Rate                     | 210                    | ml/min |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Final Flow Rate               | 210                    | ml/min |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Pump Intake From TOC          | 202                    | ft     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Location Name                 | Gorgas Landfill MW-12V |        |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Well Diameter                 | 2                      | in     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Casing Type                   | PVC                    |        |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Screen Length                 | 10                     | ft     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Total Depth                   | 207                    | ft     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Time Offset                   | -05:00:00              |        |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Top of Screen                 | 197                    | ft     |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Device Model                  | Aqua TROLL 600         |        |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |
| Device SN                     | 678400                 |        |                       |      |   |         |   |         |   |      |   |       |   |      |   |        |

## Field Data

| Parameter                     | Value                 | Units  | Data Time            | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW   |
|-------------------------------|-----------------------|--------|----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|-------|
| Comment                       | Sampled @ 0913        |        | 7/20/2021 8:55:00 AM | 6.52 |   | 72.95 |   | 2633.28 |   | 0.70 |   | 20.74 |   | 1.27 |   | 94.17 |
| Test Type                     | Low-Flow Test         |        | 7/20/2021 9:00:00 AM | 6.57 |   | 67.77 |   | 2636.18 |   | 0.40 |   | 20.59 |   | 1.42 |   | 94.17 |
| Test Date / Time              | 2021-07-20 08:50:09   |        | 7/20/2021 9:05:00 AM | 6.59 |   | 60.62 |   | 2633.40 |   | 0.33 |   | 20.51 |   | 0.54 |   | 94.17 |
| Operator Name                 | Dallas Gentry         |        | 7/20/2021 9:10:00 AM | 6.59 |   | 60.17 |   | 2629.85 |   | 0.30 |   | 20.50 |   | 0.57 |   | 94.17 |
| Tubing Type                   | PE                    |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Project                       | Gorgas Landfill       |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Initial Depth to Water        | 93.67                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Cell Volume              | 130                   | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Draw Down               | 0.5                   | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Estimated Total Volume Pumped | 4400                  | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Inner Diameter         | 0.25                  | in     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Length                 | 109                   | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Type                     | Geotech Bladder       |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Volume                   | 105                   | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Rate                     | 220                   | ml/min |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Flow Rate               | 220                   | ml/min |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Intake From TOC          | 104                   | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Location Name                 | Gorgas Landfill MW-13 |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Well Diameter                 | 2                     | in     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Casing Type                   | PVC                   |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Screen Length                 | 10                    | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Total Depth                   | 109.25                | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Time Offset                   | -05:00:00             |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Top of Screen                 | 99.25                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device Model                  | Aqua TROLL 600        |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device SN                     | 678400                |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |       |

## Field Data

| Parameter                     | Value                 | Units  | Data Time             | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW   |
|-------------------------------|-----------------------|--------|-----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|-------|
| Comment                       | Sampled @ 1016        |        | 7/20/2021 9:57:00 AM  | 6.37 |   | 50.75 |   | 2994.03 |   | 0.29 |   | 20.30 |   | 58.3 |   | 89.04 |
| Test Type                     | Low-Flow Test         |        | 7/20/2021 10:02:00 AM | 6.37 |   | 37.52 |   | 2978.03 |   | 0.19 |   | 20.29 |   | 8.15 |   | 89.04 |
| Test Date / Time              | 2021-07-20 09:52:58   |        | 7/20/2021 10:07:00 AM | 6.38 |   | 33.32 |   | 2972.60 |   | 0.16 |   | 20.12 |   | 3.23 |   | 89.04 |
| Operator Name                 | Dallas Gentry         |        | 7/20/2021 10:12:00 AM | 6.38 |   | 31.75 |   | 2964.18 |   | 0.16 |   | 20.10 |   | 2.44 |   | 89.04 |
| Tubing Type                   | PE                    |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Project                       | Gorgas Landfill       |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Initial Depth to Water        | 88.91                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Cell Volume              | 130                   | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Draw Down               | 0.13                  | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Estimated Total Volume Pumped | 7600                  | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Inner Diameter         | 0.25                  | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Length                 | 103.5                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Type                     | Geotech Bladder       |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Volume                   | 105                   | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Rate                     | 380                   | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Flow Rate               | 380                   | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Intake From TOC          | 98.5                  | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Location Name                 | Gorgas Landfill MW-14 |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Well Diameter                 | 2                     | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Casing Type                   | PVC                   |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Screen Length                 | 10                    | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Total Depth                   | 103.65                | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Time Offset                   | -05:00:00             |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Top of Screen                 | 93.65                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device Model                  | Aqua TROLL 600        |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device SN                     | 678400                |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |

## Field Data

| Parameter                     | Value                 | Units  | Data Time             | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW   |
|-------------------------------|-----------------------|--------|-----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|-------|
| Comment                       | Sampled @ 1125        |        | 7/20/2021 11:06:00 AM | 6.04 |   | 25.67 |   | 2616.49 |   | 0.26 |   | 20.33 |   | 1.82 |   | 67.23 |
| Test Type                     | Low-Flow Test         |        | 7/20/2021 11:11:00 AM | 6.02 |   | 25.14 |   | 2602.47 |   | 0.19 |   | 20.25 |   | 2.82 |   | 67.34 |
| Test Date / Time              | 2021-07-20 11:01:56   |        | 7/20/2021 11:16:00 AM | 6.02 |   | 26.05 |   | 2579.34 |   | 0.25 |   | 20.30 |   | 2.2  |   | 67.34 |
| Operator Name                 | Dallas Gentry         |        | 7/20/2021 11:21:00 AM | 6.03 |   | 24.59 |   | 2577.77 |   | 0.26 |   | 20.18 |   | 1.91 |   | 67.34 |
| Tubing Type                   | PE                    |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Project                       | Gorgas Landfill       |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Initial Depth to Water        | 66.35                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Cell Volume              | 130                   | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Draw Down               | 0.99                  | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Estimated Total Volume Pumped | 6600                  | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Inner Diameter         | 0.25                  | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Length                 | 87                    | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Type                     | Geotech Bladder       |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Volume                   | 105                   | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Rate                     | 330                   | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Flow Rate               | 330                   | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Intake From TOC          | 82                    | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Location Name                 | Gorgas Landfill MW-15 |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Well Diameter                 | 2                     | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Casing Type                   | PVC                   |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Screen Length                 | 10                    | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Total Depth                   | 86.96                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Time Offset                   | -05:00:00             |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Top of Screen                 | 76.96                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device Model                  | Aqua TROLL 600        |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device SN                     | 678400                |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |



## Field Data

| Parameter                     | Value                 | Units  | Data Time             | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW   |
|-------------------------------|-----------------------|--------|-----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|-------|
| Comment                       | Sampled @ 1210        |        | 7/21/2021 11:52:00 AM | 6.19 |   | 79.19 |   | 2295.37 |   | 0.94 |   | 20.68 |   | 0.27 |   | 90.08 |
| Test Type                     | Low-Flow Test         |        | 7/21/2021 11:57:00 AM | 6.20 |   | 77.24 |   | 2282.41 |   | 0.83 |   | 20.56 |   | 0.24 |   | 90.08 |
| Test Date / Time              | 2021-07-21 11:47:27   |        | 7/21/2021 12:02:00 PM | 6.22 |   | 73.80 |   | 2274.14 |   | 0.82 |   | 20.83 |   | 0.1  |   | 90.08 |
| Operator Name                 | TJ Daugherty          |        | 7/21/2021 12:07:00 PM | 6.24 |   | 69.94 |   | 2259.08 |   | 0.78 |   | 20.85 |   | 0.1  |   | 90.08 |
| Tubing Type                   | PE                    |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Project                       | Gorgas Landfill       |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Initial Depth to Water        | 90.05                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Cell Volume              | 130                   | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Draw Down               | 0.03                  | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Estimated Total Volume Pumped | 8800                  | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Inner Diameter         | 0.25                  | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Tubing Length                 | 110.5                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Type                     | Geotech Bladder       |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Volume                   | 105                   | ml     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Flow Rate                     | 440                   | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Final Flow Rate               | 440                   | ml/min |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Pump Intake From TOC          | 105.5                 | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Location Name                 | Gorgas Landfill MW-16 |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Well Diameter                 | 2                     | in     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Casing Type                   | PVC                   |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Screen Length                 | 10                    | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Total Depth                   | 110.56                | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Time Offset                   | -05:00:00             |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Top of Screen                 | 100.56                | ft     |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device Model                  | Aqua TROLL 600        |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |
| Device SN                     | 678330                |        |                       |      |   |       |   |         |   |      |   |       |   |      |   |       |

## Field Data

| Parameter                     | Value                  | Units  | Data Time            | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW    |
|-------------------------------|------------------------|--------|----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|--------|
| Comment                       | Sampled @ 1330         |        | 7/21/2021 1:06:00 PM | 5.36 |   | 93.43 |   | 3154.10 |   | 0.83 |   | 22.42 |   | 0.92 |   | 126.54 |
| Test Type                     | Low-Flow Test          |        | 7/21/2021 1:11:00 PM | 5.43 |   | 85.91 |   | 3138.19 |   | 0.49 |   | 22.46 |   | 0.59 |   | 126.61 |
| Test Date / Time              | 2021-07-21 13:01:44    |        | 7/21/2021 1:16:00 PM | 5.60 |   | 75.55 |   | 3106.67 |   | 0.41 |   | 22.46 |   | 0.42 |   | 126.61 |
| Operator Name                 | TJ Daugherty           |        | 7/21/2021 1:21:00 PM | 5.73 |   | 67.78 |   | 3087.79 |   | 0.38 |   | 22.46 |   | 0.41 |   | 126.61 |
| Tubing Type                   | PE                     |        | 7/21/2021 1:26:00 PM | 5.79 |   | 63.86 |   | 3081.80 |   | 0.36 |   | 22.47 |   | 0.27 |   | 126.61 |
| Project                       | Gorgas Landfill        |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Initial Depth to Water        | 125.98                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Flow Cell Volume              | 130                    | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Final Draw Down               | 0.63                   | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Estimated Total Volume Pumped | 6000                   | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Tubing Inner Diameter         | 0.17                   | in     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Tubing Length                 | 139                    | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Pump Type                     | QED Bladder            |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Pump Volume                   | 130                    | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Flow Rate                     | 240                    | ml/min |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Final Flow Rate               | 240                    | ml/min |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Pump Intake From TOC          | 133.67                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Location Name                 | Gorgas Landfill MW-17R |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Well Diameter                 | 2                      | in     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Casing Type                   | PVC                    |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Screen Length                 | 10                     | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Total Depth                   | 138.05                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Time Offset                   | -05:00:00              |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Top of Screen                 | 128.05                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Device Model                  | Aqua TROLL 600         |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Device SN                     | 678330                 |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |

## Field Data

| Parameter                     | Value                 | Units  | Data Time            | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW    |
|-------------------------------|-----------------------|--------|----------------------|------|---|-------|---|---------|---|------|---|-------|---|------|---|--------|
| Comment                       | Sampled @ 1428        |        | 7/21/2021 2:09:00 PM | 6.34 |   | 51.54 |   | 2373.3  |   | 4.28 |   | 23.43 |   | 0.31 |   | 111.56 |
| Test Type                     | Low-Flow Test         |        | 7/21/2021 2:14:00 PM | 6.31 |   | 52.02 |   | 2368.29 |   | 4.01 |   | 23.22 |   | 0.51 |   | 111.59 |
| Test Date / Time              | 2021-07-21 14:04:45   |        | 7/21/2021 2:19:00 PM | 6.31 |   | 53.80 |   | 2360.97 |   | 3.96 |   | 22.73 |   | 0.28 |   | 111.61 |
| Operator Name                 | TJ Daugherty          |        | 7/21/2021 2:24:00 PM | 6.33 |   | 55.25 |   | 2357.17 |   | 3.95 |   | 22.33 |   | 0.23 |   | 111.61 |
| Tubing Type                   | PE                    |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Project                       | Gorgas Landfill       |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Initial Depth to Water        | 111.49                | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Flow Cell Volume              | 130                   | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Final Draw Down               | 0.12                  | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Estimated Total Volume Pumped | 3200                  | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Tubing Inner Diameter         | 0.17                  | in     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Tubing Length                 | 120                   | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Pump Type                     | QED Bladder           |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Pump Volume                   | 130                   | ml     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Flow Rate                     | 160                   | ml/min |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Final Flow Rate               | 160                   | ml/min |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Pump Intake From TOC          | 117.74                | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Location Name                 | Gorgas Landfill MW-18 |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Well Diameter                 | 2                     | in     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Casing Type                   | PVC                   |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Screen Length                 | 10                    | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Total Depth                   | 118.48                | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Time Offset                   | -05:00:00             |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Top of Screen                 | 108.48                | ft     |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Device Model                  | Aqua TROLL 600        |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |
| Device SN                     | 678330                |        |                      |      |   |       |   |         |   |      |   |       |   |      |   |        |

## Field Data

| Parameter                     | Value                 | Units  | Data Time            | PH   | Q | ORP   | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb  | Q | DTW  |
|-------------------------------|-----------------------|--------|----------------------|------|---|-------|---|---------|---|------|---|-------|---|-------|---|------|
| Comment                       | Sampled @ 1401        |        | 7/21/2021 1:38:00 PM | 6.22 |   | 65.34 |   | 2931.00 |   | 0.41 |   | 21.23 |   | 16.4  |   | 79.1 |
| Test Type                     | Low-Flow Test         |        | 7/21/2021 1:43:00 PM | 6.18 |   | 66.93 |   | 2922.66 |   | 0.19 |   | 20.82 |   | 33.8  |   | 79.1 |
| Test Date / Time              | 2021-07-21 13:33:18   |        | 7/21/2021 1:48:00 PM | 6.19 |   | 64.61 |   | 2920.80 |   | 0.16 |   | 20.80 |   | 12.55 |   | 79.1 |
| Operator Name                 | Dallas Gentry         |        | 7/21/2021 1:53:00 PM | 6.21 |   | 63.42 |   | 2921.17 |   | 0.15 |   | 20.96 |   | 10.87 |   | 79.1 |
| Tubing Type                   | PE                    |        | 7/21/2021 1:58:00 PM | 6.23 |   | 61.95 |   | 2916.25 |   | 0.14 |   | 21.11 |   | 4.91  |   | 79.1 |
| Project                       | Gorgas Landfill       |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Initial Depth to Water        | 79.03                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Flow Cell Volume              | 130                   | ml     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Final Draw Down               | 0.07                  | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Estimated Total Volume Pumped | 8500                  | ml     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Tubing Inner Diameter         | 0.25                  | in     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Tubing Length                 | 98                    | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Pump Type                     | Geotech Bladder       |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Pump Volume                   | 105                   | ml     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Flow Rate                     | 340                   | ml/min |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Final Flow Rate               | 340                   | ml/min |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Pump Intake From TOC          | 93                    | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Location Name                 | Gorgas Landfill MW-19 |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Well Diameter                 | 2                     | in     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Casing Type                   | PVC                   |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Screen Length                 | 10                    | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Total Depth                   | 97.85                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Time Offset                   | -05:00:00             |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Top of Screen                 | 87.85                 | ft     |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Device Model                  | Aqua TROLL 600        |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |
| Device SN                     | 678400                |        |                      |      |   |       |   |         |   |      |   |       |   |       |   |      |

## Field Data

| Parameter                     | Value                 | Units  | Data Time             | PH   | Q | ORP    | Q | Cond    | Q | DO   | Q | Temp  | Q | Turb | Q | DTW   |
|-------------------------------|-----------------------|--------|-----------------------|------|---|--------|---|---------|---|------|---|-------|---|------|---|-------|
| Comment                       | Sampled @ 1247        |        | 7/21/2021 12:28:00 PM | 6.55 |   | -56.28 |   | 2645.96 |   | 0.16 |   | 20.36 |   | 1.59 |   | 21.05 |
| Test Type                     | Low-Flow Test         |        | 7/21/2021 12:33:00 PM | 6.56 |   | -53.54 |   | 2625.65 |   | 0.11 |   | 20.39 |   | 0.77 |   | 21.1  |
| Test Date / Time              | 2021-07-21 12:23:40   |        | 7/21/2021 12:38:00 PM | 6.58 |   | -52.76 |   | 2612.28 |   | 0.10 |   | 20.46 |   | 0.4  |   | 21.1  |
| Operator Name                 | Dallas Gentry         |        | 7/21/2021 12:43:00 PM | 6.60 |   | -52.71 |   | 2648.64 |   | 0.09 |   | 20.65 |   | 0.81 |   | 21.1  |
| Tubing Type                   | PE                    |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Project                       | Gorgas Landfill       |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Initial Depth to Water        | 19.78                 | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Flow Cell Volume              | 130                   | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Final Draw Down               | 1.32                  | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Estimated Total Volume Pumped | 6000                  | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Tubing Inner Diameter         | 0.25                  | in     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Tubing Length                 | 74                    | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Pump Type                     | Geotech Bladder       |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Pump Volume                   | 105                   | ml     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Flow Rate                     | 300                   | ml/min |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Final Flow Rate               | 300                   | ml/min |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Pump Intake From TOC          | 69                    | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Location Name                 | Gorgas Landfill MW-20 |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Well Diameter                 | 2                     | in     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Casing Type                   | PVC                   |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Screen Length                 | 10                    | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Total Depth                   | 74.1                  | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Time Offset                   | -05:00:00             |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Top of Screen                 | 64.1                  | ft     |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Device Model                  | Aqua TROLL 600        |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |
| Device SN                     | 678400                |        |                       |      |   |        |   |         |   |      |   |       |   |      |   |       |

# Appendix D



## Appendix D. - Horizontal Groundwater Flow Velocity Calculations

### Plant Gorgas CCR Landfill

| 2021 Semi-Annual Monitoring Events |            |            |                 |                             |                        |                    |                                      |                                      |
|------------------------------------|------------|------------|-----------------|-----------------------------|------------------------|--------------------|--------------------------------------|--------------------------------------|
| Source                             | MW-2       | MW-20      | Distance        | Hydraulic Gradient          | Hydraulic Conductivity | Effective Porosity | Calculated Groundwater Flow Velocity | Calculated Groundwater Flow Velocity |
|                                    | $h_1$ (ft) | $h_2$ (ft) | $\Delta l$ (ft) | $\Delta h/\Delta l$ (ft/ft) | K                      | n                  | (ft/d)                               | (ft/yr)                              |
| 2/22/2021                          | 418.50     | 313.60     | 3507.0          | 0.030                       | 8.01                   | 0.15               | 1.60                                 | 583.01                               |
| 7/12/2021                          | 417.75     | 312.81     | 3507.0          | 0.030                       | 8.01                   | 0.15               | 1.60                                 | 583.23                               |
| Source                             | MW-3       | MW-6       | Distance        | Hydraulic Gradient          | Hydraulic Conductivity | Effective Porosity | Calculated Groundwater Flow Velocity | Calculated Groundwater Flow Velocity |
|                                    | $h_1$ (ft) | $h_2$ (ft) | $\Delta l$ (ft) | $\Delta h/\Delta l$ (ft/ft) | K                      | n                  | (ft/d)                               | (ft/yr)                              |
| 2/22/2021                          | 419.94     | 311.83     | 2970.0          | 0.036                       | 8.01                   | 0.15               | 1.94                                 | 709.49                               |
| 7/12/2021                          | 421.54     | 314.66     | 2970.0          | 0.036                       | 8.01                   | 0.15               | 1.92                                 | 701.41                               |
| Source                             | MW-14      | MW-19      | Distance        | Hydraulic Gradient          | Hydraulic Conductivity | Effective Porosity | Calculated Groundwater Flow Velocity | Calculated Groundwater Flow Velocity |
|                                    | $h_1$ (ft) | $h_2$ (ft) | $\Delta l$ (ft) | $\Delta h/\Delta l$ (ft/ft) | K                      | n                  | (ft/d)                               | (ft/yr)                              |
| 2/22/2021                          | 340.86     | 298.70     | 1890.0          | 0.022                       | 8.01                   | 0.15               | 1.19                                 | 434.78                               |
| 7/12/2021                          | 340.84     | 298.00     | 1890.0          | 0.023                       | 8.01                   | 0.15               | 1.21                                 | 441.80                               |

Notes:

ft=feet

ft/d = feet/day

ft/ft = feet per foot

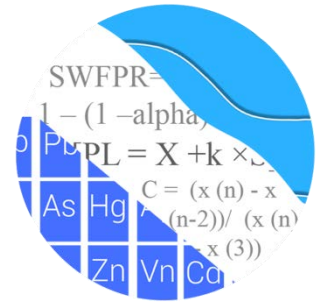
ft/yr = feet per year

# Appendix E



**1st**  
**Semi-Annual**  
**Monitoring Event**

# GROUNDWATER STATS CONSULTING



May 26, 2021

Southern Company Services  
Attn: Mr. Greg Dyer  
3535 Colonnade Parkway  
Birmingham, AL 35243

Re: Plant Gorgas CCR Landfill  
1<sup>st</sup> Semi-Annual Analysis – February 2021

Dear Mr. Dyer,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the statistical analysis of groundwater data for the February 2021 1<sup>st</sup> semi-annual sample event for Alabama Power Company's Plant Gorgas CCR Landfill. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began at site for the CCR program in 2016. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** MW-1, MW-2, MW-3, and MW-4
- **Downgradient wells:** MW-5, MW-6, MW-7, and MW-8

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was prepared according to the Statistical Analysis Plan approved by Dr. Kirk Cameron, PhD Statistician with MacStat Consulting, primary author of the USEPA Unified Guidance, and Senior Advisor to Groundwater Stats Consulting. The analysis was reviewed by Kristina Rayner, Groundwater Statistician and Founder of Groundwater Stats Consulting.

The CCR program consists of the following constituents:

**Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS

**Appendix IV** (Assessment Monitoring) - antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A list of Appendix IV downgradient well/constituent pairs with 100% non-detects follows this letter.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). A substitution of the most recent reporting limit is used for non-detect data. Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells.

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on analysis of the spatial variability of groundwater quality data among wells upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves are provided in this report to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests that the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations. Power curves are based on the following statistical methods and site/data characteristics:

- Semi-Annual Sampling
- Intrawell Prediction Limits with 1-of-2 resample plan
- Interwell Prediction Limits with 1-of-2 resample plan
- # Background Samples (Intrawell): 11
- # Background Samples (Interwell): 92
- # Constituents: 7
- # Downgradient wells: 4

## Summary of Statistical Methods – Appendix III Parameters

Based on the earlier evaluation described above, the following statistical methods were selected:

- Intrawell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, fluoride, sulfate, and TDS
- Interwell prediction limits, combined with a 1-of-2 resample plan for chloride and pH

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the annual false positive rate associated with parametric limits is fixed at 10% as recommended by the EPA Unified Guidance (2009), the false positive rate associated with nonparametric limits is not fixed and depends upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (USEPA, 2009), data are analyzed using either parametric or non-parametric prediction limits as appropriate.

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the intrawell case, data for all wells and constituents may be re-evaluated when a minimum of 4 new data points are available to determine whether earlier concentrations are representative of present-day groundwater

quality. In the interwell case, prediction limits are updated with upgradient well data following each sampling event after careful screening for any new outliers. While not required for this report in some cases, deselecting the earlier portion of data may be necessary prior to construction of limits so that resulting statistical limits are conservative (lower) from a regulatory perspective and capable of rapidly detecting changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

### **Background Update Summary – Conducted in September 2019**

Intrawell prediction limits, which compare the most recent compliance sample from a given well to historical data from the same well, are updated by testing for the appropriateness of consolidating new sampling observations with the screened background data. This process is described below and requires a minimum of four new data points. Historical data were evaluated for updating with newer data through May 2019 through the use of time series graphs to identify potential outliers when necessary, as well as the Mann Whitney test for equality of medians. As discussed in the Statistical Analysis Plan (August 2020), intrawell prediction limits are used to evaluate boron, calcium, fluoride, sulfate, and TDS at all wells due to natural spatial variation for these parameters.

Interwell prediction limits are used to compare the most recent sample from each downgradient well to statistical limits constructed from pooled upgradient well data for chloride and pH. As mentioned above, these limits are updated following each sampling event after careful screening for new outliers. Data from upgradient wells are also periodically re-screened for newly developing trends, which may require adjustment of the background period to eliminate the trend. No adjustments were required in upgradient wells for constituents evaluated using interwell prediction limits.

Prior to performing prediction limits, proposed background data through May 2019 were reviewed to identify any newly suspected outliers at all wells for boron, calcium, fluoride, sulfate, and TDS, and at upgradient wells for chloride and pH. Both Tukey's Test and visual screening are used to identify potential outliers. When identified as outliers, values were flagged with "o" and excluded to reduce variation, better represent background conditions, and provide limits that are conservative from a regulatory perspective. Potential outliers that are identified by Tukey's test but are not greatly different from the rest of the data are not flagged. Also, outliers that are not identified as important by Tukey's test may be identified visually. As mentioned above, flagged data are displayed in a lighter font and as a disconnected symbol on the time series reports, as well as in a

lighter font on the accompanying data pages. A summary of Tukey's test results for Appendix III parameters was included with the September 2019 screening.

For constituents requiring intrawell prediction limits, the Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through May 2017 for upgradient wells MW-1, MW-2, MW-3, and MW-4 and historical data through October 2017 for downgradient wells MW-5, MW-6, MW-7, and MW-8 to compliance data through May 2019. When no statistically significant difference in medians between the two groups is found at a 99% confidence level, background data may be updated with compliance data. Statistically significant differences were found between the two groups for calcium in wells MW-1 and MW-8; fluoride in wells MW-2 and MW-4; and TDS in well MW-1.

Typically, when the test concludes that the medians of the two groups are significantly different, particularly in the downgradient wells, the background data are not updated to include the newer data but will be reconsidered in the future. For this site, all background data sets were updated through May 2019 and a summary of these results was included with the Mann Whitney test section in the September 2019 screening.

The Sen's Slope/Mann Kendall trend test was used to evaluate the entire record of data from upgradient wells for parameters utilizing interwell prediction limits. When statistically significant increasing trends are identified in upgradient wells, the earlier portion of data is deselected prior to construction of interwell statistical limits if the trending data would result in statistical limits that are not conservative from a regulatory perspective. No statistically significant trends were noted in upgradient wells and a summary of the results was included with the September 2019 screening.

### **Evaluation of Appendix III Parameters – February 2021**

Intrawell prediction limits were constructed for boron, calcium, fluoride, sulfate, and TDS using screened background data through May 2019 at each well. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

Intrawell limits constructed from carefully screened background data from within each well serve to provide statistical limits that are representative of the background data population, and that will rapidly identify a change in more recent compliance data from within a given well. The most recent sample from the same well is compared to its respective background. This statistical method removes the element of variation from across wells and eliminates the chance of mistaking natural spatial variation for a release

from the facility. Intrawell prediction limits combined with a 1-of-2 verification strategy were constructed for boron, calcium, fluoride, sulfate, and TDS (Figure D). Note that as a result of reporting limit changes for boron (from <0.1 mg/L to <0.1015 mg/L), the intrawell prediction limit for boron at well MW-2 slightly increased (from 0.04783 mg/L to 0.04892 mg/L), but the findings during this analysis were consistent with those from the Fall 2020 analysis. Background data for these limits are updated when a minimum of 4 compliance samples are available. This was last performed in September 2019 and the report was submitted at that time.

Interwell prediction limits combined with a 1-of-2 verification strategy were constructed for chloride and pH (Figure E). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are statistically significant increases (SSIs).

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified, and further research is required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If a resample falls within the statistical limit, the initial exceedance is considered to be a false positive result; therefore, no further action is necessary.

A summary of the prediction limits results may be found in the Prediction Limit Summary tables following this letter. No exceedances were identified for intrawell prediction limits but exceedances for interwell prediction limits were identified for the following well/constituent pairs:

Interwell:

- Chloride: MW-5, MW-7, and MW-8
- pH: MW-5, MW-7, and MW-8

Intrawell:

- No Exceedances

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure F). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the

site. The existence of similar trends in both upgradient and downgradient wells is an indication of natural variability in groundwater that is unrelated to practices at the site. A summary of the trend test results follows this letter. A statistically significant increasing trend was identified for pH in well MW-8, and no other trends were noted.

### **Evaluation of Appendix IV Parameters – February 2021**

Data from all wells for Appendix IV parameters were assessed for outliers during previous analyses. A previously flagged outlier of 0.00473 mg/L for cadmium at upgradient well MW-3 was unflagged as it appears to represent natural groundwater concentrations. Additionally, the second highest value of 0.00885 mg/L for cadmium at this well was flagged because the value did not appear to represent the population. A summary of flagged outliers follows this report (Figure C).

In accordance with Alabama Department of Environmental Management, the Groundwater Protections Standards (GWPS) utilized during the 2019 2<sup>nd</sup> semi-annual report were used in the confidence interval analysis for this 2021 1<sup>st</sup> semi-annual report. The GWPS will be updated during the 2021 2<sup>nd</sup> semi-annual statistical analysis. The methodology used to create these GWPS is described below.

First, background limits were determined using tolerance limits constructed from pooled upgradient well data. The tolerance limits contain a known fraction (coverage) of the background population with a known level of confidence. When data followed a normal or transformed-normal distribution, parametric tolerance limits were used to calculate background limits for Appendix IV parameters using pooled upgradient well data through October 2019 with a target of 95% confidence and 95% coverage (Figure G).

Nonparametric tolerance limits, which use the highest value in background as the statistical limit, were constructed when data did not follow a normal or transformed-normal distribution or when there were greater than 50% non-detects. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. These background limits were then compared to the Maximum Contaminant Levels (MCLs) for each parameter, and the higher of the two was used as the GWPS (Figure H) in the confidence interval comparisons described below. Exceptions are noted in Figure H for beryllium and cadmium. For these two parameters, the MCL's were used as the GWPS rather than the higher background UTLs to maintain the more conservative standard. Note that none of the parametric tolerance limits resulted in higher limits than the established MCLs or CCR-Rule Specified Limits. In future UTL calculations, nonparametric tolerance limits will be used exclusively, as requested by ADEM, to eliminate variation among upgradient well data.



Confidence intervals were then constructed on downgradient wells using a maximum of the most recent 8 samples through February 2021 for each of the Appendix IV parameters. These intervals were constructed as either parametric or nonparametric confidence intervals depending on the data distribution and percentage of non-detects. As mentioned above, well/constituent pairs with 100% non-detects for the most recent 8 samples did not require statistics; therefore, they were deselected prior to construction of confidence intervals. A list of those deselected well/constituent pairs follows this report. The decision logic, with respect to the use of parametric or nonparametric confidence intervals, is similar to that used to construct tolerance limits as discussed above. Each confidence interval was compared with the corresponding GWPS. Only when the entire confidence interval is above the GWPS is the well/constituent pair considered to exceed its respective standard. Note the following reporting limits changed from the previous analysis to this analysis:

- Antimony: <0.003 mg/L to <0.001015 mg/L
- Beryllium: <0.003 mg/L to <0.001015 mg/L
- Cadmium: <0.001 mg/L to <0.000203 mg/L
- Chromium: <0.01 mg/L to <0.001015 mg/L
- Cobalt: <0.005 mg/L to <0.000203 mg/L
- Lead: <0.005 mg/L to <0.000203 mg/L
- Molybdenum: <0.01 mg/L to <0.000203 mg/L
- Selenium: <0.01 mg/L to <0.001015 mg/L
- Thallium: <0.001 mg/L to <0.000203 mg/L

While this resulted in slight changes to the upper and lower confidence limits in some cases, the confidence interval findings were consistent with those from the Fall 2020 analysis. Both a tabular summary and graphical presentation of the confidence interval results follow this letter (Figure I). No exceedances were noted for any of the well/constituent pairs.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Gorgas CCR Landfill. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew Collins  
Project Manager



Kristina Rayner  
Groundwater Statistician

# 100% Non-Detects: Appendix IV Downgradient

Analysis Run 5/19/2021 7:10 PM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Antimony (mg/L)  
MW-5, MW-6, MW-7, MW-8

Beryllium (mg/L)  
MW-5, MW-7, MW-8

Cadmium (mg/L)  
MW-5, MW-7, MW-8

Chromium (mg/L)  
MW-5, MW-6, MW-7, MW-8

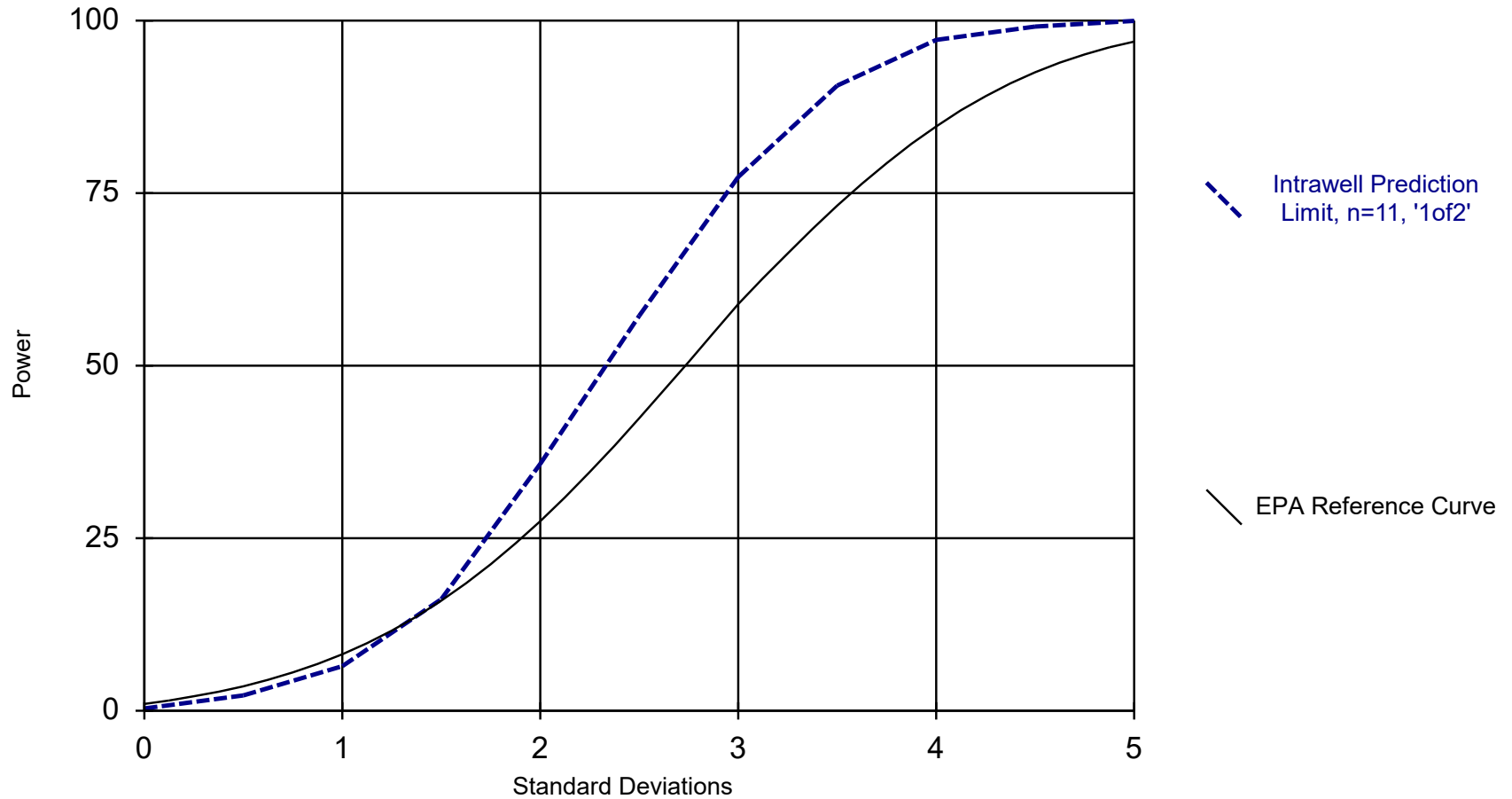
Lead (mg/L)  
MW-5, MW-6, MW-7, MW-8

Mercury (mg/L)  
MW-5, MW-6, MW-7, MW-8

Selenium (mg/L)  
MW-6, MW-7, MW-8

Thallium (mg/L)  
MW-5, MW-6, MW-7, MW-8

### Intrawell Power Curve

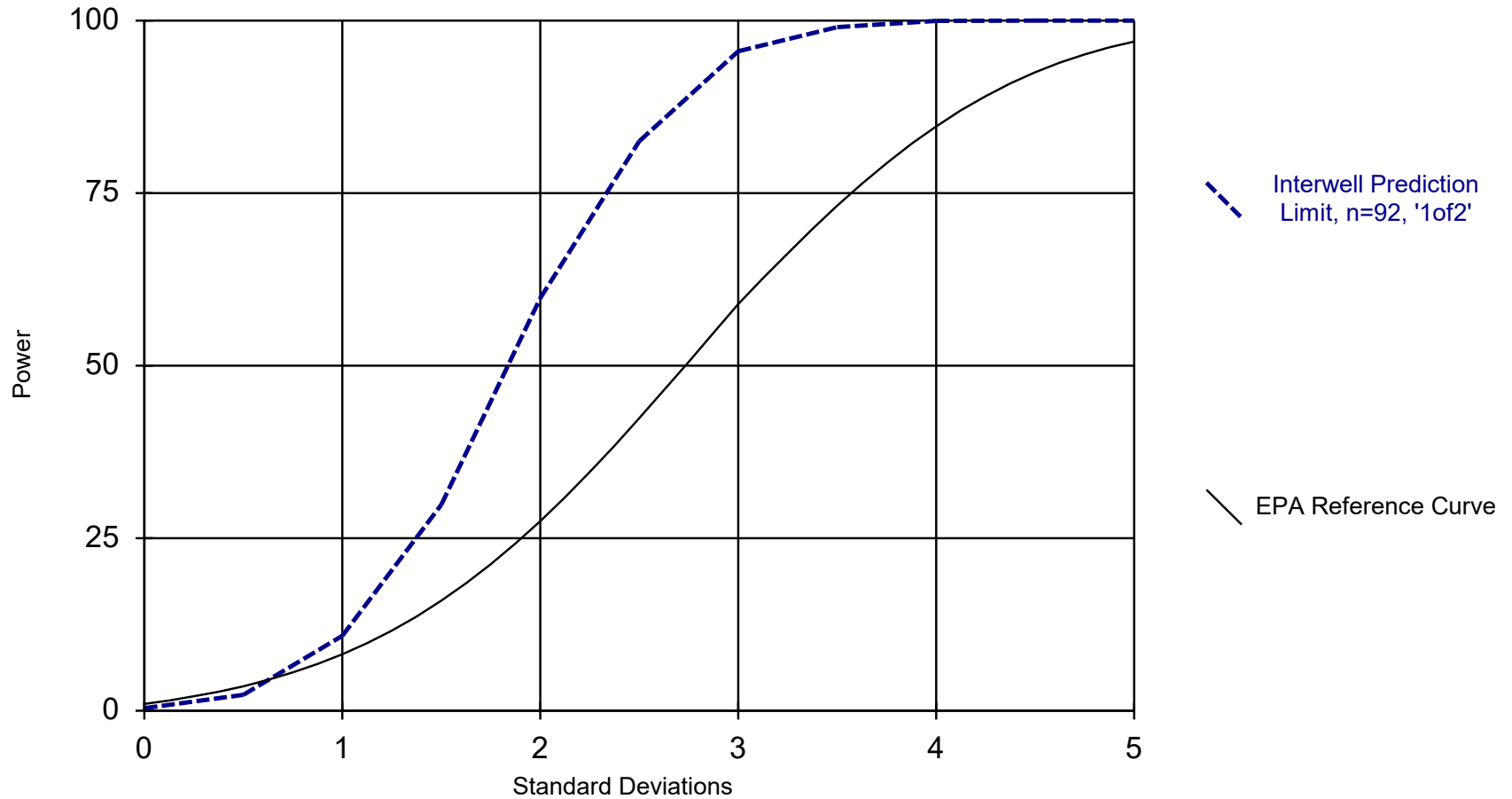


Kappa = 2.3, based on 4 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 5/20/2021 8:44 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Interwell Power Curve



Kappa = 1.756, based on 4 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 5/20/2021 8:44 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

# Appendix III Intrawell Prediction Limits - All Results (No Significant)

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 5:35 PM

| Constituent                         | Well | Upper Lim. | Lower Lim. | Date      | Observ.   | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj.      | Transform | Alpha    | Method                      |
|-------------------------------------|------|------------|------------|-----------|-----------|------|------|---------|-----------|-------|--------------|-----------|----------|-----------------------------|
| Boron, total (mg/L)                 | MW-1 | 0.05       | n/a        | 2/22/2021 | 0.0307J   | No   | 18   | n/a     | n/a       | 16.67 | n/a          | n/a       | 0.005373 | NP Intra (normality) 1 of 2 |
| Boron, total (mg/L)                 | MW-2 | 0.04892    | n/a        | 2/22/2021 | 0.05075ND | No   | 18   | 0.1754  | 0.02252   | 11.11 | None         | sqrt(x)   | 0.00188  | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-3 | 0.05843    | n/a        | 2/22/2021 | 0.05075ND | No   | 18   | 0.0423  | 0.00794   | 16.67 | Kaplan-Meier | No        | 0.00188  | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-4 | 0.1015     | n/a        | 2/22/2021 | 0.0397J   | No   | 18   | n/a     | n/a       | 5.556 | n/a          | n/a       | 0.005373 | NP Intra (normality) 1 of 2 |
| Boron, total (mg/L)                 | MW-5 | 0.1015     | n/a        | 2/23/2021 | 0.0369J   | No   | 12   | n/a     | n/a       | 8.333 | n/a          | n/a       | 0.01077  | NP Intra (normality) 1 of 2 |
| Boron, total (mg/L)                 | MW-6 | 0.09671    | n/a        | 2/23/2021 | 0.0866J   | No   | 12   | 0.07943 | 0.007739  | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-7 | 0.08083    | n/a        | 2/23/2021 | 0.0803J   | No   | 11   | 0.07139 | 0.004105  | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-8 | 0.0831     | n/a        | 2/23/2021 | 0.0731J   | No   | 12   | n/a     | n/a       | 0     | n/a          | n/a       | 0.01077  | NP Intra (normality) 1 of 2 |
| Calcium, total (mg/L)               | MW-1 | 243        | n/a        | 2/22/2021 | 151       | No   | 18   | n/a     | n/a       | 0     | n/a          | n/a       | 0.005373 | NP Intra (normality) 1 of 2 |
| Calcium, total (mg/L)               | MW-2 | 218.6      | n/a        | 2/22/2021 | 178       | No   | 18   | 173.9   | 22.02     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-3 | 416.4      | n/a        | 2/22/2021 | 312       | No   | 18   | 301.6   | 56.48     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-4 | 388.7      | n/a        | 2/22/2021 | 271       | No   | 18   | 311.2   | 38.16     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-5 | 466.9      | n/a        | 2/23/2021 | 394       | No   | 12   | 382.1   | 38.01     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-6 | 471.6      | n/a        | 2/23/2021 | 428       | No   | 12   | 390.4   | 36.38     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-7 | 346.8      | n/a        | 2/23/2021 | 292       | No   | 12   | 2.6e7   | 6944823   | 0     | None         | x^3       | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-8 | 341.4      | n/a        | 2/23/2021 | 306       | No   | 12   | 304.5   | 16.53     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-1 | 0.1975     | n/a        | 2/22/2021 | 0.082J    | No   | 19   | 0.1261  | 0.03556   | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-2 | 0.2572     | n/a        | 2/22/2021 | 0.209     | No   | 19   | 0.1404  | 0.05808   | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-3 | 0.6475     | n/a        | 2/22/2021 | 0.246     | No   | 19   | -1.063  | 0.3126    | 0     | None         | ln(x)     | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-4 | 0.4323     | n/a        | 2/22/2021 | 0.357     | No   | 19   | 0.1114  | 0.03754   | 0     | None         | x^2       | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-5 | 0.4265     | n/a        | 2/23/2021 | 0.287     | No   | 13   | 0.3334  | 0.04245   | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-6 | 0.1565     | n/a        | 2/23/2021 | 0.139     | No   | 13   | 0.1398  | 0.007628  | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-7 | 0.2139     | n/a        | 2/23/2021 | 0.2       | No   | 13   | 0.1855  | 0.01295   | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-8 | 0.2342     | n/a        | 2/23/2021 | 0.208     | No   | 13   | 0.2142  | 0.009112  | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-1 | 2100       | n/a        | 2/22/2021 | 1400      | No   | 18   | n/a     | n/a       | 0     | n/a          | n/a       | 0.005373 | NP Intra (normality) 1 of 2 |
| Sulfate as SO4 (mg/L)               | MW-2 | 1260       | n/a        | 2/22/2021 | 864       | No   | 18   | 1003    | 126.2     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-3 | 3202       | n/a        | 2/22/2021 | 3040      | No   | 18   | 2431    | 379.6     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-4 | 3041       | n/a        | 2/22/2021 | 2040      | No   | 18   | 2566    | 233.5     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-5 | 2558       | n/a        | 2/23/2021 | 2210      | No   | 12   | 2339    | 98.21     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-6 | 2232       | n/a        | 2/23/2021 | 2010      | No   | 12   | 1983    | 111.5     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-7 | 1613       | n/a        | 2/23/2021 | 1320      | No   | 11   | 1306    | 133.5     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-8 | 2100       | n/a        | 2/23/2021 | 1420      | No   | 12   | n/a     | n/a       | 0     | n/a          | n/a       | 0.01077  | NP Intra (normality) 1 of 2 |
| Total Dissolved Solids [TDS] (mg/L) | MW-1 | 2544       | n/a        | 2/22/2021 | 2230      | No   | 18   | 2183    | 178       | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-2 | 2052       | n/a        | 2/22/2021 | 1620      | No   | 18   | 1640    | 202.8     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-3 | 4938       | n/a        | 2/22/2021 | 4670      | No   | 18   | 3661    | 628.6     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-4 | 4601       | n/a        | 2/22/2021 | 3190      | No   | 18   | 1.6e7   | 2719774   | 0     | None         | x^2       | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-5 | 4190       | n/a        | 2/23/2021 | 3740      | No   | 12   | 3846    | 154.3     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-6 | 3448       | n/a        | 2/23/2021 | 3230      | No   | 12   | 3283    | 74.36     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-7 | 2647       | n/a        | 2/23/2021 | 2320      | No   | 12   | 6.3e16  | 3.0e16    | 0     | None         | x^5       | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-8 | 2862       | n/a        | 2/23/2021 | 2550      | No   | 12   | 2593    | 120.2     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |

# Appendix III Interwell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 5:30 PM

| Constituent            | Well | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha     | Method                      |
|------------------------|------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|-----------|-----------------------------|
| Chloride, Total (mg/L) | MW-5 | 3.82       | n/a        | 2/23/2021 | 6.19    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-7 | 3.82       | n/a        | 2/23/2021 | 7.85    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-8 | 3.82       | n/a        | 2/23/2021 | 17.9    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| pH, Field (SU)         | MW-5 | 6.35       | 3.77       | 2/23/2021 | 6.47    | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-7 | 6.35       | 3.77       | 2/23/2021 | 6.7     | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-8 | 6.35       | 3.77       | 2/23/2021 | 6.73    | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |

# Appendix III Interwell Prediction Limits - All Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 5:30 PM

| Constituent            | Well | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha     | Method                      |
|------------------------|------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|-----------|-----------------------------|
| Chloride, Total (mg/L) | MW-5 | 3.82       | n/a        | 2/23/2021 | 6.19    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-6 | 3.82       | n/a        | 2/23/2021 | 3.47    | No   | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-7 | 3.82       | n/a        | 2/23/2021 | 7.85    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-8 | 3.82       | n/a        | 2/23/2021 | 17.9    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| pH, Field (SU)         | MW-5 | 6.35       | 3.77       | 2/23/2021 | 6.47    | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-6 | 6.35       | 3.77       | 2/23/2021 | 6.13    | No   | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-7 | 6.35       | 3.77       | 2/23/2021 | 6.7     | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-8 | 6.35       | 3.77       | 2/23/2021 | 6.73    | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |

# Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 6:43 PM

| Constituent    | Well | Slope   | Calc. | Critical | Sig. | N  | %NDs | Normality | Xform | Alpha | Method |
|----------------|------|---------|-------|----------|------|----|------|-----------|-------|-------|--------|
| pH, Field (SU) | MW-8 | 0.05948 | 96    | 63       | Yes  | 17 | 0    | n/a       | n/a   | 0.01  | NP     |



# Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 6:43 PM

| Constituent            | Well        | Slope          | Calc.     | Critical  | Sig.       | N         | %NDs     | Normality  | Xform      | Alpha       | Method    |
|------------------------|-------------|----------------|-----------|-----------|------------|-----------|----------|------------|------------|-------------|-----------|
| Chloride, Total (mg/L) | MW-1 (bg)   | -0.01333       | -10       | -98       | No         | 23        | 0        | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-2 (bg)   | 0.01347        | 2         | 98        | No         | 23        | 0        | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-3 (bg)   | 0.04257        | 44        | 98        | No         | 23        | 8.696    | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-4 (bg)   | -0.06663       | -59       | -98       | No         | 23        | 4.348    | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-5        | -0.1427        | -23       | -58       | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-7        | -6.069         | -21       | -58       | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-8        | -32.54         | -46       | -58       | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-1 (bg)   | -0.01537       | -79       | -98       | No         | 23        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-2 (bg)   | 0.03796        | 83        | 98        | No         | 23        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-3 (bg)   | -0.06383       | -38       | -105      | No         | 24        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-4 (bg)   | 0.0165         | 81        | 105       | No         | 24        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-5        | 0.01646        | 44        | 63        | No         | 17        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-7        | 0              | -8        | -63       | No         | 17        | 0        | n/a        | n/a        | 0.01        | NP        |
| <b>pH, Field (SU)</b>  | <b>MW-8</b> | <b>0.05948</b> | <b>96</b> | <b>63</b> | <b>Yes</b> | <b>17</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |

# Upper Tolerance Limits - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 7/22/2020, 10:42 AM

| Constituent                       | Upper Lim. | Lower Lim. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha   | Method              |
|-----------------------------------|------------|------------|------|---------|-----------|-------|---------|-----------|---------|---------------------|
| Antimony (mg/L)                   | 0.003      | n/a        | 80   | n/a     | n/a       | 92.5  | n/a     | n/a       | 0.01652 | NP Inter(NDs)       |
| Arsenic (mg/L)                    | 0.005      | n/a        | 80   | n/a     | n/a       | 91.25 | n/a     | n/a       | 0.01652 | NP Inter(NDs)       |
| Barium (mg/L)                     | 0.01527    | n/a        | 80   | -4.517  | 0.1705    | 0     | None    | ln(x)     | 0.05    | Inter               |
| Beryllium (mg/L)                  | 0.0121     | n/a        | 78   | n/a     | n/a       | 82.05 | n/a     | n/a       | 0.0183  | NP Inter(NDs)       |
| Cadmium (mg/L)                    | 0.00598    | n/a        | 79   | n/a     | n/a       | 49.37 | n/a     | n/a       | 0.01738 | 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(NDs)       |
| Thallium (mg/L)                   | 0.001      | n/a        | 80   | n/a     | n/a       | 96.25 | n/a     | n/a       | 0.01652 | NP Inter(NDs)       |

| <b>GORGAS CCR LANDFILL GWPS</b> |              |                   |             |
|---------------------------------|--------------|-------------------|-------------|
| <b>Analyte</b>                  | <b>Units</b> | <b>Background</b> | <b>GWPS</b> |
| Antimony                        | mg/L         | 0.003             | 0.006       |
| Arsenic                         | mg/L         | 0.005             | 0.01        |
| Barium                          | mg/L         | 0.01527           | 2           |
| Beryllium                       | mg/L         | 0.0121            | 0.004       |
| Cadmium                         | mg/L         | 0.00598           | 0.005       |
| Chromium                        | mg/L         | 0.0105            | 0.1         |
| Cobalt                          | mg/L         | 1.07              | 1.07        |
| Combined Radium-226/228         | pCi/L        | 1.098             | 5           |
| Fluoride                        | mg/L         | 0.5302            | 4           |
| Lead                            | mg/L         | 0.00692           | 0.015       |
| Lithium                         | mg/L         | 0.419             | 0.419       |
| Mercury                         | mg/L         | 0.0005            | 0.002       |
| Molybdenum                      | mg/L         | 0.01              | 0.1         |
| Selenium                        | mg/L         | 0.0158            | 0.05        |
| Thallium                        | mg/L         | 0.001             | 0.002       |

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.
4. GWPS established during second semi-annual sampling event in 2019.

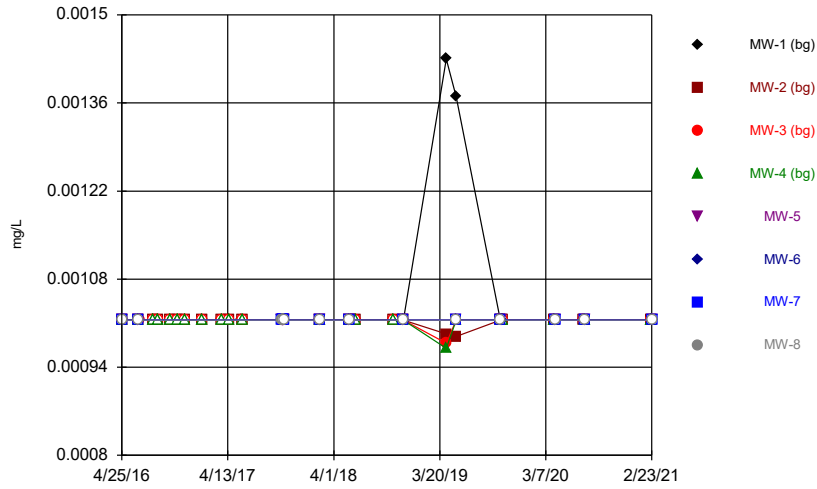
# Confidence Intervals - All Results (No Significant)

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 7:14 PM

| Constituent                       | Well | Upper Lim. | Lower Lim. | Compliance | Sig. | N | Mean      | Std. Dev.  | %NDs | ND Adj.      | Transform | Alpha | Method         |
|-----------------------------------|------|------------|------------|------------|------|---|-----------|------------|------|--------------|-----------|-------|----------------|
| Arsenic (mg/L)                    | MW-5 | 0.005      | 0.000309   | 0.01       | No   | 8 | 0.003559  | 0.002028   | 62.5 | None         | No        | 0.004 | NP (NDs)       |
| Arsenic (mg/L)                    | MW-6 | 0.005742   | 0.00345    | 0.01       | No   | 8 | 0.004596  | 0.001081   | 0    | None         | No        | 0.01  | Param.         |
| Arsenic (mg/L)                    | MW-7 | 0.001492   | 0.001323   | 0.01       | No   | 8 | 0.001408  | 0.00007978 | 0    | None         | No        | 0.01  | Param.         |
| Arsenic (mg/L)                    | MW-8 | 0.001915   | 0.001145   | 0.01       | No   | 8 | 0.00153   | 0.0003631  | 0    | None         | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-5 | 0.01326    | 0.01049    | 2          | No   | 8 | 0.01188   | 0.001309   | 0    | None         | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-6 | 0.01519    | 0.01261    | 2          | No   | 8 | 0.0139    | 0.001221   | 0    | None         | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-7 | 0.01447    | 0.01163    | 2          | No   | 8 | 0.01305   | 0.001338   | 0    | None         | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-8 | 0.01418    | 0.01245    | 2          | No   | 8 | 0.01331   | 0.0008167  | 0    | None         | No        | 0.01  | Param.         |
| Beryllium (mg/L)                  | MW-6 | 0.001015   | 0.000677   | 0.004      | No   | 8 | 0.0009444 | 0.0001341  | 75   | None         | No        | 0.004 | NP (NDs)       |
| Cadmium (mg/L)                    | MW-6 | 0.00204    | 0.000203   | 0.005      | No   | 8 | 0.0005145 | 0.0006576  | 75   | None         | No        | 0.004 | NP (NDs)       |
| Cobalt (mg/L)                     | MW-5 | 0.005      | 0.00102    | 1.07       | No   | 8 | 0.004502  | 0.001407   | 87.5 | None         | No        | 0.004 | NP (NDs)       |
| Cobalt (mg/L)                     | MW-6 | 0.2328     | 0.02697    | 1.07       | No   | 8 | 0.1324    | 0.16       | 0    | None         | ln(x)     | 0.01  | Param.         |
| Cobalt (mg/L)                     | MW-7 | 0.005248   | 0.002382   | 1.07       | No   | 8 | 0.004111  | 0.001367   | 25   | Kaplan-Meier | No        | 0.01  | Param.         |
| Cobalt (mg/L)                     | MW-8 | 0.008443   | 0.004917   | 1.07       | No   | 8 | 0.00668   | 0.001663   | 0    | None         | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-5 | 0.84       | 0.5025     | 5          | No   | 8 | 0.6713    | 0.1592     | 0    | None         | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-6 | 1.552      | 0.5018     | 5          | No   | 8 | 1.027     | 0.4952     | 0    | None         | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-7 | 0.7035     | 0.1893     | 5          | No   | 8 | 0.4464    | 0.2426     | 0    | None         | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-8 | 0.9437     | 0.2933     | 5          | No   | 8 | 0.6083    | 0.349      | 0    | None         | sqrt(x)   | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-5 | 0.3322     | 0.2361     | 4          | No   | 8 | 0.2841    | 0.04534    | 0    | None         | No        | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-6 | 0.1402     | 0.1063     | 4          | No   | 8 | 0.1201    | 0.02945    | 12.5 | None         | x^4       | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-7 | 0.1966     | 0.1654     | 4          | No   | 8 | 0.181     | 0.01474    | 0    | None         | No        | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-8 | 0.21       | 0.189      | 4          | No   | 8 | 0.2009    | 0.009433   | 0    | None         | No        | 0.004 | NP (normality) |
| Lithium (mg/L)                    | MW-5 | 0.133      | 0.0981     | 0.419      | No   | 8 | 0.1118    | 0.01438    | 0    | None         | No        | 0.004 | NP (normality) |
| Lithium (mg/L)                    | MW-6 | 0.2659     | 0.1688     | 0.419      | No   | 8 | 0.2101    | 0.07407    | 0    | None         | x^3       | 0.01  | Param.         |
| Lithium (mg/L)                    | MW-7 | 0.131      | 0.103      | 0.419      | No   | 8 | 0.1236    | 0.009899   | 0    | None         | No        | 0.004 | NP (normality) |
| Lithium (mg/L)                    | MW-8 | 0.1854     | 0.1516     | 0.419      | No   | 8 | 0.1685    | 0.01594    | 0    | None         | No        | 0.01  | Param.         |
| Molybdenum (mg/L)                 | MW-5 | 0.01       | 0.0014     | 0.1        | No   | 8 | 0.008925  | 0.003041   | 87.5 | None         | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-6 | 0.01       | 0.000285   | 0.1        | No   | 8 | 0.008786  | 0.003435   | 87.5 | None         | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-7 | 0.01       | 0.00107    | 0.1        | No   | 8 | 0.008884  | 0.003157   | 87.5 | None         | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-8 | 0.0129     | 0.01       | 0.1        | No   | 8 | 0.01036   | 0.001025   | 87.5 | None         | No        | 0.004 | NP (NDs)       |
| Selenium (mg/L)                   | MW-5 | 0.01       | 0.00233    | 0.05       | No   | 8 | 0.009041  | 0.002712   | 87.5 | None         | No        | 0.004 | NP (NDs)       |

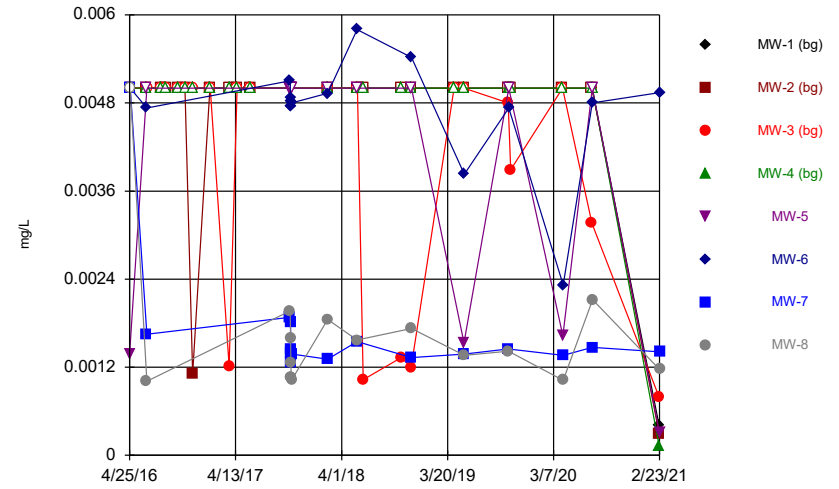
FIGURE A.

### Time Series



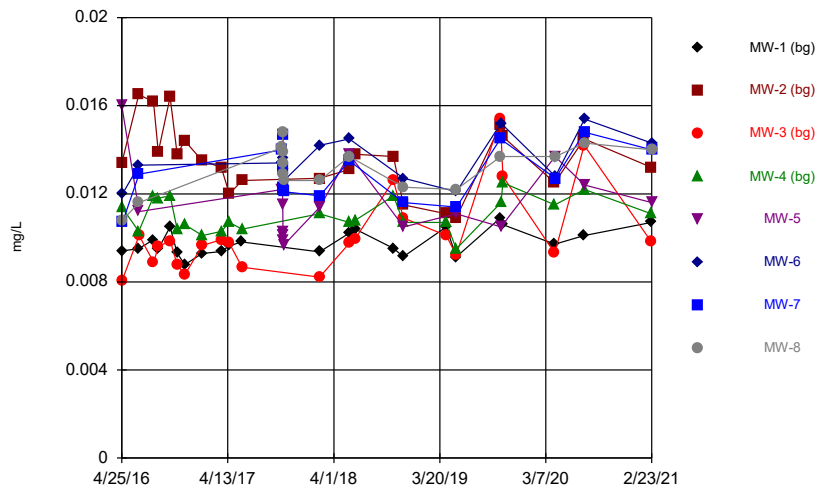
Constituent: Antimony Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



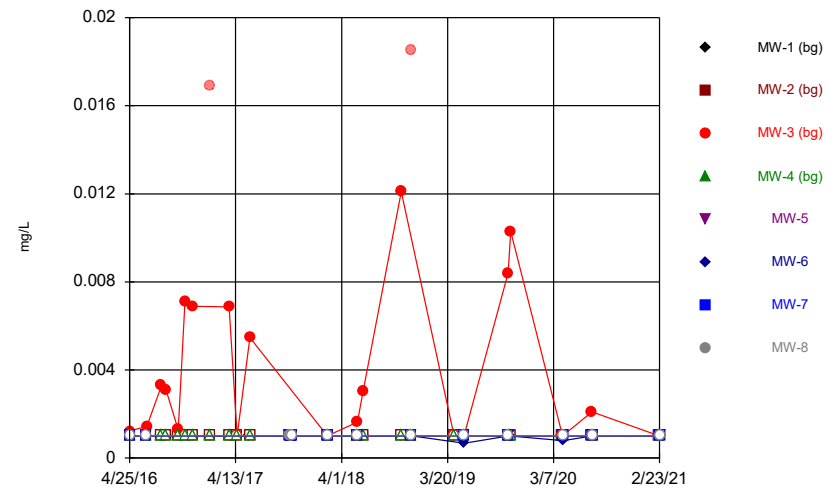
Constituent: Arsenic Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



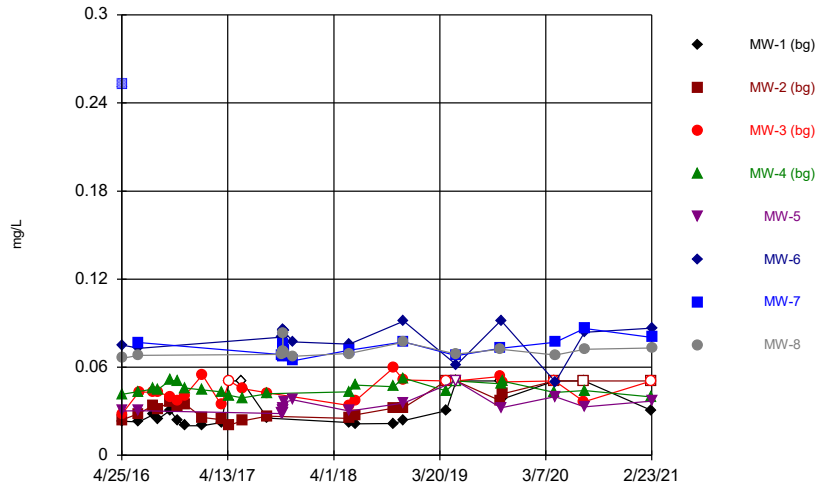
Constituent: Barium Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



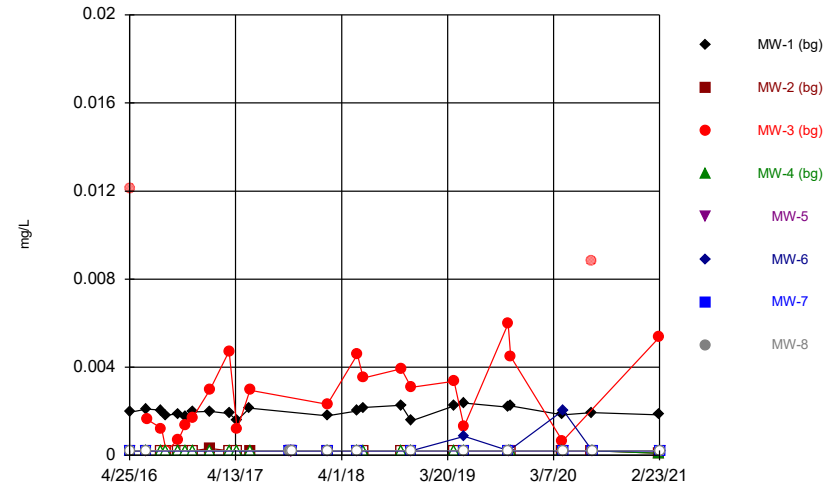
Constituent: Beryllium Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



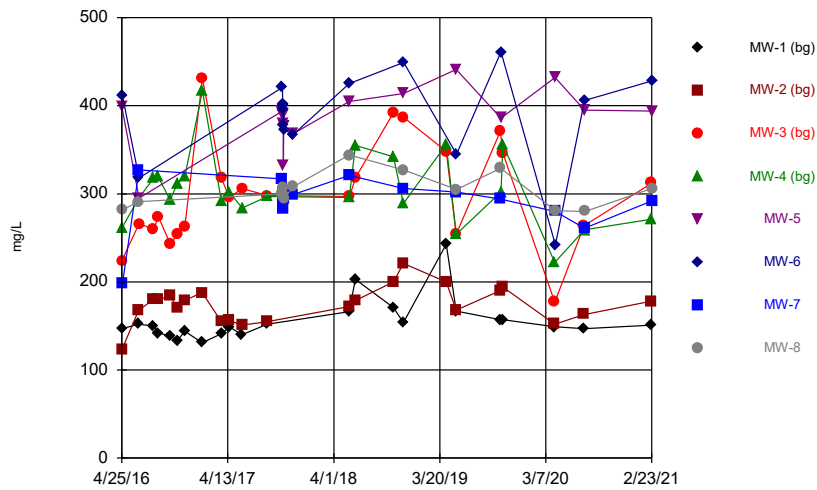
Constituent: Boron, total Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



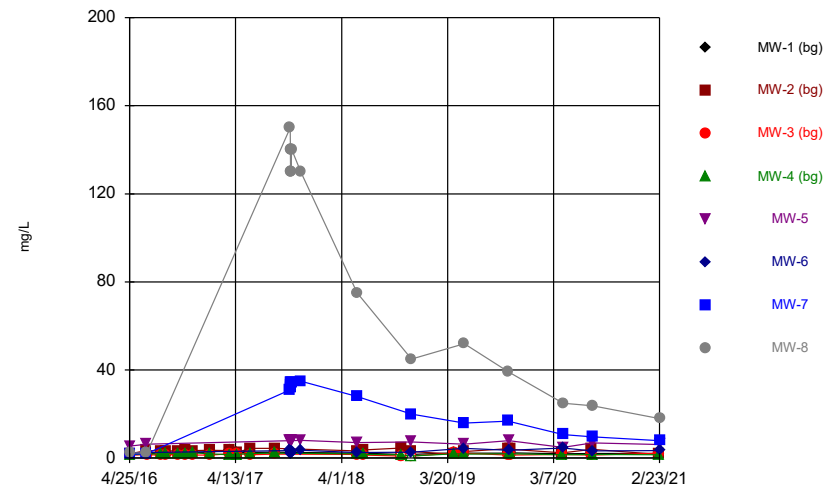
Constituent: Cadmium Analysis Run 5/19/2021 5:19 PM  
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Time Series



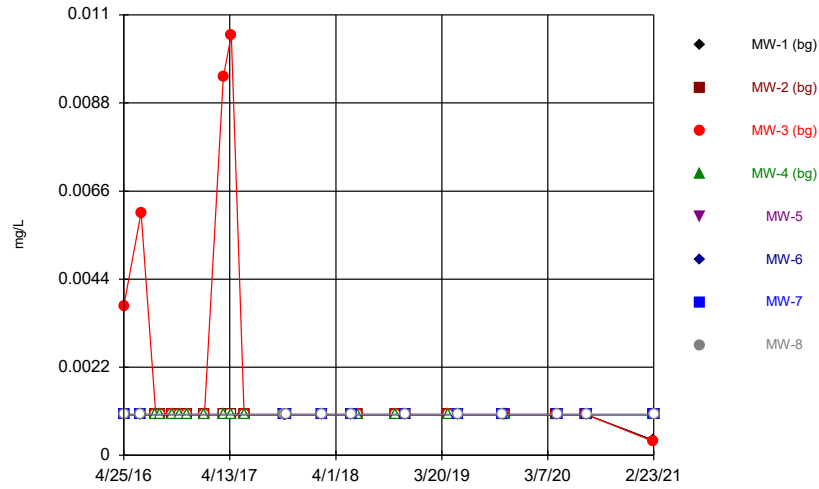
Constituent: Calcium, total Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



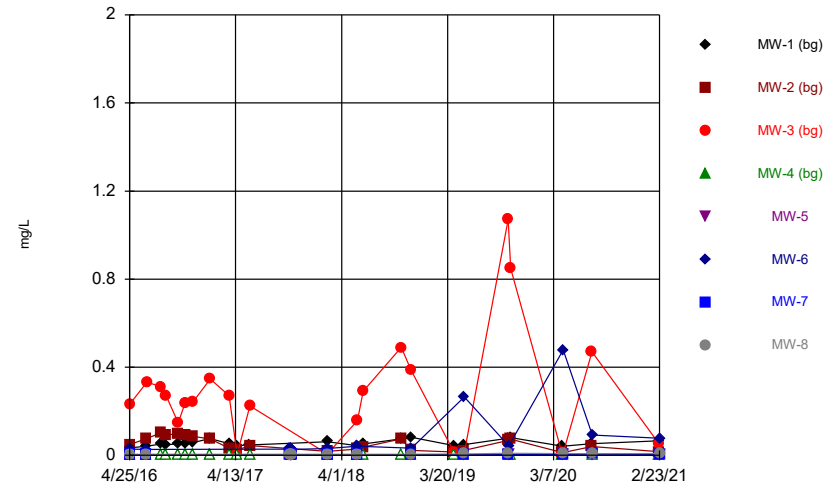
Constituent: Chloride, Total Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



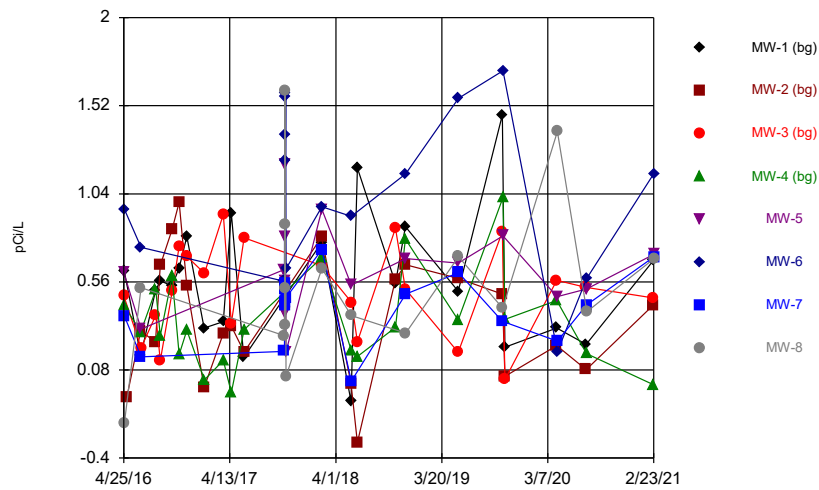
Constituent: Chromium Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



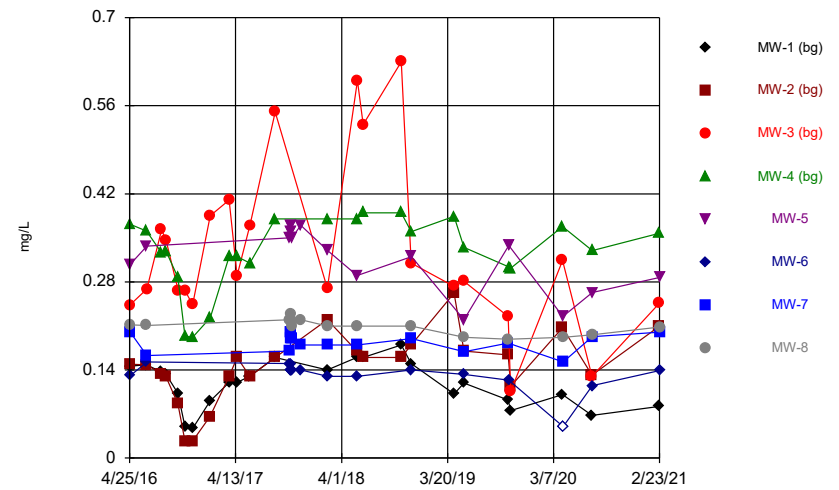
Constituent: Cobalt Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

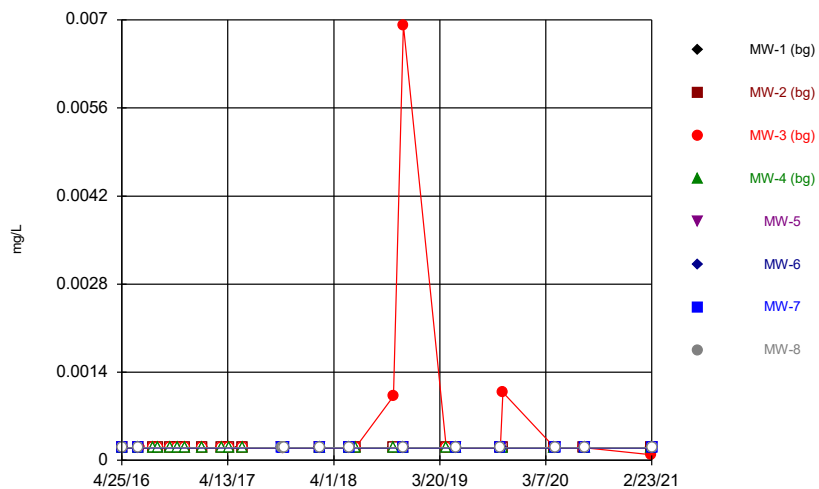
Time Series



Constituent: Fluoride, total Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

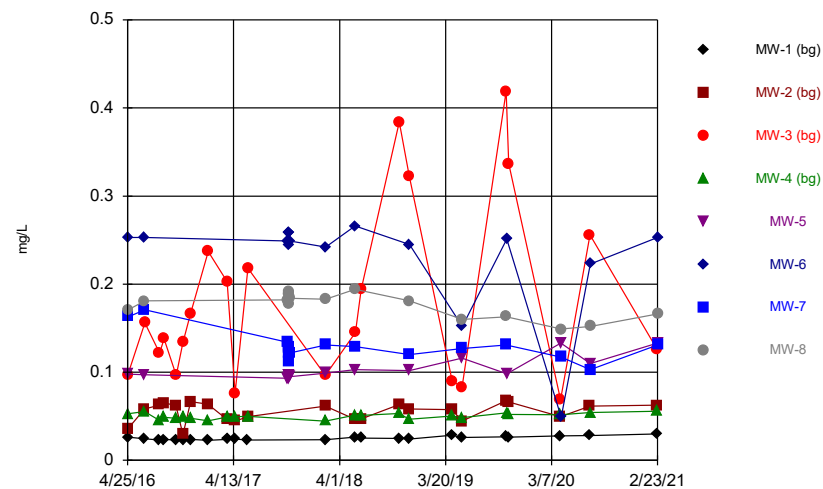


### Time Series



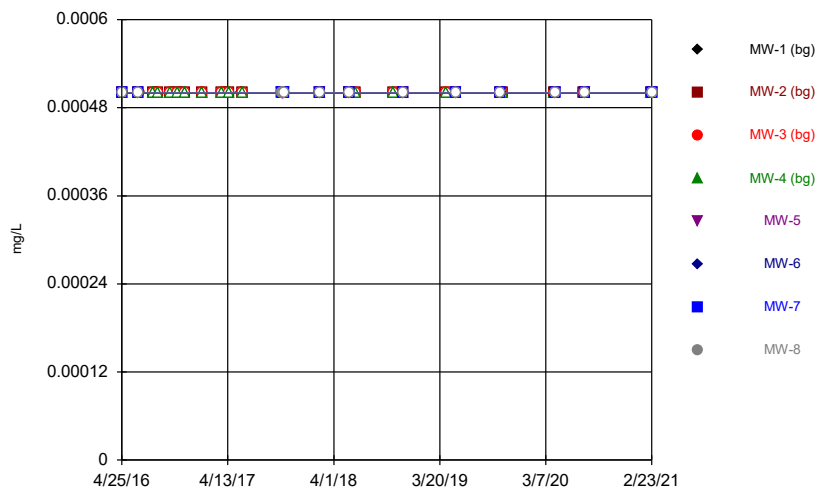
Constituent: Lead Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



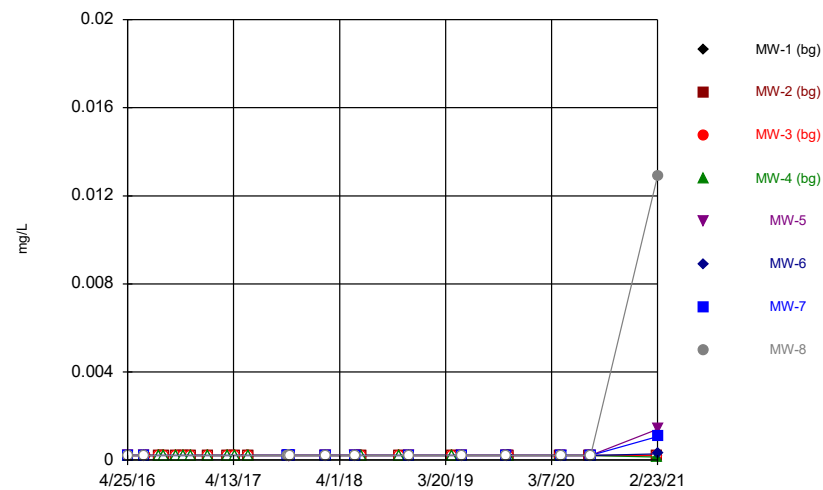
Constituent: Lithium Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



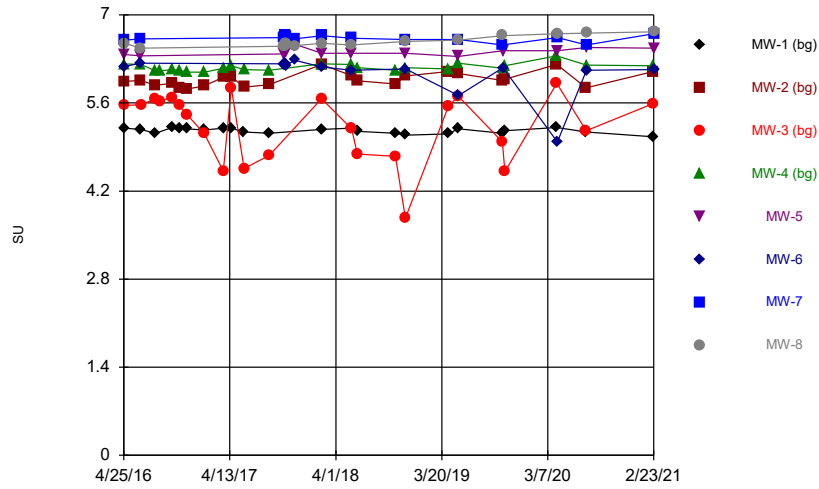
Constituent: Mercury Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



Constituent: Molybdenum Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

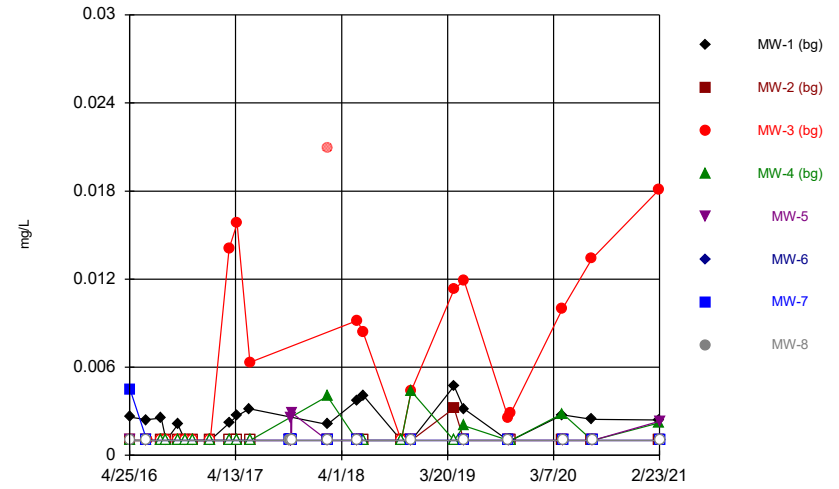
### Time Series



Constituent: pH, Field Analysis Run 5/19/2021 5:19 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

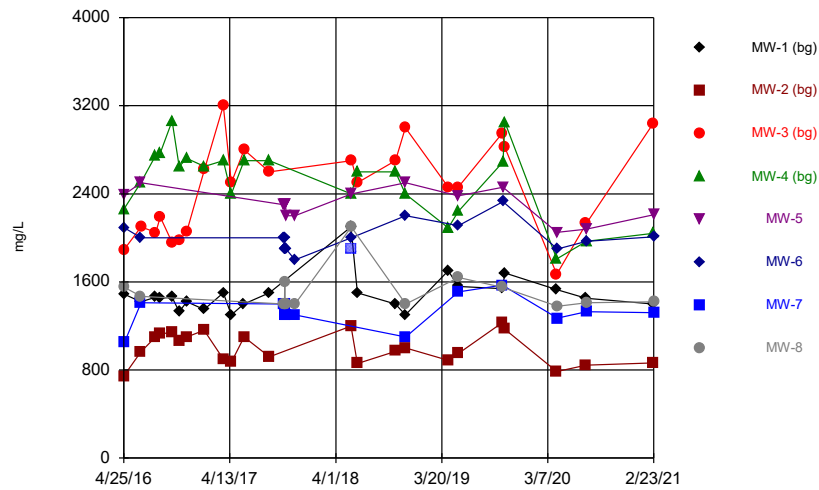
Hollow symbols indicate censored values.

### Time Series



Constituent: Selenium Analysis Run 5/19/2021 5:19 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

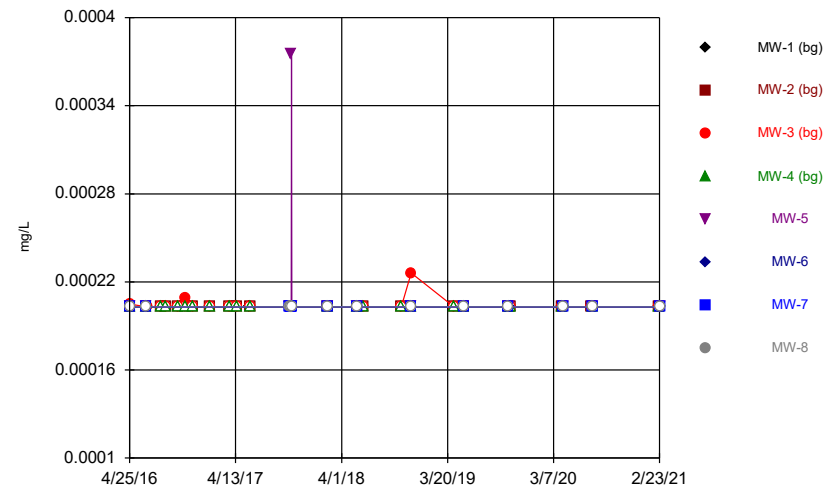
### Time Series



Constituent: Sulfate as SO4 Analysis Run 5/19/2021 5:19 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

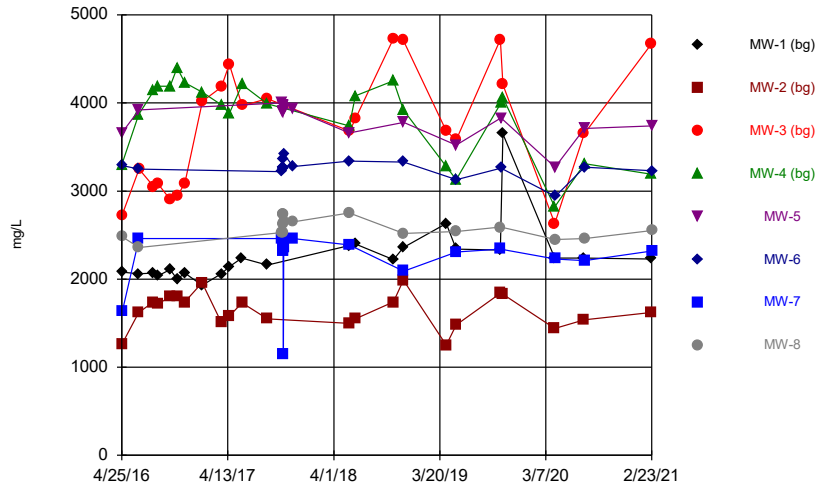
Hollow symbols indicate censored values.

### Time Series



Constituent: Thallium Analysis Run 5/19/2021 5:19 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 5/19/2021 5:19 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

# Time Series

Constituent: Antimony (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)   | MW-2 (bg)    | MW-3 (bg)    | MW-4 (bg)   | MW-5      | MW-6      | MW-7      | MW-8      |
|------------|-------------|--------------|--------------|-------------|-----------|-----------|-----------|-----------|
| 4/25/2016  |             | <0.001015    | <0.001015    | <0.001015   | <0.001015 |           |           |           |
| 4/26/2016  | <0.001015   |              |              |             |           |           |           |           |
| 4/27/2016  |             |              |              |             |           | <0.001015 | <0.001015 | <0.001015 |
| 6/20/2016  | <0.001015   | <0.001015    |              | <0.001015   |           |           |           |           |
| 6/21/2016  |             |              |              |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 6/22/2016  |             |              | <0.001015    |             |           |           |           |           |
| 8/8/2016   | <0.001015   | <0.001015    |              |             |           |           |           |           |
| 8/9/2016   |             |              | <0.001015    | <0.001015   |           |           |           |           |
| 8/24/2016  | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 10/3/2016  | <0.001015   | <0.001015    |              | <0.001015   |           |           |           |           |
| 10/4/2016  |             |              | <0.001015    |             |           |           |           |           |
| 10/26/2016 | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 11/21/2016 | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 1/17/2017  | <0.001015   | <0.001015    |              |             |           |           |           |           |
| 1/18/2017  |             |              | <0.001015    | <0.001015   |           |           |           |           |
| 3/22/2017  | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 4/18/2017  | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 5/30/2017  | <0.001015   |              |              |             |           |           |           |           |
| 5/31/2017  |             | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 10/12/2017 |             |              |              |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 10/13/2017 |             |              |              |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 10/14/2017 |             |              |              |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 10/15/2017 |             |              |              |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 10/16/2017 |             |              |              |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 10/17/2017 |             |              |              |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 2/13/2018  | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 2/14/2018  |             |              |              |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 5/22/2018  | <0.001015   | <0.001015    |              |             |           |           |           |           |
| 5/23/2018  |             |              |              | <0.001015   | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 5/24/2018  |             |              | <0.001015    |             |           |           |           |           |
| 6/12/2018  | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 10/17/2018 | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 11/19/2018 | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 11/20/2018 |             |              |              |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 4/10/2019  | 0.00143 (J) | 0.000993 (J) | 0.000978 (J) | 0.00097 (J) |           |           |           |           |
| 5/14/2019  | 0.00137 (J) | 0.000989 (J) | <0.001015    | <0.001015   | <0.001015 |           |           |           |
| 5/15/2019  |             |              |              |             |           | <0.001015 | <0.001015 | <0.001015 |
| 10/8/2019  | <0.001015   | <0.001015    | <0.001015    |             |           |           | <0.001015 |           |
| 10/9/2019  |             |              |              |             |           |           |           | <0.001015 |
| 10/10/2019 |             |              |              | <0.001015   | <0.001015 | <0.001015 |           |           |
| 10/16/2019 | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 4/6/2020   | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 4/7/2020   |             |              |              |             | <0.001015 |           |           |           |
| 4/8/2020   |             |              |              |             |           | <0.001015 | <0.001015 | <0.001015 |
| 7/13/2020  | <0.001015   | <0.001015    | <0.001015    |             |           |           |           |           |
| 7/14/2020  |             |              |              | <0.001015   | <0.001015 | <0.001015 | <0.001015 |           |
| 7/15/2020  |             |              |              |             |           |           |           | <0.001015 |
| 2/22/2021  | <0.001015   | <0.001015    | <0.001015    | <0.001015   |           |           |           |           |
| 2/23/2021  |             |              |              |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg)   | MW-3 (bg)   | MW-4 (bg)    | MW-5        | MW-6        | MW-7        | MW-8        |
|------------|-----------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|
| 4/25/2016  |           | <0.005      | <0.005      | <0.005       | 0.00138 (J) |             |             |             |
| 4/26/2016  | <0.005    |             |             |              |             |             |             |             |
| 4/27/2016  |           |             |             |              |             | 0.005       | <0.005      | <0.005      |
| 6/20/2016  | <0.005    | <0.005      |             | <0.005       |             |             |             |             |
| 6/21/2016  |           |             |             |              | <0.005      | 0.00473 (J) | 0.00165 (J) | 0.00101 (J) |
| 6/22/2016  |           |             | <0.005      |              |             |             |             |             |
| 8/8/2016   | <0.005    | <0.005      |             |              |             |             |             |             |
| 8/9/2016   |           |             | <0.005      | <0.005       |             |             |             |             |
| 8/24/2016  | <0.005    | <0.005      | <0.005      | <0.005       |             |             |             |             |
| 10/3/2016  | <0.005    | <0.005      |             | <0.005       |             |             |             |             |
| 10/4/2016  |           |             | <0.005      |              |             |             |             |             |
| 10/26/2016 | <0.005    | <0.005      | <0.005      | <0.005       |             |             |             |             |
| 11/21/2016 | <0.005    | 0.00111 (J) | <0.005      | <0.005       |             |             |             |             |
| 1/17/2017  | <0.005    | <0.005      |             |              |             |             |             |             |
| 1/18/2017  |           |             | <0.005      | <0.005       |             |             |             |             |
| 3/22/2017  | <0.005    | <0.005      | 0.00122 (J) | <0.005       |             |             |             |             |
| 4/18/2017  | <0.005    | <0.005      | <0.005      | <0.005       |             |             |             |             |
| 5/30/2017  | <0.005    |             |             |              |             |             |             |             |
| 5/31/2017  |           | <0.005      | <0.005      | <0.005       |             |             |             |             |
| 10/12/2017 |           |             |             |              | <0.005      | 0.0051      | 0.00188 (J) | 0.00197 (J) |
| 10/13/2017 |           |             |             |              | <0.005      | 0.00487 (J) | 0.00181 (J) | 0.00159 (J) |
| 10/14/2017 |           |             |             |              | <0.005      | 0.00476 (J) | 0.00127 (J) | 0.00126 (J) |
| 10/15/2017 |           |             |             |              | <0.005      | 0.00475 (J) | 0.00144 (J) | 0.00106 (J) |
| 10/16/2017 |           |             |             |              | <0.005      | 0.00482 (J) | 0.00139 (J) | 0.00106 (J) |
| 10/17/2017 |           |             |             |              | <0.005      | 0.0048 (J)  | 0.00138 (J) | 0.00103 (J) |
| 2/13/2018  | <0.005    | <0.005      | <0.005      | <0.005       |             |             |             |             |
| 2/14/2018  |           |             |             |              | <0.005      | 0.00493 (J) | 0.00131 (J) | 0.00185 (J) |
| 5/22/2018  | <0.005    | <0.005      |             |              |             |             |             |             |
| 5/23/2018  |           |             |             | <0.005       | <0.005      | 0.0058      | 0.00155 (J) | 0.00157 (J) |
| 5/24/2018  |           |             | <0.005      |              |             |             |             |             |
| 6/12/2018  | <0.005    | <0.005      | 0.00103 (J) | <0.005       |             |             |             |             |
| 10/17/2018 | <0.005    | <0.005      | 0.00133 (J) | <0.005       |             |             |             |             |
| 11/19/2018 | <0.005    | <0.005      | 0.0012 (J)  | <0.005       |             |             |             |             |
| 11/20/2018 |           |             |             |              | <0.005      | 0.00542     | 0.00133 (J) | 0.00173 (J) |
| 4/10/2019  | <0.005    | <0.005      | <0.005      | <0.005       |             |             |             |             |
| 5/14/2019  | <0.005    | <0.005      | <0.005      | <0.005       | 0.00153 (J) |             |             |             |
| 5/15/2019  |           |             |             |              |             | 0.00383 (J) | 0.00138 (J) | 0.00136 (J) |
| 10/8/2019  | <0.005    | <0.005      | 0.0048 (J)  |              |             |             | 0.00145 (J) |             |
| 10/9/2019  |           |             |             |              |             |             |             | 0.00142 (J) |
| 10/10/2019 |           |             |             | <0.005       | <0.005      | 0.00473 (J) |             |             |
| 10/16/2019 | <0.005    | <0.005      | 0.00389 (J) | <0.005       |             |             |             |             |
| 4/6/2020   | <0.005    | <0.005      | <0.005      | <0.005       |             |             |             |             |
| 4/7/2020   |           |             |             |              | 0.00163 (J) |             |             |             |
| 4/8/2020   |           |             |             |              |             | 0.00232 (J) | 0.00136 (J) | 0.00102 (J) |
| 7/13/2020  | <0.005    | <0.005      | 0.00316 (J) |              |             |             |             |             |
| 7/14/2020  |           |             |             | <0.005       | <0.005      | 0.0048 (J)  | 0.00147 (J) |             |
| 7/15/2020  |           |             |             |              |             |             |             | 0.00212 (J) |
| 2/22/2021  | 0.000403  | 0.000295    | 0.000789    | 0.000125 (J) |             |             |             |             |
| 2/23/2021  |           |             |             |              | 0.000309    | 0.00494     | 0.00141     | 0.00117     |

# Time Series

Constituent: Barium (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)   | MW-2 (bg) | MW-3 (bg)   | MW-4 (bg)   | MW-5        | MW-6   | MW-7   | MW-8   |
|------------|-------------|-----------|-------------|-------------|-------------|--------|--------|--------|
| 4/25/2016  |             | 0.0134    | 0.00803 (J) | 0.0114      | 0.016       |        |        |        |
| 4/26/2016  | 0.00941 (J) |           |             |             |             |        |        |        |
| 4/27/2016  |             |           |             |             |             | 0.012  | 0.0107 | 0.0108 |
| 6/20/2016  | 0.00951 (J) | 0.0165    |             | 0.0103      |             |        |        |        |
| 6/21/2016  |             |           |             |             | 0.0112      | 0.0133 | 0.0129 | 0.0116 |
| 6/22/2016  |             |           | 0.0101      |             |             |        |        |        |
| 8/8/2016   | 0.00991 (J) | 0.0162    |             |             |             |        |        |        |
| 8/9/2016   |             |           | 0.00889 (J) | 0.0119      |             |        |        |        |
| 8/24/2016  | 0.00949 (J) | 0.0139    | 0.00962 (J) | 0.0118      |             |        |        |        |
| 10/3/2016  | 0.0105      | 0.0164    |             | 0.0119      |             |        |        |        |
| 10/4/2016  |             |           | 0.00984 (J) |             |             |        |        |        |
| 10/26/2016 | 0.00931 (J) | 0.0138    | 0.00878 (J) | 0.0104      |             |        |        |        |
| 11/21/2016 | 0.00879 (J) | 0.0144    | 0.00833 (J) | 0.0106      |             |        |        |        |
| 1/17/2017  | 0.00929 (J) | 0.0135    |             |             |             |        |        |        |
| 1/18/2017  |             |           | 0.00966 (J) | 0.0101      |             |        |        |        |
| 3/22/2017  | 0.00938 (J) | 0.0132    | 0.00991 (J) | 0.0103      |             |        |        |        |
| 4/18/2017  | 0.00964 (J) | 0.012     | 0.00976 (J) | 0.0107      |             |        |        |        |
| 5/30/2017  | 0.00982 (J) |           |             |             |             |        |        |        |
| 5/31/2017  |             | 0.0126    | 0.00866 (J) | 0.0104      |             |        |        |        |
| 10/12/2017 |             |           |             |             | 0.0122      | 0.0134 | 0.014  | 0.0141 |
| 10/13/2017 |             |           |             |             | 0.0115      | 0.0124 | 0.0147 | 0.0148 |
| 10/14/2017 |             |           |             |             | 0.0099 (J)  | 0.0129 | 0.0123 | 0.0134 |
| 10/15/2017 |             |           |             |             | 0.0103      | 0.0136 | 0.0132 | 0.0139 |
| 10/16/2017 |             |           |             |             | 0.0101      | 0.0131 | 0.0122 | 0.0129 |
| 10/17/2017 |             |           |             |             | 0.00968 (J) | 0.0126 | 0.0121 | 0.0126 |
| 2/13/2018  | 0.00937 (J) | 0.0127    | 0.00821 (J) | 0.0111      |             |        |        |        |
| 2/14/2018  |             |           |             |             | 0.0114      | 0.0142 | 0.0119 | 0.0126 |
| 5/22/2018  | 0.0102      | 0.0131    |             |             |             |        |        |        |
| 5/23/2018  |             |           |             | 0.0107      | 0.0138      | 0.0145 | 0.0135 | 0.0137 |
| 5/24/2018  |             |           | 0.00977 (J) |             |             |        |        |        |
| 6/12/2018  | 0.0104      | 0.0138    | 0.00997 (J) | 0.0108      |             |        |        |        |
| 10/17/2018 | 0.00952 (J) | 0.0137    | 0.0126      | 0.0119      |             |        |        |        |
| 11/19/2018 | 0.00915 (J) | 0.0115    | 0.0109      | 0.0107      |             |        |        |        |
| 11/20/2018 |             |           |             |             | 0.0105      | 0.0127 | 0.0116 | 0.0123 |
| 4/10/2019  | 0.0105      | 0.0111    | 0.0101      | 0.0107      |             |        |        |        |
| 5/14/2019  | 0.00913 (J) | 0.0109    | 0.00922 (J) | 0.00949 (J) | 0.0111      |        |        |        |
| 5/15/2019  |             |           |             |             |             | 0.0121 | 0.0114 | 0.0122 |
| 10/8/2019  | 0.0109      | 0.0151    | 0.0154      |             |             |        | 0.0145 |        |
| 10/9/2019  |             |           |             |             |             |        |        | 0.0137 |
| 10/10/2019 |             |           |             | 0.0116      | 0.0105      | 0.0152 |        |        |
| 10/16/2019 | 0.0106      | 0.0146    | 0.0128      | 0.0125      |             |        |        |        |
| 4/6/2020   | 0.00971 (J) | 0.0125    | 0.00931 (J) | 0.0115      |             |        |        |        |
| 4/7/2020   |             |           |             |             | 0.0137      |        |        |        |
| 4/8/2020   |             |           |             |             |             | 0.0128 | 0.0127 | 0.0137 |
| 7/13/2020  | 0.0101      | 0.0145    | 0.0142      |             |             |        |        |        |
| 7/14/2020  |             |           |             | 0.0122      | 0.0124      | 0.0154 | 0.0148 |        |
| 7/15/2020  |             |           |             |             |             |        |        | 0.0143 |
| 2/22/2021  | 0.0107      | 0.0132    | 0.00981     | 0.0111      |             |        |        |        |
| 2/23/2021  |             |           |             |             | 0.0116      | 0.0143 | 0.014  | 0.014  |

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg)   | MW-4 (bg) | MW-5      | MW-6         | MW-7      | MW-8      |
|------------|-----------|-----------|-------------|-----------|-----------|--------------|-----------|-----------|
| 4/25/2016  |           | <0.001015 | 0.00122 (J) | <0.001015 | <0.001015 |              |           |           |
| 4/26/2016  | <0.001015 |           |             |           |           |              |           |           |
| 4/27/2016  |           |           |             |           |           | <0.001015    | <0.001015 | <0.001015 |
| 6/20/2016  | <0.001015 | <0.001015 |             | <0.001015 |           |              |           |           |
| 6/21/2016  |           |           |             |           | <0.001015 | <0.001015    | <0.001015 | <0.001015 |
| 6/22/2016  |           |           | 0.00144 (J) |           |           |              |           |           |
| 8/8/2016   | <0.001015 | <0.001015 |             |           |           |              |           |           |
| 8/9/2016   |           |           | 0.00331     | <0.001015 |           |              |           |           |
| 8/24/2016  | <0.001015 | <0.001015 | 0.00308     | <0.001015 |           |              |           |           |
| 10/3/2016  | <0.001015 | <0.001015 |             | <0.001015 |           |              |           |           |
| 10/4/2016  |           |           | 0.00129 (J) |           |           |              |           |           |
| 10/26/2016 | <0.001015 | <0.001015 | 0.0071      | <0.001015 |           |              |           |           |
| 11/21/2016 | <0.001015 | <0.001015 | 0.00689     | <0.001015 |           |              |           |           |
| 1/17/2017  | <0.001015 | <0.001015 |             |           |           |              |           |           |
| 1/18/2017  |           |           | 0.0169 (O)  | <0.001015 |           |              |           |           |
| 3/22/2017  | <0.001015 | <0.001015 | 0.00686     | <0.001015 |           |              |           |           |
| 4/18/2017  | <0.001015 | <0.001015 | <0.001015   | <0.001015 |           |              |           |           |
| 5/30/2017  | <0.001015 |           |             |           |           |              |           |           |
| 5/31/2017  |           | <0.001015 | 0.00547     | <0.001015 |           |              |           |           |
| 10/12/2017 |           |           |             |           | <0.001015 | <0.001015    | <0.001015 | <0.001015 |
| 10/13/2017 |           |           |             |           | <0.001015 | <0.001015    | <0.001015 | <0.001015 |
| 10/14/2017 |           |           |             |           | <0.001015 | <0.001015    | <0.001015 | <0.001015 |
| 10/15/2017 |           |           |             |           | <0.001015 | <0.001015    | <0.001015 | <0.001015 |
| 10/16/2017 |           |           |             |           | <0.001015 | <0.001015    | <0.001015 | <0.001015 |
| 10/17/2017 |           |           |             |           | <0.001015 | <0.001015    | <0.001015 | <0.001015 |
| 2/13/2018  | <0.001015 | <0.001015 | <0.001015   | <0.001015 |           |              |           |           |
| 2/14/2018  |           |           |             |           | <0.001015 | <0.001015    | <0.001015 | <0.001015 |
| 5/22/2018  | <0.001015 | <0.001015 |             |           |           |              |           |           |
| 5/23/2018  |           |           |             | <0.001015 | <0.001015 | <0.001015    | <0.001015 | <0.001015 |
| 5/24/2018  |           |           | 0.00164 (J) |           |           |              |           |           |
| 6/12/2018  | <0.001015 | <0.001015 | 0.00306     | <0.001015 |           |              |           |           |
| 10/17/2018 | <0.001015 | <0.001015 | 0.0121      | <0.001015 |           |              |           |           |
| 11/19/2018 | <0.001015 | <0.001015 | 0.0185 (O)  | <0.001015 |           |              |           |           |
| 11/20/2018 |           |           |             |           | <0.001015 | <0.001015    | <0.001015 | <0.001015 |
| 4/10/2019  | <0.001015 | <0.001015 | <0.001015   | <0.001015 |           |              |           |           |
| 5/14/2019  | <0.001015 | <0.001015 | <0.001015   | <0.001015 | <0.001015 |              |           |           |
| 5/15/2019  |           |           |             |           |           | 0.000677 (J) | <0.001015 | <0.001015 |
| 10/8/2019  | <0.001015 | <0.001015 | 0.0084      |           |           |              | <0.001015 |           |
| 10/9/2019  |           |           |             |           |           |              |           | <0.001015 |
| 10/10/2019 |           |           |             | <0.001015 | <0.001015 | <0.001015    |           |           |
| 10/16/2019 | <0.001015 | <0.001015 | 0.0103      | <0.001015 |           |              |           |           |
| 4/6/2020   | <0.001015 | <0.001015 | <0.001015   | <0.001015 |           |              |           |           |
| 4/7/2020   |           |           |             |           | <0.001015 |              |           |           |
| 4/8/2020   |           |           |             |           |           | 0.000788 (J) | <0.001015 | <0.001015 |
| 7/13/2020  | <0.001015 | <0.001015 | 0.0021 (J)  |           |           |              |           |           |
| 7/14/2020  |           |           |             | <0.001015 | <0.001015 | <0.001015    | <0.001015 |           |
| 7/15/2020  |           |           |             |           |           |              |           | <0.001015 |
| 2/22/2021  | <0.001015 | <0.001015 | <0.001015   | <0.001015 |           |              |           |           |
| 2/23/2021  |           |           |             |           | <0.001015 | <0.001015    | <0.001015 | <0.001015 |

# Time Series

Constituent: Boron, total (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)  | MW-2 (bg)  | MW-3 (bg)  | MW-4 (bg)  | MW-5       | MW-6       | MW-7       | MW-8       |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 4/25/2016  |            | 0.0241 (J) | 0.028 (J)  | 0.0414 (J) | 0.0301 (J) |            |            |            |
| 4/26/2016  | 0.0231 (J) |            |            |            |            |            |            |            |
| 4/27/2016  |            |            |            |            |            | 0.075 (J)  | 0.253 (O)  | 0.0662 (J) |
| 6/20/2016  | 0.0227 (J) | 0.0284 (J) |            | 0.0434 (J) |            |            |            |            |
| 6/21/2016  |            |            |            |            | 0.0304 (J) | 0.0729 (J) | 0.0768 (J) | 0.0681 (J) |
| 6/22/2016  |            |            | 0.0433 (J) |            |            |            |            |            |
| 8/8/2016   | 0.0278 (J) | 0.034 (J)  |            |            |            |            |            |            |
| 8/9/2016   |            |            | 0.0429 (J) | 0.0453 (J) |            |            |            |            |
| 8/24/2016  | 0.0247 (J) | 0.0316 (J) | 0.0431 (J) | 0.0451 (J) |            |            |            |            |
| 10/3/2016  | 0.0307 (J) | 0.0367 (J) |            | 0.0511 (J) |            |            |            |            |
| 10/4/2016  |            |            | 0.04 (J)   |            |            |            |            |            |
| 10/26/2016 | 0.0241 (J) | 0.0331 (J) | 0.0375 (J) | 0.0507 (J) |            |            |            |            |
| 11/21/2016 | 0.0202 (J) | 0.035 (J)  | 0.0406 (J) | 0.0458 (J) |            |            |            |            |
| 1/17/2017  | 0.0201 (J) | 0.0259 (J) |            |            |            |            |            |            |
| 1/18/2017  |            |            | 0.0548 (J) | 0.0445 (J) |            |            |            |            |
| 3/22/2017  | 0.0224 (J) | 0.0243 (J) | 0.0344 (J) | 0.0432 (J) |            |            |            |            |
| 4/18/2017  | <0.1015    | 0.0206 (J) | <0.1015    | 0.0409 (J) |            |            |            |            |
| 5/30/2017  | <0.1015    |            |            |            |            |            |            |            |
| 5/31/2017  |            | 0.0234 (J) | 0.0454 (J) | 0.0392 (J) |            |            |            |            |
| 8/23/2017  | 0.0253 (J) | 0.0267 (J) | 0.0425 (J) | 0.042 (J)  |            |            |            |            |
| 10/12/2017 |            |            |            |            | 0.0285 (J) | 0.0806 (J) | 0.0685 (J) | 0.0687 (J) |
| 10/13/2017 |            |            |            |            | 0.0287 (J) | 0.0803 (J) | 0.0674 (J) | 0.0831 (J) |
| 10/14/2017 |            |            |            |            | 0.0305 (J) | 0.0828 (J) | 0.0756 (J) | 0.0702 (J) |
| 10/15/2017 |            |            |            |            | 0.0319 (J) | 0.0852 (J) | 0.0719 (J) | 0.0702 (J) |
| 10/16/2017 |            |            |            |            | 0.0304 (J) | 0.0858 (J) | 0.0726 (J) | 0.0707 (J) |
| 10/17/2017 |            |            |            |            | 0.036 (J)  | 0.0846 (J) | 0.0716 (J) | 0.0695 (J) |
| 11/16/2017 |            |            |            |            | 0.0377 (J) | 0.0772 (J) | 0.0644 (J) | 0.0675 (J) |
| 5/22/2018  | 0.0224 (J) | 0.0251 (J) |            |            |            |            |            |            |
| 5/23/2018  |            |            |            | 0.0433 (J) | 0.0301 (J) | 0.0757 (J) | 0.0715 (J) | 0.0693 (J) |
| 5/24/2018  |            |            | 0.0339 (J) |            |            |            |            |            |
| 6/12/2018  | 0.0214 (J) | 0.0275 (J) | 0.0371 (J) | 0.0478 (J) |            |            |            |            |
| 10/17/2018 | 0.0216 (J) | 0.0321 (J) | 0.0596 (J) | 0.0468 (J) |            |            |            |            |
| 11/19/2018 | 0.0237 (J) | 0.0324 (J) | 0.0514 (J) | 0.0526 (J) |            |            |            |            |
| 11/20/2018 |            |            |            |            | 0.0357 (J) | 0.0915 (J) | 0.0772 (J) | 0.0771 (J) |
| 4/10/2019  | 0.0304 (J) | <0.1015    | <0.1015    | 0.0438 (J) |            |            |            |            |
| 5/14/2019  | <0.1015    | <0.1015    | <0.1015    | <0.1015    | <0.1015    |            |            |            |
| 5/15/2019  |            |            |            |            |            | 0.0616 (J) | 0.0678 (J) | 0.0689 (J) |
| 10/8/2019  | <0.1015    | 0.0371 (J) | 0.0537 (J) |            |            |            | 0.073 (J)  |            |
| 10/9/2019  |            |            |            |            |            |            |            | 0.0723 (J) |
| 10/10/2019 |            |            |            | 0.0487 (J) | 0.0323 (J) | 0.0919 (J) |            |            |
| 10/16/2019 | 0.0385 (J) | 0.0419 (J) | 0.05 (J)   | 0.0505 (J) |            |            |            |            |
| 4/6/2020   | <0.1015    | <0.1015    | <0.1015    | 0.0428 (J) |            |            |            |            |
| 4/7/2020   |            |            |            |            | 0.0399 (J) |            |            |            |
| 4/8/2020   |            |            |            |            |            | 0.0499 (J) | 0.077 (J)  | 0.0683 (J) |
| 7/13/2020  | <0.1015    | <0.1015    | 0.0366 (J) |            |            |            |            |            |
| 7/14/2020  |            |            |            | 0.0441 (J) | 0.033 (J)  | 0.0838 (J) | 0.0865 (J) |            |
| 7/15/2020  |            |            |            |            |            |            |            | 0.0723 (J) |
| 2/22/2021  | 0.0307 (J) | <0.1015    | <0.1015    | 0.0397 (J) |            |            |            |            |
| 2/23/2021  |            |            |            |            | 0.0369 (J) | 0.0866 (J) | 0.0803 (J) | 0.0731 (J) |



# Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg)    | MW-3 (bg)    | MW-4 (bg)    | MW-5      | MW-6         | MW-7      | MW-8      |
|------------|-----------|--------------|--------------|--------------|-----------|--------------|-----------|-----------|
| 4/25/2016  |           | <0.000203    | 0.0121 (O)   | <0.000203    | <0.000203 |              |           |           |
| 4/26/2016  | 0.00196   |              |              |              |           |              |           |           |
| 4/27/2016  |           |              |              |              |           | <0.000203    | <0.000203 | <0.000203 |
| 6/20/2016  | 0.0021    | <0.000203    |              | <0.000203    |           |              |           |           |
| 6/21/2016  |           |              |              |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |
| 6/22/2016  |           |              | 0.00163      |              |           |              |           |           |
| 8/8/2016   | 0.00206   | <0.000203    |              |              |           |              |           |           |
| 8/9/2016   |           |              | 0.00122      | <0.000203    |           |              |           |           |
| 8/24/2016  | 0.00182   | <0.000203    | <0.000203    | <0.000203    |           |              |           |           |
| 10/3/2016  | 0.00188   | <0.000203    |              | <0.000203    |           |              |           |           |
| 10/4/2016  |           |              | 0.000689 (J) |              |           |              |           |           |
| 10/26/2016 | 0.00175   | <0.000203    | 0.00136      | <0.000203    |           |              |           |           |
| 11/21/2016 | 0.00197   | <0.000203    | 0.00171      | <0.000203    |           |              |           |           |
| 1/17/2017  | 0.002     | 0.000311 (J) |              |              |           |              |           |           |
| 1/18/2017  |           |              | 0.003        | <0.000203    |           |              |           |           |
| 3/22/2017  | 0.0019    | <0.000203    | 0.00473      | <0.000203    |           |              |           |           |
| 4/18/2017  | 0.00159   | <0.000203    | 0.00117      | <0.000203    |           |              |           |           |
| 5/30/2017  | 0.00214   |              |              |              |           |              |           |           |
| 5/31/2017  |           | 0.000212 (J) | 0.00296      | <0.000203    |           |              |           |           |
| 10/12/2017 |           |              |              |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |
| 10/13/2017 |           |              |              |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |
| 10/14/2017 |           |              |              |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |
| 10/15/2017 |           |              |              |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |
| 10/16/2017 |           |              |              |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |
| 10/17/2017 |           |              |              |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |
| 2/13/2018  | 0.0018    | <0.000203    | 0.00232      | <0.000203    |           |              |           |           |
| 2/14/2018  |           |              |              |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |
| 5/22/2018  | 0.00201   | <0.000203    |              |              |           |              |           |           |
| 5/23/2018  |           |              |              | <0.000203    | <0.000203 | <0.000203    | <0.000203 | <0.000203 |
| 5/24/2018  |           |              | 0.00459      |              |           |              |           |           |
| 6/12/2018  | 0.00217   | <0.000203    | 0.00351      | <0.000203    |           |              |           |           |
| 10/17/2018 | 0.00228   | <0.000203    | 0.00393      | <0.000203    |           |              |           |           |
| 11/19/2018 | 0.00156   | <0.000203    | 0.00309      | <0.000203    |           |              |           |           |
| 11/20/2018 |           |              |              |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |
| 4/10/2019  | 0.00224   | <0.000203    | 0.00337      | <0.000203    |           |              |           |           |
| 5/14/2019  | 0.00238   | <0.000203    | 0.0013       | <0.000203    | <0.000203 |              |           |           |
| 5/15/2019  |           |              |              |              |           | 0.000858 (J) | <0.000203 | <0.000203 |
| 10/8/2019  | 0.00218   | <0.000203    | 0.00598      |              |           |              | <0.000203 |           |
| 10/9/2019  |           |              |              |              |           |              |           | <0.000203 |
| 10/10/2019 |           |              |              | <0.000203    | <0.000203 | <0.000203    |           |           |
| 10/16/2019 | 0.00225   | <0.000203    | 0.00448      | <0.000203    |           |              |           |           |
| 4/6/2020   | 0.00184   | <0.000203    | 0.000645 (J) | <0.000203    |           |              |           |           |
| 4/7/2020   |           |              |              |              | <0.000203 |              |           |           |
| 4/8/2020   |           |              |              |              |           | 0.00204      | <0.000203 | <0.000203 |
| 7/13/2020  | 0.00194   | <0.000203    | 0.00885 (O)  |              |           |              |           |           |
| 7/14/2020  |           |              |              | <0.000203    | <0.000203 | <0.000203    | <0.000203 |           |
| 7/15/2020  |           |              |              |              |           |              |           | <0.000203 |
| 2/22/2021  | 0.00184   | 8.96E-05 (J) | 0.00536      | 8.96E-05 (J) |           |              |           |           |
| 2/23/2021  |           |              |              |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |

# Time Series

Constituent: Calcium, total (mg/L) Analysis Run 5/19/2021 5:23 PM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) | MW-5 | MW-6 | MW-7 | MW-8 |
|------------|-----------|-----------|-----------|-----------|------|------|------|------|
| 4/25/2016  |           | 123       | 224       | 261       | 399  |      |      |      |
| 4/26/2016  | 147       |           |           |           |      |      |      |      |
| 4/27/2016  |           |           |           |           |      | 411  | 198  | 282  |
| 6/20/2016  | 152       | 168       |           | 295       |      |      |      |      |
| 6/21/2016  |           |           |           |           | 295  | 318  | 327  | 291  |
| 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       |      |      |      |      |
| 10/12/2017 |           |           |           |           | 394  | 421  | 317  | 300  |
| 10/13/2017 |           |           |           |           | 389  | 396  | 302  | 298  |
| 10/14/2017 |           |           |           |           | 391  | 400  | 283  | 299  |
| 10/15/2017 |           |           |           |           | 332  | 378  | 294  | 307  |
| 10/16/2017 |           |           |           |           | 380  | 402  | 284  | 299  |
| 10/17/2017 |           |           |           |           | 377  | 373  | 294  | 294  |
| 11/16/2017 |           |           |           |           | 368  | 367  | 299  | 308  |
| 5/22/2018  | 166       | 172       |           |           |      |      |      |      |
| 5/23/2018  |           |           |           | 296       | 405  | 425  | 321  | 344  |
| 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       |      |      |      |      |
| 11/20/2018 |           |           |           |           | 414  | 449  | 306  | 327  |
| 4/10/2019  | 243       | 200       | 348       | 356       |      |      |      |      |
| 5/14/2019  | 167       | 168       | 254       | 254       | 441  |      |      |      |
| 5/15/2019  |           |           |           |           |      | 345  | 302  | 305  |
| 10/8/2019  | 157       | 190       | 371       |           |      |      | 294  |      |
| 10/9/2019  |           |           |           |           |      |      |      | 329  |
| 10/10/2019 |           |           |           | 302       | 386  | 461  |      |      |
| 10/16/2019 | 157       | 194       | 346       | 356       |      |      |      |      |
| 4/6/2020   | 149       | 152       | 177       | 222       |      |      |      |      |
| 4/7/2020   |           |           |           |           | 432  |      |      |      |
| 4/8/2020   |           |           |           |           |      | 242  | 280  | 281  |
| 7/13/2020  | 147       | 163       | 264       |           |      |      |      |      |
| 7/14/2020  |           |           |           | 259       | 395  | 406  | 261  |      |
| 7/15/2020  |           |           |           |           |      |      |      | 280  |
| 2/22/2021  | 151       | 178       | 312       | 271       |      |      |      |      |
| 2/23/2021  |           |           |           |           | 394  | 428  | 292  | 306  |

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 5/19/2021 5:23 PM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) | MW-5  | MW-6    | MW-7   | MW-8    |
|------------|-----------|-----------|-----------|-----------|-------|---------|--------|---------|
| 4/25/2016  |           | 1.9       | 1.32      | 1.53      | 5.44  |         |        |         |
| 4/26/2016  | 1.94      |           |           |           |       |         |        |         |
| 4/27/2016  |           |           |           |           |       | 2.19    | 1.71   | 2.34    |
| 6/20/2016  | 2.09      | 3.43      |           | 1.85      |       |         |        |         |
| 6/21/2016  |           |           |           |           | 6.32  | 2.56    | 2.04   | 2.29    |
| 6/22/2016  |           |           | 1.46      |           |       |         |        |         |
| 8/8/2016   | 2.18      | 3.31      |           |           |       |         |        |         |
| 8/9/2016   |           |           | 1.35      | 1.95      |       |         |        |         |
| 8/24/2016  | 2.22      | 3.23      | 1.47      | 2.07      |       |         |        |         |
| 10/3/2016  | 2.34      | 3.21      |           | 2.02      |       |         |        |         |
| 10/4/2016  |           |           | 1.59      |           |       |         |        |         |
| 10/26/2016 | 2.34      | 3.35      | 1.27      | 2.07      |       |         |        |         |
| 11/21/2016 | 2.5       | 3.34      | 1.38      | 2.39      |       |         |        |         |
| 1/17/2017  | 2.68      | 3.58      |           |           |       |         |        |         |
| 1/18/2017  |           |           | 1.34      | 1.9       |       |         |        |         |
| 3/22/2017  | 3.7       | 3.4       | 2         | 1.5 (J)   |       |         |        |         |
| 4/18/2017  | 2.4       | 2.6       | 2.2       | 1.6 (J)   |       |         |        |         |
| 5/30/2017  | 2.6       |           |           |           |       |         |        |         |
| 5/31/2017  |           | 4.4       | 1.5 (J)   | 2.1       |       |         |        |         |
| 8/23/2017  | 2.7       | 4.4       | 1.8 (J)   | 2.3       |       |         |        |         |
| 10/12/2017 |           |           |           |           | 7.9   | 3.4     | 31     | 150     |
| 10/13/2017 |           |           |           |           | 8 (B) | 3 (B)   | 32 (B) | 130 (B) |
| 10/14/2017 |           |           |           |           | 7.4   | 2.8     | 33     | 140     |
| 10/15/2017 |           |           |           |           | 7.2   | 1.9 (J) | 34     | 130     |
| 10/16/2017 |           |           |           |           | 8.1   | 1.8 (J) | 34     | 140     |
| 10/17/2017 |           |           |           |           | 7.9   | 3.1     | 34     | 140     |
| 11/16/2017 |           |           |           |           | 8.1   | 3.5     | 35     | 130     |
| 5/22/2018  | 2.3       | 3.2       |           |           |       |         |        |         |
| 5/23/2018  |           |           |           | 2         | 7     | 2.6     | 28     | 75      |
| 5/24/2018  |           |           | 1.6 (J)   |           |       |         |        |         |
| 6/12/2018  | 2.3       | 3.7       | 1.4 (J)   | 1.7 (J)   |       |         |        |         |
| 10/17/2018 | 1.7 (J)   | 4.6       | <2        | 1.5 (J)   |       |         |        |         |
| 11/19/2018 | 1.7 (J)   | 3         | <2        | <2        |       |         |        |         |
| 11/20/2018 |           |           |           |           | 7.4   | 2.7     | 20     | 45      |
| 4/10/2019  | 2.36      | 1.76      | 2.25      | 1.88      |       |         |        |         |
| 5/14/2019  | 2.28      | 2.98      | 2.28      | 1.82      | 6.24  |         |        |         |
| 5/15/2019  |           |           |           |           |       | 4.45    | 15.9   | 52      |
| 10/8/2019  | 2.31      | 4.26      | 1.36      |           |       |         | 16.8   |         |
| 10/9/2019  |           |           |           |           |       |         |        | 39.2    |
| 10/10/2019 |           |           |           | 1.93      | 7.88  | 3.61    |        |         |
| 10/16/2019 | 2.42      | 4.04      | 1.4       | 1.92      |       |         |        |         |
| 4/6/2020   | 2.01      | 2.43      | 1.72      | 1.5       |       |         |        |         |
| 4/7/2020   |           |           |           |           | 4.83  |         |        |         |
| 4/8/2020   |           |           |           |           |       | 4.63    | 10.6   | 24.9    |
| 7/13/2020  | 2.1       | 4.05      | 1.34      |           |       |         |        |         |
| 7/14/2020  |           |           |           | 1.61      | 6.84  | 3.25    | 9.68   |         |
| 7/15/2020  |           |           |           |           |       |         |        | 23.8    |
| 2/22/2021  | 2.16      | 1.72      | 2.22      | 1.52      |       |         |        |         |
| 2/23/2021  |           |           |           |           | 6.19  | 3.47    | 7.85   | 17.9    |

# Time Series

Constituent: Chromium (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)    | MW-2 (bg) | MW-3 (bg)   | MW-4 (bg) | MW-5      | MW-6      | MW-7      | MW-8      |
|------------|--------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| 4/25/2016  |              | <0.001015 | 0.00373 (J) | <0.001015 | <0.001015 |           |           |           |
| 4/26/2016  | <0.001015    |           |             |           |           |           |           |           |
| 4/27/2016  |              |           |             |           |           | <0.001015 | <0.001015 | <0.001015 |
| 6/20/2016  | <0.001015    | <0.001015 |             | <0.001015 |           |           |           |           |
| 6/21/2016  |              |           |             |           | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 6/22/2016  |              |           | 0.00606 (J) |           |           |           |           |           |
| 8/8/2016   | <0.001015    | <0.001015 |             |           |           |           |           |           |
| 8/9/2016   |              |           | <0.001015   | <0.001015 |           |           |           |           |
| 8/24/2016  | <0.001015    | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 10/3/2016  | <0.001015    | <0.001015 |             | <0.001015 |           |           |           |           |
| 10/4/2016  |              |           | <0.001015   |           |           |           |           |           |
| 10/26/2016 | <0.001015    | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 11/21/2016 | <0.001015    | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 1/17/2017  | <0.001015    | <0.001015 |             |           |           |           |           |           |
| 1/18/2017  |              |           | <0.001015   | <0.001015 |           |           |           |           |
| 3/22/2017  | <0.001015    | <0.001015 | 0.00945 (J) | <0.001015 |           |           |           |           |
| 4/18/2017  | <0.001015    | <0.001015 | 0.0105      | <0.001015 |           |           |           |           |
| 5/30/2017  | <0.001015    |           |             |           |           |           |           |           |
| 5/31/2017  |              | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 10/12/2017 |              |           |             |           | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 10/13/2017 |              |           |             |           | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 10/14/2017 |              |           |             |           | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 10/15/2017 |              |           |             |           | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 10/16/2017 |              |           |             |           | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 10/17/2017 |              |           |             |           | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 2/13/2018  | <0.001015    | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 2/14/2018  |              |           |             |           | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 5/22/2018  | <0.001015    | <0.001015 |             |           |           |           |           |           |
| 5/23/2018  |              |           |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 5/24/2018  |              |           | <0.001015   |           |           |           |           |           |
| 6/12/2018  | <0.001015    | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 10/17/2018 | <0.001015    | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 11/19/2018 | <0.001015    | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 11/20/2018 |              |           |             |           | <0.001015 | <0.001015 | <0.001015 | <0.001015 |
| 4/10/2019  | <0.001015    | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 5/14/2019  | <0.001015    | <0.001015 | <0.001015   | <0.001015 | <0.001015 |           |           |           |
| 5/15/2019  |              |           |             |           |           | <0.001015 | <0.001015 | <0.001015 |
| 10/8/2019  | <0.001015    | <0.001015 | <0.001015   |           |           |           | <0.001015 |           |
| 10/9/2019  |              |           |             |           |           |           |           | <0.001015 |
| 10/10/2019 |              |           |             | <0.001015 | <0.001015 | <0.001015 |           |           |
| 10/16/2019 | <0.001015    | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 4/6/2020   | <0.001015    | <0.001015 | <0.001015   | <0.001015 |           |           |           |           |
| 4/7/2020   |              |           |             |           | <0.001015 |           |           |           |
| 4/8/2020   |              |           |             |           |           | <0.001015 | <0.001015 | <0.001015 |
| 7/13/2020  | <0.001015    | <0.001015 | <0.001015   |           |           |           |           |           |
| 7/14/2020  |              |           |             | <0.001015 | <0.001015 | <0.001015 | <0.001015 |           |
| 7/15/2020  |              |           |             |           |           |           |           | <0.001015 |
| 2/22/2021  | 0.000382 (J) | <0.001015 | 0.00035 (J) | <0.001015 |           |           |           |           |
| 2/23/2021  |              |           |             |           | <0.001015 | <0.001015 | <0.001015 | <0.001015 |

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg)   | MW-4 (bg) | MW-5        | MW-6   | MW-7        | MW-8        |
|------------|-----------|-----------|-------------|-----------|-------------|--------|-------------|-------------|
| 4/25/2016  |           | 0.0487    | 0.232       | <0.000203 | 0.00287 (J) |        |             |             |
| 4/26/2016  | 0.0343    |           |             |           |             |        |             |             |
| 4/27/2016  |           |           |             |           |             | 0.0287 | <0.000203   | 0.00436 (J) |
| 6/20/2016  | 0.0413    | 0.0767    |             | <0.000203 |             |        |             |             |
| 6/21/2016  |           |           |             |           | 0.00228 (J) | 0.0269 | <0.000203   | 0.00484 (J) |
| 6/22/2016  |           |           | 0.332       |           |             |        |             |             |
| 8/8/2016   | 0.0513    | 0.103     |             |           |             |        |             |             |
| 8/9/2016   |           |           | 0.311       | <0.000203 |             |        |             |             |
| 8/24/2016  | 0.0471    | 0.093     | 0.271       | <0.000203 |             |        |             |             |
| 10/3/2016  | 0.0525    | 0.0964    |             | <0.000203 |             |        |             |             |
| 10/4/2016  |           |           | 0.148       |           |             |        |             |             |
| 10/26/2016 | 0.0527    | 0.0904    | 0.236       | <0.000203 |             |        |             |             |
| 11/21/2016 | 0.0569    | 0.0857    | 0.241       | <0.000203 |             |        |             |             |
| 1/17/2017  | 0.0768    | 0.0745    |             |           |             |        |             |             |
| 1/18/2017  |           |           | 0.347       | <0.000203 |             |        |             |             |
| 3/22/2017  | 0.0535    | 0.0328    | 0.271       | <0.000203 |             |        |             |             |
| 4/18/2017  | 0.0442    | 0.0242    | 0.00324 (J) | <0.000203 |             |        |             |             |
| 5/30/2017  | 0.0465    |           |             |           |             |        |             |             |
| 5/31/2017  |           | 0.0441    | 0.225       | <0.000203 |             |        |             |             |
| 10/12/2017 |           |           |             |           | <0.000203   | 0.0279 | 0.00269 (J) | 0.005 (J)   |
| 10/13/2017 |           |           |             |           | <0.000203   | 0.0271 | 0.00341 (J) | 0.0052 (J)  |
| 10/14/2017 |           |           |             |           | <0.000203   | 0.0296 | 0.00451 (J) | 0.00513 (J) |
| 10/15/2017 |           |           |             |           | 0.00203 (J) | 0.0303 | 0.00371 (J) | 0.00518 (J) |
| 10/16/2017 |           |           |             |           | <0.000203   | 0.0274 | 0.00371 (J) | 0.00453 (J) |
| 10/17/2017 |           |           |             |           | <0.000203   | 0.0274 | 0.0035 (J)  | 0.00463 (J) |
| 2/13/2018  | 0.062     | 0.0179    | 0.00661 (J) | <0.000203 |             |        |             |             |
| 2/14/2018  |           |           |             |           | <0.000203   | 0.0305 | <0.000203   | 0.00441 (J) |
| 5/22/2018  | 0.0443    | 0.028     |             |           |             |        |             |             |
| 5/23/2018  |           |           |             | <0.000203 | <0.000203   | 0.0409 | <0.000203   | 0.00466 (J) |
| 5/24/2018  |           |           | 0.158       |           |             |        |             |             |
| 6/12/2018  | 0.0512    | 0.0366    | 0.291       | <0.000203 |             |        |             |             |
| 10/17/2018 | 0.0751    | 0.0745    | 0.49        | <0.000203 |             |        |             |             |
| 11/19/2018 | 0.0825    | 0.0225    | 0.386       | <0.000203 |             |        |             |             |
| 11/20/2018 |           |           |             |           | <0.000203   | 0.0327 | 0.00306 (J) | 0.00551     |
| 4/10/2019  | 0.0445    | 0.0152    | 0.0144      | <0.000203 |             |        |             |             |
| 5/14/2019  | 0.0485    | 0.0222    | 0.00536     | <0.000203 | <0.000203   |        |             |             |
| 5/15/2019  |           |           |             |           |             | 0.265  | 0.00234 (J) | 0.00643     |
| 10/8/2019  | 0.0778    | 0.0674    | 1.07        |           |             |        | 0.00408 (J) |             |
| 10/9/2019  |           |           |             |           |             |        |             | 0.00864     |
| 10/10/2019 |           |           |             | <0.000203 | <0.000203   | 0.0425 |             |             |
| 10/16/2019 | 0.08      | 0.073     | 0.848       | <0.000203 |             |        |             |             |
| 4/6/2020   | 0.0417    | 0.0116    | <0.000203   | <0.000203 |             |        |             |             |
| 4/7/2020   |           |           |             |           | <0.000203   |        |             |             |
| 4/8/2020   |           |           |             |           |             | 0.479  | 0.00394 (J) | 0.00762     |
| 7/13/2020  | 0.0532    | 0.0405    | 0.47        |           |             |        |             |             |
| 7/14/2020  |           |           |             | <0.000203 | <0.000203   | 0.0916 | 0.00653     |             |
| 7/15/2020  |           |           |             |           |             |        |             | 0.00821     |
| 2/22/2021  | 0.0657    | 0.0161    | 0.0515      | <0.000203 |             |        |             |             |
| 2/23/2021  |           |           |             |           | 0.00102     | 0.0771 | 0.00294     | 0.00796     |

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/19/2021 5:23 PM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)  | MW-2 (bg)   | MW-3 (bg)  | MW-4 (bg)   | MW-5      | MW-6      | MW-7       | MW-8       |
|------------|------------|-------------|------------|-------------|-----------|-----------|------------|------------|
| 4/25/2016  |            |             | 0.484 (U)  | 0.434 (U)   | 0.611     |           |            |            |
| 4/26/2016  | 0.622      |             |            |             |           |           |            |            |
| 4/27/2016  |            |             |            |             |           | 0.956     | 0.374 (U)  | -0.207 (U) |
| 5/5/2016   |            | -0.0718 (U) |            |             |           |           |            |            |
| 6/20/2016  | 0.159 (U)  | 0.295 (U)   |            | 0.287 (U)   |           |           |            |            |
| 6/21/2016  |            |             |            |             | 0.304 (U) | 0.748     | 0.151 (U)  | 0.529      |
| 6/22/2016  |            |             | 0.2 (U)    |             |           |           |            |            |
| 8/8/2016   | 0.511 (U)  | 0.231 (U)   |            |             |           |           |            |            |
| 8/9/2016   |            |             | 0.378 (U)  | 0.516 (U)   |           |           |            |            |
| 8/24/2016  | 0.566 (U)  | 0.65        | 0.131 (U)  | 0.266 (U)   |           |           |            |            |
| 10/3/2016  | 0.537 (U)  | 0.845       |            | 0.59 (U)    |           |           |            |            |
| 10/4/2016  |            |             | 0.514 (U)  |             |           |           |            |            |
| 10/26/2016 | 0.636      | 0.994       | 0.755      | 0.164 (U)   |           |           |            |            |
| 11/21/2016 | 0.807      | 0.537 (U)   | 0.7        | 0.296 (U)   |           |           |            |            |
| 1/17/2017  | 0.308 (U)  | -0.0159 (U) |            |             |           |           |            |            |
| 1/18/2017  |            |             | 0.606      | 0.0267 (U)  |           |           |            |            |
| 3/22/2017  | 0.344 (U)  | 0.279 (U)   | 0.927      | 0.132 (U)   |           |           |            |            |
| 4/18/2017  | 0.934      | 0.32 (U)    | 0.334 (U)  | -0.0439 (U) |           |           |            |            |
| 5/30/2017  | 0.149 (U)  |             |            |             |           |           |            |            |
| 5/31/2017  |            | 0.178 (U)   | 0.8        | 0.3 (U)     |           |           |            |            |
| 10/12/2017 |            |             |            |             | 0.627 (U) | 0.564 (U) | 0.182 (U)  | 0.267 (U)  |
| 10/13/2017 |            |             |            |             | 0.391 (U) | 1.36 (U)  | 0.517 (U)  | 0.873 (U)  |
| 10/14/2017 |            |             |            |             | 1.2 (U)   | 1.59 (U)  | 0.43 (U)   | 1.6 (U)    |
| 10/15/2017 |            |             |            |             | 0.806 (U) | 1.22 (U)  | 0.45 (U)   | 0.327 (U)  |
| 10/16/2017 |            |             |            |             | 0.564 (U) | 1.57 (U)  | 0.55 (U)   | 0.524 (U)  |
| 10/17/2017 |            |             |            |             | 0.178 (U) | 0.631 (U) | 0.474 (U)  | 0.0455 (U) |
| 2/13/2018  | 0.774      | 0.804       | 0.649      | 0.69        |           |           |            |            |
| 2/14/2018  |            |             |            |             | 0.955     | 0.969     | 0.736      | 0.633      |
| 5/22/2018  | -0.091 (U) | 0.0077 (U)  |            |             |           |           |            |            |
| 5/23/2018  |            |             |            | 0.186 (U)   | 0.543     | 0.918     | 0.0192 (U) | 0.377 (U)  |
| 5/24/2018  |            |             | 0.448 (U)  |             |           |           |            |            |
| 6/12/2018  | 1.18       | -0.315 (U)  | 0.234 (U)  | 0.153 (U)   |           |           |            |            |
| 10/17/2018 | 0.553 (U)  | 0.574 (U)   | 0.852      | 0.313 (U)   |           |           |            |            |
| 11/19/2018 | 0.862 (D)  | 0.654 (D)   | 0.521 (D)  | 0.794 (D)   |           |           |            |            |
| 11/20/2018 |            |             |            |             | 0.687     | 1.15      | 0.494      | 0.28 (U)   |
| 5/14/2019  | 0.509      | 0.579       | 0.176 (U)  | 0.352 (U)   | 0.663     |           |            |            |
| 5/15/2019  |            |             |            |             |           | 1.56      | 0.61       | 0.697      |
| 10/8/2019  | 1.47       | 0.493 (U)   | 0.833 (U)  |             |           |           | 0.345 (U)  |            |
| 10/9/2019  |            |             |            |             |           |           |            | 0.416 (U)  |
| 10/10/2019 |            |             |            | 1.02 (U)    | 0.811 (U) | 1.71      |            |            |
| 10/16/2019 | 0.204 (U)  | 0.046 (U)   | 0.0279 (U) | 0.356 (U)   |           |           |            |            |
| 4/6/2020   | 0.309 (U)  | 0.212 (U)   | 0.569 (U)  | 0.459 (U)   |           |           |            |            |
| 4/7/2020   |            |             |            |             | 0.48 (U)  |           |            |            |
| 4/8/2020   |            |             |            |             |           | 0.179 (U) | 0.237 (U)  | 1.38 (U)   |
| 7/13/2020  | 0.219 (U)  | 0.0814 (U)  | 0.53       |             |           |           |            |            |
| 7/14/2020  |            |             |            | 0.169 (U)   | 0.521     | 0.578     | 0.434      |            |
| 7/15/2020  |            |             |            |             |           |           |            | 0.398 (U)  |
| 2/22/2021  | 0.677 (U)  | 0.434 (U)   | 0.472 (U)  | 0 (U)       |           |           |            |            |
| 2/23/2021  |            |             |            |             | 0.71 (U)  | 1.15 (U)  | 0.696 (U)  | 0.685 (U)  |

# Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 5/19/2021 5:23 PM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)  | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) | MW-5     | MW-6      | MW-7      | MW-8      |
|------------|------------|-----------|-----------|-----------|----------|-----------|-----------|-----------|
| 4/25/2016  |            | 0.149 (J) | 0.243 (J) | 0.372     | 0.307    |           |           |           |
| 4/26/2016  | 0.146 (J)  |           |           |           |          |           |           |           |
| 4/27/2016  |            |           |           |           |          | 0.131 (J) | 0.2 (J)   | 0.212 (J) |
| 6/20/2016  | 0.148 (J)  | 0.148 (J) |           | 0.361     |          |           |           |           |
| 6/21/2016  |            |           |           |           | 0.337    | 0.153 (J) | 0.163 (J) | 0.211 (J) |
| 6/22/2016  |            |           | 0.269 (J) |           |          |           |           |           |
| 8/8/2016   | 0.137 (J)  | 0.134 (J) |           |           |          |           |           |           |
| 8/9/2016   |            |           | 0.363     | 0.326     |          |           |           |           |
| 8/24/2016  | 0.133 (J)  | 0.129 (J) | 0.346     | 0.329     |          |           |           |           |
| 10/3/2016  | 0.103 (J)  | 0.086 (J) |           | 0.287 (J) |          |           |           |           |
| 10/4/2016  |            |           | 0.266 (J) |           |          |           |           |           |
| 10/26/2016 | 0.05 (J)   | 0.027 (J) | 0.266 (J) | 0.194 (J) |          |           |           |           |
| 11/21/2016 | 0.047 (J)  | 0.027 (J) | 0.244 (J) | 0.192 (J) |          |           |           |           |
| 1/17/2017  | 0.09 (J)   | 0.066 (J) |           |           |          |           |           |           |
| 1/18/2017  |            |           | 0.385     | 0.223 (J) |          |           |           |           |
| 3/22/2017  | 0.12       | 0.13      | 0.41      | 0.32      |          |           |           |           |
| 4/18/2017  | 0.12       | 0.16      | 0.29      | 0.32      |          |           |           |           |
| 5/30/2017  | 0.13       |           |           |           |          |           |           |           |
| 5/31/2017  |            | 0.13      | 0.37      | 0.31      |          |           |           |           |
| 8/23/2017  | 0.16       | 0.16      | 0.55      | 0.38      |          |           |           |           |
| 10/12/2017 |            |           |           |           | 0.35     | 0.15      | 0.17      | 0.22      |
| 10/13/2017 |            |           |           |           | 0.36     | 0.15      | 0.19      | 0.23      |
| 10/14/2017 |            |           |           |           | 0.37     | 0.14      | 0.2       | 0.22      |
| 10/15/2017 |            |           |           |           | 0.37     | 0.14      | 0.2       | 0.22      |
| 10/16/2017 |            |           |           |           | 0.36     | 0.14      | 0.2       | 0.22      |
| 10/17/2017 |            |           |           |           | 0.35     | 0.14      | 0.19      | 0.21      |
| 11/16/2017 |            |           |           |           | 0.37     | 0.14      | 0.18      | 0.22      |
| 2/13/2018  | 0.14 (D)   | 0.22 (D)  | 0.27 (D)  | 0.38 (D)  |          |           |           |           |
| 2/14/2018  |            |           |           |           | 0.33 (D) | 0.13 (D)  | 0.18 (D)  | 0.21 (D)  |
| 5/22/2018  | 0.16       | 0.17      |           |           |          |           |           |           |
| 5/23/2018  |            |           |           | 0.38      | 0.29     | 0.13      | 0.18      | 0.21      |
| 5/24/2018  |            |           | 0.6       |           |          |           |           |           |
| 6/12/2018  | 0.16       | 0.16      | 0.53      | 0.39      |          |           |           |           |
| 10/17/2018 | 0.18       | 0.16      | 0.63      | 0.39      |          |           |           |           |
| 11/19/2018 | 0.15       | 0.18      | 0.31      | 0.36      |          |           |           |           |
| 11/20/2018 |            |           |           |           | 0.32     | 0.14      | 0.19      | 0.21      |
| 4/10/2019  | 0.102      | 0.262     | 0.273     | 0.384     |          |           |           |           |
| 5/14/2019  | 0.119      | 0.17      | 0.281     | 0.335     | 0.22     |           |           |           |
| 5/15/2019  |            |           |           |           |          | 0.133     | 0.169     | 0.192     |
| 10/8/2019  | 0.0924 (J) | 0.164     | 0.225     |           |          |           | 0.183     |           |
| 10/9/2019  |            |           |           |           |          |           |           | 0.189     |
| 10/10/2019 |            |           |           | 0.304     | 0.338    | 0.124     |           |           |
| 10/16/2019 | 0.0756 (J) | 0.114     | 0.106     | 0.302     |          |           |           |           |
| 4/6/2020   | 0.101      | 0.207     | 0.314     | 0.368     |          |           |           |           |
| 4/7/2020   |            |           |           |           | 0.225    |           |           |           |
| 4/8/2020   |            |           |           |           |          | <0.1      | 0.153     | 0.192     |
| 7/13/2020  | 0.0678 (J) | 0.132     | 0.13      |           |          |           |           |           |
| 7/14/2020  |            |           |           | 0.33      | 0.263    | 0.115     | 0.193     |           |
| 7/15/2020  |            |           |           |           |          |           |           | 0.196     |
| 2/22/2021  | 0.082 (J)  | 0.209     | 0.246     | 0.357     |          |           |           |           |
| 2/23/2021  |            |           |           |           | 0.287    | 0.139     | 0.2       | 0.208     |

# Time Series

Constituent: Lead (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg)   | MW-4 (bg) | MW-5      | MW-6      | MW-7      | MW-8      |
|------------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| 4/25/2016  |           | <0.000203 | <0.000203   | <0.000203 | <0.000203 |           |           |           |
| 4/26/2016  | <0.000203 |           |             |           |           |           |           |           |
| 4/27/2016  |           |           |             |           |           | <0.000203 | <0.000203 | <0.000203 |
| 6/20/2016  | <0.000203 | <0.000203 |             | <0.000203 |           |           |           |           |
| 6/21/2016  |           |           |             |           | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 6/22/2016  |           |           | <0.000203   |           |           |           |           |           |
| 8/8/2016   | <0.000203 | <0.000203 |             |           |           |           |           |           |
| 8/9/2016   |           |           | <0.000203   | <0.000203 |           |           |           |           |
| 8/24/2016  | <0.000203 | <0.000203 | <0.000203   | <0.000203 |           |           |           |           |
| 10/3/2016  | <0.000203 | <0.000203 |             | <0.000203 |           |           |           |           |
| 10/4/2016  |           |           | <0.000203   |           |           |           |           |           |
| 10/26/2016 | <0.000203 | <0.000203 | <0.000203   | <0.000203 |           |           |           |           |
| 11/21/2016 | <0.000203 | <0.000203 | <0.000203   | <0.000203 |           |           |           |           |
| 1/17/2017  | <0.000203 | <0.000203 |             |           |           |           |           |           |
| 1/18/2017  |           |           | <0.000203   | <0.000203 |           |           |           |           |
| 3/22/2017  | <0.000203 | <0.000203 | <0.000203   | <0.000203 |           |           |           |           |
| 4/18/2017  | <0.000203 | <0.000203 | <0.000203   | <0.000203 |           |           |           |           |
| 5/30/2017  | <0.000203 |           |             |           |           |           |           |           |
| 5/31/2017  |           | <0.000203 | <0.000203   | <0.000203 |           |           |           |           |
| 10/12/2017 |           |           |             |           | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 10/13/2017 |           |           |             |           | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 10/14/2017 |           |           |             |           | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 10/15/2017 |           |           |             |           | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 10/16/2017 |           |           |             |           | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 10/17/2017 |           |           |             |           | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 2/13/2018  | <0.000203 | <0.000203 | <0.000203   | <0.000203 |           |           |           |           |
| 2/14/2018  |           |           |             |           | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 5/22/2018  | <0.000203 | <0.000203 |             |           |           |           |           |           |
| 5/23/2018  |           |           |             | <0.000203 | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 5/24/2018  |           |           | <0.000203   |           |           |           |           |           |
| 6/12/2018  | <0.000203 | <0.000203 | <0.000203   | <0.000203 |           |           |           |           |
| 10/17/2018 | <0.000203 | <0.000203 | 0.00102 (J) | <0.000203 |           |           |           |           |
| 11/19/2018 | <0.000203 | <0.000203 | 0.00692     | <0.000203 |           |           |           |           |
| 11/20/2018 |           |           |             |           | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 4/10/2019  | <0.000203 | <0.000203 | <0.000203   | <0.000203 |           |           |           |           |
| 5/14/2019  | <0.000203 | <0.000203 | <0.000203   | <0.000203 | <0.000203 |           |           |           |
| 5/15/2019  |           |           |             |           |           | <0.000203 | <0.000203 | <0.000203 |
| 10/8/2019  | <0.000203 | <0.000203 | <0.000203   |           |           |           | <0.000203 |           |
| 10/9/2019  |           |           |             |           |           |           |           | <0.000203 |
| 10/10/2019 |           |           |             | <0.000203 | <0.000203 | <0.000203 |           |           |
| 10/16/2019 | <0.000203 | <0.000203 | 0.00108 (J) | <0.000203 |           |           |           |           |
| 4/6/2020   | <0.000203 | <0.000203 | <0.000203   | <0.000203 |           |           |           |           |
| 4/7/2020   |           |           |             |           | <0.000203 |           |           |           |
| 4/8/2020   |           |           |             |           |           | <0.000203 | <0.000203 | <0.000203 |
| 7/13/2020  | <0.000203 | <0.000203 | <0.000203   |           |           |           |           |           |
| 7/14/2020  |           |           |             | <0.000203 | <0.000203 | <0.000203 | <0.000203 |           |
| 7/15/2020  |           |           |             |           |           |           |           | <0.000203 |
| 2/22/2021  | <0.000203 | <0.000203 | 8.8E-05 (J) | <0.000203 |           |           |           |           |
| 2/23/2021  |           |           |             |           | <0.000203 | <0.000203 | <0.000203 | <0.000203 |



# Time Series

Constituent: Lithium (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)  | MW-2 (bg)  | MW-3 (bg) | MW-4 (bg)  | MW-5   | MW-6   | MW-7  | MW-8  |
|------------|------------|------------|-----------|------------|--------|--------|-------|-------|
| 4/25/2016  |            | 0.0353 (J) | 0.0964    | 0.0528     | 0.0977 |        |       |       |
| 4/26/2016  | 0.0264 (J) |            |           |            |        |        |       |       |
| 4/27/2016  |            |            |           |            |        | 0.253  | 0.163 | 0.171 |
| 6/20/2016  | 0.0246 (J) | 0.0583     |           | 0.0554     |        |        |       |       |
| 6/21/2016  |            |            |           |            | 0.0972 | 0.253  | 0.171 | 0.181 |
| 6/22/2016  |            |            | 0.156     |            |        |        |       |       |
| 8/8/2016   | 0.0229 (J) | 0.0627     |           |            |        |        |       |       |
| 8/9/2016   |            |            | 0.122     | 0.0452 (J) |        |        |       |       |
| 8/24/2016  | 0.0236 (J) | 0.0651     | 0.138     | 0.0488 (J) |        |        |       |       |
| 10/3/2016  | 0.0229 (J) | 0.0622     |           | 0.0476 (J) |        |        |       |       |
| 10/4/2016  |            |            | 0.0966    |            |        |        |       |       |
| 10/26/2016 | 0.0227 (J) | 0.0293 (J) | 0.134     | 0.049 (J)  |        |        |       |       |
| 11/21/2016 | 0.0236 (J) | 0.0667     | 0.167     | 0.0477 (J) |        |        |       |       |
| 1/17/2017  | 0.0228 (J) | 0.0636     |           |            |        |        |       |       |
| 1/18/2017  |            |            | 0.237     | 0.045 (J)  |        |        |       |       |
| 3/22/2017  | 0.0238 (J) | 0.0464 (J) | 0.203     | 0.0493 (J) |        |        |       |       |
| 4/18/2017  | 0.0242 (J) | 0.0446 (J) | 0.0764    | 0.0494 (J) |        |        |       |       |
| 5/30/2017  | 0.0229 (J) |            |           |            |        |        |       |       |
| 5/31/2017  |            | 0.0496 (J) | 0.218     | 0.0501     |        |        |       |       |
| 10/12/2017 |            |            |           |            | 0.093  | 0.249  | 0.134 | 0.182 |
| 10/13/2017 |            |            |           |            | 0.0935 | 0.249  | 0.127 | 0.189 |
| 10/14/2017 |            |            |           |            | 0.0931 | 0.244  | 0.112 | 0.177 |
| 10/15/2017 |            |            |           |            | 0.0968 | 0.259  | 0.129 | 0.191 |
| 10/16/2017 |            |            |           |            | 0.0963 | 0.259  | 0.122 | 0.189 |
| 10/17/2017 |            |            |           |            | 0.0949 | 0.249  | 0.122 | 0.184 |
| 2/13/2018  | 0.0233 (J) | 0.0615     | 0.0964    | 0.0446 (J) |        |        |       |       |
| 2/14/2018  |            |            |           |            | 0.0989 | 0.242  | 0.131 | 0.183 |
| 5/22/2018  | 0.0263 (J) | 0.0465 (J) |           |            |        |        |       |       |
| 5/23/2018  |            |            |           | 0.0513     | 0.103  | 0.266  | 0.129 | 0.194 |
| 5/24/2018  |            |            | 0.145     |            |        |        |       |       |
| 6/12/2018  | 0.0251 (J) | 0.0472 (J) | 0.194     | 0.0511     |        |        |       |       |
| 10/17/2018 | 0.025 (J)  | 0.0633     | 0.384     | 0.0532     |        |        |       |       |
| 11/19/2018 | 0.0241     | 0.0584     | 0.323     | 0.0467     |        |        |       |       |
| 11/20/2018 |            |            |           |            | 0.102  | 0.245  | 0.12  | 0.181 |
| 4/10/2019  | 0.0285     | 0.0574     | 0.0905    | 0.0504     |        |        |       |       |
| 5/14/2019  | 0.026 (J)  | 0.0445     | 0.0828    | 0.0485     | 0.116  |        |       |       |
| 5/15/2019  |            |            |           |            |        | 0.152  | 0.127 | 0.16  |
| 10/8/2019  | 0.0268     | 0.0677     | 0.419     |            |        |        | 0.131 |       |
| 10/9/2019  |            |            |           |            |        |        |       | 0.163 |
| 10/10/2019 |            |            |           | 0.054      | 0.0981 | 0.251  |       |       |
| 10/16/2019 | 0.0263     | 0.0661     | 0.337     | 0.052      |        |        |       |       |
| 4/6/2020   | 0.0278     | 0.0496     | 0.0689    | 0.0519     |        |        |       |       |
| 4/7/2020   |            |            |           |            | 0.133  |        |       |       |
| 4/8/2020   |            |            |           |            |        | 0.0489 | 0.117 | 0.149 |
| 7/13/2020  | 0.028      | 0.0615     | 0.256     |            |        |        |       |       |
| 7/14/2020  |            |            |           | 0.0543     | 0.11   | 0.223  | 0.103 |       |
| 7/15/2020  |            |            |           |            |        |        |       | 0.152 |
| 2/22/2021  | 0.0301     | 0.0625     | 0.126     | 0.0558     |        |        |       |       |
| 2/23/2021  |            |            |           |            | 0.133  | 0.253  | 0.131 | 0.166 |

# Time Series

Constituent: Mercury (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) | MW-5    | MW-6    | MW-7    | MW-8    |
|------------|-----------|-----------|-----------|-----------|---------|---------|---------|---------|
| 4/25/2016  |           | <0.0005   | <0.0005   | <0.0005   | <0.0005 |         |         |         |
| 4/26/2016  | <0.0005   |           |           |           |         |         |         |         |
| 4/27/2016  |           |           |           |           |         | <0.0005 | <0.0005 | <0.0005 |
| 6/20/2016  | <0.0005   | <0.0005   |           | <0.0005   |         |         |         |         |
| 6/21/2016  |           |           |           |           | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 6/22/2016  |           |           | <0.0005   |           |         |         |         |         |
| 8/8/2016   | <0.0005   | <0.0005   |           |           |         |         |         |         |
| 8/9/2016   |           |           | <0.0005   | <0.0005   |         |         |         |         |
| 8/24/2016  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 10/3/2016  | <0.0005   | <0.0005   |           | <0.0005   |         |         |         |         |
| 10/4/2016  |           |           | <0.0005   |           |         |         |         |         |
| 10/26/2016 | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 11/21/2016 | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 1/17/2017  | <0.0005   | <0.0005   |           |           |         |         |         |         |
| 1/18/2017  |           |           | <0.0005   | <0.0005   |         |         |         |         |
| 3/22/2017  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 4/18/2017  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 5/30/2017  | <0.0005   |           |           |           |         |         |         |         |
| 5/31/2017  |           | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 10/12/2017 |           |           |           |           | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/13/2017 |           |           |           |           | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/14/2017 |           |           |           |           | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/15/2017 |           |           |           |           | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/16/2017 |           |           |           |           | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/17/2017 |           |           |           |           | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 2/13/2018  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 2/14/2018  |           |           |           |           | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 5/22/2018  | <0.0005   | <0.0005   |           |           |         |         |         |         |
| 5/23/2018  |           |           |           | <0.0005   | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 5/24/2018  |           |           | <0.0005   |           |         |         |         |         |
| 6/12/2018  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 10/17/2018 | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 11/19/2018 | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 11/20/2018 |           |           |           |           | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 4/10/2019  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 5/14/2019  | <0.0005   | <0.0005   | <0.0005   | <0.0005   | <0.0005 |         |         |         |
| 5/15/2019  |           |           |           |           |         | <0.0005 | <0.0005 | <0.0005 |
| 10/8/2019  | <0.0005   | <0.0005   | <0.0005   |           |         |         | <0.0005 |         |
| 10/9/2019  |           |           |           |           |         |         |         | <0.0005 |
| 10/10/2019 |           |           |           | <0.0005   | <0.0005 | <0.0005 |         |         |
| 10/16/2019 | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 4/6/2020   | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 4/7/2020   |           |           |           |           | <0.0005 |         |         |         |
| 4/8/2020   |           |           |           |           |         | <0.0005 | <0.0005 | <0.0005 |
| 7/13/2020  | <0.0005   | <0.0005   | <0.0005   |           |         |         |         |         |
| 7/14/2020  |           |           |           | <0.0005   | <0.0005 | <0.0005 | <0.0005 |         |
| 7/15/2020  |           |           |           |           |         |         |         | <0.0005 |
| 2/22/2021  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |         |         |         |         |
| 2/23/2021  |           |           |           |           | <0.0005 | <0.0005 | <0.0005 | <0.0005 |

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/19/2021 5:23 PM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg)    | MW-5      | MW-6      | MW-7      | MW-8      |
|------------|-----------|-----------|-----------|--------------|-----------|-----------|-----------|-----------|
| 4/25/2016  |           | <0.000203 | <0.000203 | <0.000203    | <0.000203 |           |           |           |
| 4/26/2016  | <0.000203 |           |           |              |           |           |           |           |
| 4/27/2016  |           |           |           |              |           | <0.000203 | <0.000203 | <0.000203 |
| 6/20/2016  | <0.000203 | <0.000203 |           | <0.000203    |           |           |           |           |
| 6/21/2016  |           |           |           |              | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 6/22/2016  |           |           | <0.000203 |              |           |           |           |           |
| 8/8/2016   | <0.000203 | <0.000203 |           |              |           |           |           |           |
| 8/9/2016   |           |           | <0.000203 | <0.000203    |           |           |           |           |
| 8/24/2016  | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 10/3/2016  | <0.000203 | <0.000203 |           | <0.000203    |           |           |           |           |
| 10/4/2016  |           |           | <0.000203 |              |           |           |           |           |
| 10/26/2016 | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 11/21/2016 | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 1/17/2017  | <0.000203 | <0.000203 |           |              |           |           |           |           |
| 1/18/2017  |           |           | <0.000203 | <0.000203    |           |           |           |           |
| 3/22/2017  | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 4/18/2017  | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 5/30/2017  | <0.000203 |           |           |              |           |           |           |           |
| 5/31/2017  |           | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 10/12/2017 |           |           |           |              | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 10/13/2017 |           |           |           |              | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 10/14/2017 |           |           |           |              | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 10/15/2017 |           |           |           |              | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 10/16/2017 |           |           |           |              | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 10/17/2017 |           |           |           |              | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 2/13/2018  | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 2/14/2018  |           |           |           |              | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 5/22/2018  | <0.000203 | <0.000203 |           |              |           |           |           |           |
| 5/23/2018  |           |           |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 5/24/2018  |           |           | <0.000203 |              |           |           |           |           |
| 6/12/2018  | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 10/17/2018 | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 11/19/2018 | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 11/20/2018 |           |           |           |              | <0.000203 | <0.000203 | <0.000203 | <0.000203 |
| 4/10/2019  | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 5/14/2019  | <0.000203 | <0.000203 | <0.000203 | <0.000203    | <0.000203 |           |           |           |
| 5/15/2019  |           |           |           |              |           | <0.000203 | <0.000203 | <0.000203 |
| 10/8/2019  | <0.000203 | <0.000203 | <0.000203 |              |           |           | <0.000203 |           |
| 10/9/2019  |           |           |           |              |           |           |           | <0.000203 |
| 10/10/2019 |           |           |           | <0.000203    | <0.000203 | <0.000203 |           |           |
| 10/16/2019 | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 4/6/2020   | <0.000203 | <0.000203 | <0.000203 | <0.000203    |           |           |           |           |
| 4/7/2020   |           |           |           |              | <0.000203 |           |           |           |
| 4/8/2020   |           |           |           |              |           | <0.000203 | <0.000203 | <0.000203 |
| 7/13/2020  | <0.000203 | <0.000203 | <0.000203 |              |           |           |           |           |
| 7/14/2020  |           |           |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 |           |
| 7/15/2020  |           |           |           |              |           |           |           | <0.000203 |
| 2/22/2021  | <0.000203 | <0.000203 | <0.000203 | 0.000131 (J) |           |           |           |           |
| 2/23/2021  |           |           |           |              | 0.0014    | 0.000285  | 0.00107   | 0.0129    |

# Time Series

Constituent: pH, Field (SU) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) | MW-5 | MW-6 | MW-7 | MW-8 |
|------------|-----------|-----------|-----------|-----------|------|------|------|------|
| 4/25/2016  |           | 5.94      | 5.56      | 6.22      | 6.37 |      |      |      |
| 4/26/2016  | 5.2       |           |           |           |      |      |      |      |
| 4/27/2016  |           |           |           |           |      | 6.18 | 6.6  | 6.55 |
| 6/20/2016  | 5.18      | 5.96      |           | 6.21      |      |      |      |      |
| 6/21/2016  |           |           |           |           | 6.35 | 6.23 | 6.62 | 6.47 |
| 6/22/2016  |           |           | 5.57      |           |      |      |      |      |
| 8/8/2016   | 5.12      | 5.88      |           |           |      |      |      |      |
| 8/9/2016   |           |           | 5.67      | 6.11      |      |      |      |      |
| 8/24/2016  |           |           | 5.63      | 6.11      |      |      |      |      |
| 10/3/2016  | 5.21 (D)  | 5.91 (D)  |           | 6.13 (D)  |      |      |      |      |
| 10/4/2016  |           |           | 5.69 (D)  |           |      |      |      |      |
| 10/26/2016 | 5.2       | 5.84      | 5.56      | 6.12      |      |      |      |      |
| 11/21/2016 | 5.19 (D)  | 5.82 (D)  | 5.42 (D)  | 6.09 (D)  |      |      |      |      |
| 1/17/2017  | 5.17 (D)  | 5.87 (D)  |           |           |      |      |      |      |
| 1/18/2017  |           |           | 5.11 (D)  | 6.09 (D)  |      |      |      |      |
| 3/22/2017  | 5.2 (D)   | 6.01 (D)  | 4.52 (D)  | 6.15 (D)  |      |      |      |      |
| 4/18/2017  | 5.2       | 6.02      | 5.84      | 6.19      |      |      |      |      |
| 5/30/2017  | 5.14 (D)  |           |           |           |      |      |      |      |
| 5/31/2017  |           | 5.85 (D)  | 4.56 (D)  | 6.13 (D)  |      |      |      |      |
| 8/23/2017  | 5.12 (D)  | 5.89 (D)  | 4.77 (D)  | 6.12 (D)  |      |      |      |      |
| 10/12/2017 |           |           |           |           | 6.38 | 6.22 | 6.64 | 6.5  |
| 10/13/2017 |           |           |           |           | 6.43 | 6.23 | 6.64 | 6.51 |
| 10/14/2017 |           |           |           |           | 6.41 | 6.22 | 6.66 | 6.53 |
| 10/15/2017 |           |           |           |           | 6.42 | 6.22 | 6.67 | 6.53 |
| 10/16/2017 |           |           |           |           | 6.42 | 6.21 | 6.67 | 6.54 |
| 10/17/2017 |           |           |           |           | 6.41 | 6.2  | 6.66 | 6.54 |
| 11/16/2017 |           |           |           |           | 6.53 | 6.28 | 6.62 | 6.51 |
| 2/13/2018  | 5.18      | 6.21      | 5.67      | 6.22      |      |      |      |      |
| 2/14/2018  |           |           |           |           | 6.39 | 6.17 | 6.67 | 6.55 |
| 5/22/2018  | 5.2       | 6.04      |           |           |      |      |      |      |
| 5/23/2018  |           |           |           | 6.21      | 6.39 | 6.12 | 6.63 | 6.52 |
| 5/24/2018  |           |           | 5.19      |           |      |      |      |      |
| 6/12/2018  | 5.15      | 5.95      | 4.79      | 6.16      |      |      |      |      |
| 10/17/2018 | 5.12      | 5.9       | 4.75      | 6.12      |      |      |      |      |
| 11/19/2018 | 5.09      | 6.03      | 3.77 (E)  | 6.16      |      |      |      |      |
| 11/20/2018 |           |           |           |           | 6.39 | 6.14 | 6.61 | 6.58 |
| 4/10/2019  | 5.11      | 6.1       | 5.54      | 6.14      |      |      |      |      |
| 5/14/2019  | 5.19      | 6.07      | 5.71      | 6.23      | 6.34 |      |      |      |
| 5/15/2019  |           |           |           |           |      | 5.72 | 6.61 | 6.6  |
| 10/8/2019  | 5.12      | 5.96      | 4.98      |           |      |      | 6.52 |      |
| 10/9/2019  |           |           |           |           |      |      |      | 6.67 |
| 10/10/2019 |           |           |           | 6.15      | 6.43 | 6.16 |      |      |
| 10/16/2019 | 5.16      | 5.98      | 4.51      | 6.19      |      |      |      |      |
| 4/6/2020   | 5.21      | 6.21      | 5.91      | 6.35      |      |      |      |      |
| 4/7/2020   |           |           |           |           | 6.43 |      |      |      |
| 4/8/2020   |           |           |           |           |      | 4.98 | 6.64 | 6.7  |
| 7/13/2020  | 5.14      | 5.84      | 5.16      |           |      |      |      |      |
| 7/14/2020  |           |           |           | 6.2       | 6.48 | 6.12 | 6.52 |      |
| 7/15/2020  |           |           |           |           |      |      |      | 6.71 |
| 2/22/2021  | 5.06      | 6.1       | 5.59      | 6.19      |      |      |      |      |
| 2/23/2021  |           |           |           |           | 6.47 | 6.13 | 6.7  | 6.73 |

# Time Series

Constituent: Selenium (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)   | MW-2 (bg)   | MW-3 (bg)   | MW-4 (bg)   | MW-5        | MW-6      | MW-7        | MW-8      |
|------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|
| 4/25/2016  |             | <0.001015   | <0.001015   | <0.001015   | <0.001015   |           |             |           |
| 4/26/2016  | 0.00261 (J) |             |             |             |             |           |             |           |
| 4/27/2016  |             |             |             |             |             | <0.001015 | 0.00445 (J) | <0.001015 |
| 6/20/2016  | 0.00242 (J) | <0.001015   |             | <0.001015   |             |           |             |           |
| 6/21/2016  |             |             |             |             | <0.001015   | <0.001015 | <0.001015   | <0.001015 |
| 6/22/2016  |             |             | <0.001015   |             |             |           |             |           |
| 8/8/2016   | 0.00253 (J) | <0.001015   |             |             |             |           |             |           |
| 8/9/2016   |             |             | <0.001015   | <0.001015   |             |           |             |           |
| 8/24/2016  | <0.001015   | <0.001015   | <0.001015   | <0.001015   |             |           |             |           |
| 10/3/2016  | 0.00211 (J) | <0.001015   |             | <0.001015   |             |           |             |           |
| 10/4/2016  |             |             | <0.001015   |             |             |           |             |           |
| 10/26/2016 | <0.001015   | <0.001015   | <0.001015   | <0.001015   |             |           |             |           |
| 11/21/2016 | <0.001015   | <0.001015   | <0.001015   | <0.001015   |             |           |             |           |
| 1/17/2017  | <0.001015   | <0.001015   |             |             |             |           |             |           |
| 1/18/2017  |             |             | <0.001015   | <0.001015   |             |           |             |           |
| 3/22/2017  | 0.0022 (J)  | <0.001015   | 0.0141      | <0.001015   |             |           |             |           |
| 4/18/2017  | 0.0027 (J)  | <0.001015   | 0.0158      | <0.001015   |             |           |             |           |
| 5/30/2017  | 0.00316 (J) |             |             |             |             |           |             |           |
| 5/31/2017  |             | <0.001015   | 0.00632 (J) | <0.001015   |             |           |             |           |
| 10/12/2017 |             |             |             |             | <0.001015   | <0.001015 | <0.001015   | <0.001015 |
| 10/13/2017 |             |             |             |             | <0.001015   | <0.001015 | <0.001015   | <0.001015 |
| 10/14/2017 |             |             |             |             | <0.001015   | <0.001015 | <0.001015   | <0.001015 |
| 10/15/2017 |             |             |             |             | 0.00254 (J) | <0.001015 | <0.001015   | <0.001015 |
| 10/16/2017 |             |             |             |             | <0.001015   | <0.001015 | <0.001015   | <0.001015 |
| 10/17/2017 |             |             |             |             | 0.00288 (J) | <0.001015 | <0.001015   | <0.001015 |
| 2/13/2018  | 0.00211 (J) | <0.001015   | 0.0209 (O)  | 0.00403 (J) |             |           |             |           |
| 2/14/2018  |             |             |             |             | <0.001015   | <0.001015 | <0.001015   | <0.001015 |
| 5/22/2018  | 0.00372 (J) | <0.001015   |             |             |             |           |             |           |
| 5/23/2018  |             |             |             | <0.001015   | <0.001015   | <0.001015 | <0.001015   | <0.001015 |
| 5/24/2018  |             |             | 0.00918 (J) |             |             |           |             |           |
| 6/12/2018  | 0.00409 (J) | <0.001015   | 0.00836 (J) | <0.001015   |             |           |             |           |
| 10/17/2018 | <0.001015   | <0.001015   | <0.001015   | <0.001015   |             |           |             |           |
| 11/19/2018 | <0.001015   | <0.001015   | 0.00439 (J) | 0.00436 (J) |             |           |             |           |
| 11/20/2018 |             |             |             |             | <0.001015   | <0.001015 | <0.001015   | <0.001015 |
| 4/10/2019  | 0.00471 (J) | 0.00322 (J) | 0.0113      | <0.001015   |             |           |             |           |
| 5/14/2019  | 0.00316 (J) | <0.001015   | 0.0119      | 0.00201 (J) | <0.001015   |           |             |           |
| 5/15/2019  |             |             |             |             |             | <0.001015 | <0.001015   | <0.001015 |
| 10/8/2019  | <0.001015   | <0.001015   | 0.00256 (J) |             |             | <0.001015 | <0.001015   |           |
| 10/9/2019  |             |             |             |             |             |           |             | <0.001015 |
| 10/10/2019 |             |             |             | <0.001015   | <0.001015   | <0.001015 |             |           |
| 10/16/2019 | <0.001015   | <0.001015   | 0.00286 (J) | <0.001015   |             |           |             |           |
| 4/6/2020   | 0.00275 (J) | <0.001015   | 0.01        | 0.00284 (J) |             |           |             |           |
| 4/7/2020   |             |             |             |             | <0.001015   |           |             |           |
| 4/8/2020   |             |             |             |             |             | <0.001015 | <0.001015   | <0.001015 |
| 7/13/2020  | 0.00245 (J) | <0.001015   | 0.0134      |             |             |           |             |           |
| 7/14/2020  |             |             |             | <0.001015   | <0.001015   | <0.001015 | <0.001015   |           |
| 7/15/2020  |             |             |             |             |             |           |             | <0.001015 |
| 2/22/2021  | 0.00241     | <0.001015   | 0.0181      | 0.00222     |             |           |             |           |
| 2/23/2021  |             |             |             |             | 0.00233     | <0.001015 | <0.001015   | <0.001015 |

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/19/2021 5:23 PM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) | MW-5 | MW-6 | MW-7     | MW-8 |
|------------|-----------|-----------|-----------|-----------|------|------|----------|------|
| 4/25/2016  |           | 745       | 1890      | 2260      | 2390 |      |          |      |
| 4/26/2016  | 1490      |           |           |           |      |      |          |      |
| 4/27/2016  |           |           |           |           |      | 2090 | 1050     | 1550 |
| 6/20/2016  | 1420      | 964       |           | 2500      |      |      |          |      |
| 6/21/2016  |           |           |           |           | 2500 | 2000 | 1410     | 1470 |
| 6/22/2016  |           |           | 2100      |           |      |      |          |      |
| 8/8/2016   | 1460      | 1100      |           |           |      |      |          |      |
| 8/9/2016   |           |           | 2050      | 2750      |      |      |          |      |
| 8/24/2016  | 1450      | 1130      | 2190      | 2770      |      |      |          |      |
| 10/3/2016  | 1460      | 1140      |           | 3060      |      |      |          |      |
| 10/4/2016  |           |           | 1950      |           |      |      |          |      |
| 10/26/2016 | 1330      | 1060      | 1980      | 2650      |      |      |          |      |
| 11/21/2016 | 1420      | 1100      | 2060      | 2720      |      |      |          |      |
| 1/17/2017  | 1350      | 1160      |           |           |      |      |          |      |
| 1/18/2017  |           |           | 2620      | 2650      |      |      |          |      |
| 3/22/2017  | 1500      | 900       | 3200      | 2700      |      |      |          |      |
| 4/18/2017  | 1300      | 870       | 2500      | 2400      |      |      |          |      |
| 5/30/2017  | 1400      |           |           |           |      |      |          |      |
| 5/31/2017  |           | 1100      | 2800      | 2700      |      |      |          |      |
| 8/23/2017  | 1500      | 920       | 2600      | 2700      |      |      |          |      |
| 10/12/2017 |           |           |           |           | 2300 | 2000 | 1400     | 1400 |
| 10/13/2017 |           |           |           |           | 2300 | 2000 | 1400     | 1600 |
| 10/14/2017 |           |           |           |           | 2300 | 1900 | 1300     | 1400 |
| 10/15/2017 |           |           |           |           | 2300 | 1900 | 1300     | 1400 |
| 10/16/2017 |           |           |           |           | 2300 | 1900 | 1300     | 1400 |
| 10/17/2017 |           |           |           |           | 2200 | 1900 | 1300     | 1400 |
| 11/16/2017 |           |           |           |           | 2200 | 1800 | 1300     | 1400 |
| 5/22/2018  | 2100      | 1200      |           |           |      |      |          |      |
| 5/23/2018  |           |           |           | 2400      | 2400 | 2000 | 1900 (O) | 2100 |
| 5/24/2018  |           |           | 2700      |           |      |      |          |      |
| 6/12/2018  | 1500      | 860       | 2500      | 2600      |      |      |          |      |
| 10/17/2018 | 1400      | 970       | 2700      | 2600      |      |      |          |      |
| 11/19/2018 | 1300      | 1000      | 3000      | 2400      |      |      |          |      |
| 11/20/2018 |           |           |           |           | 2500 | 2200 | 1100     | 1400 |
| 4/10/2019  | 1700      | 889       | 2460      | 2090      |      |      |          |      |
| 5/14/2019  | 1560      | 948       | 2460      | 2240      | 2380 |      |          |      |
| 5/15/2019  |           |           |           |           |      | 2110 | 1510     | 1640 |
| 10/8/2019  | 1540      | 1230      | 2950      |           |      |      | 1570     |      |
| 10/9/2019  |           |           |           |           |      |      |          | 1550 |
| 10/10/2019 |           |           |           | 2690      | 2460 | 2330 |          |      |
| 10/16/2019 | 1680      | 1170      | 2820      | 3050      |      |      |          |      |
| 4/6/2020   | 1530      | 786       | 1670      | 1810      |      |      |          |      |
| 4/7/2020   |           |           |           |           | 2050 |      |          |      |
| 4/8/2020   |           |           |           |           |      | 1900 | 1270     | 1380 |
| 7/13/2020  | 1450      | 843       | 2130      |           |      |      |          |      |
| 7/14/2020  |           |           |           | 1970      | 2080 | 1970 | 1330     |      |
| 7/15/2020  |           |           |           |           |      |      |          | 1410 |
| 2/22/2021  | 1400      | 864       | 3040      | 2040      |      |      |          |      |
| 2/23/2021  |           |           |           |           | 2210 | 2010 | 1320     | 1420 |

# Time Series

Constituent: Thallium (mg/L) Analysis Run 5/19/2021 5:23 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg)    | MW-4 (bg) | MW-5         | MW-6      | MW-7      | MW-8      |
|------------|-----------|-----------|--------------|-----------|--------------|-----------|-----------|-----------|
| 4/25/2016  |           | <0.000203 | 0.000205 (J) | <0.000203 | <0.000203    |           |           |           |
| 4/26/2016  | <0.000203 |           |              |           |              |           |           |           |
| 4/27/2016  |           |           |              |           |              | <0.000203 | <0.000203 | <0.000203 |
| 6/20/2016  | <0.000203 | <0.000203 |              | <0.000203 |              |           |           |           |
| 6/21/2016  |           |           |              |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 |
| 6/22/2016  |           |           | <0.000203    |           |              |           |           |           |
| 8/8/2016   | <0.000203 | <0.000203 |              |           |              |           |           |           |
| 8/9/2016   |           |           | <0.000203    | <0.000203 |              |           |           |           |
| 8/24/2016  | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 10/3/2016  | <0.000203 | <0.000203 |              | <0.000203 |              |           |           |           |
| 10/4/2016  |           |           | <0.000203    |           |              |           |           |           |
| 10/26/2016 | <0.000203 | <0.000203 | 0.000209 (J) | <0.000203 |              |           |           |           |
| 11/21/2016 | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 1/17/2017  | <0.000203 | <0.000203 |              |           |              |           |           |           |
| 1/18/2017  |           |           | <0.000203    | <0.000203 |              |           |           |           |
| 3/22/2017  | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 4/18/2017  | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 5/30/2017  | <0.000203 |           |              |           |              |           |           |           |
| 5/31/2017  |           | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 10/12/2017 |           |           |              |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 |
| 10/13/2017 |           |           |              |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 |
| 10/14/2017 |           |           |              |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 |
| 10/15/2017 |           |           |              |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 |
| 10/16/2017 |           |           |              |           | 0.000375 (J) | <0.000203 | <0.000203 | <0.000203 |
| 10/17/2017 |           |           |              |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 |
| 2/13/2018  | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 2/14/2018  |           |           |              |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 |
| 5/22/2018  | <0.000203 | <0.000203 |              |           |              |           |           |           |
| 5/23/2018  |           |           |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 | <0.000203 |
| 5/24/2018  |           |           | <0.000203    |           |              |           |           |           |
| 6/12/2018  | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 10/17/2018 | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 11/19/2018 | <0.000203 | <0.000203 | 0.000226 (J) | <0.000203 |              |           |           |           |
| 11/20/2018 |           |           |              |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 |
| 4/10/2019  | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 5/14/2019  | <0.000203 | <0.000203 | <0.000203    | <0.000203 | <0.000203    |           |           |           |
| 5/15/2019  |           |           |              |           |              | <0.000203 | <0.000203 | <0.000203 |
| 10/8/2019  | <0.000203 | <0.000203 | <0.000203    |           |              |           | <0.000203 |           |
| 10/9/2019  |           |           |              |           |              |           |           | <0.000203 |
| 10/10/2019 |           |           |              | <0.000203 | <0.000203    | <0.000203 |           |           |
| 10/16/2019 | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 4/6/2020   | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 4/7/2020   |           |           |              |           | <0.000203    |           |           |           |
| 4/8/2020   |           |           |              |           |              | <0.000203 | <0.000203 | <0.000203 |
| 7/13/2020  | <0.000203 | <0.000203 | <0.000203    |           |              |           |           |           |
| 7/14/2020  |           |           |              | <0.000203 | <0.000203    | <0.000203 | <0.000203 |           |
| 7/15/2020  |           |           |              |           |              |           |           | <0.000203 |
| 2/22/2021  | <0.000203 | <0.000203 | <0.000203    | <0.000203 |              |           |           |           |
| 2/23/2021  |           |           |              |           | <0.000203    | <0.000203 | <0.000203 | <0.000203 |

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/19/2021 5:23 PM

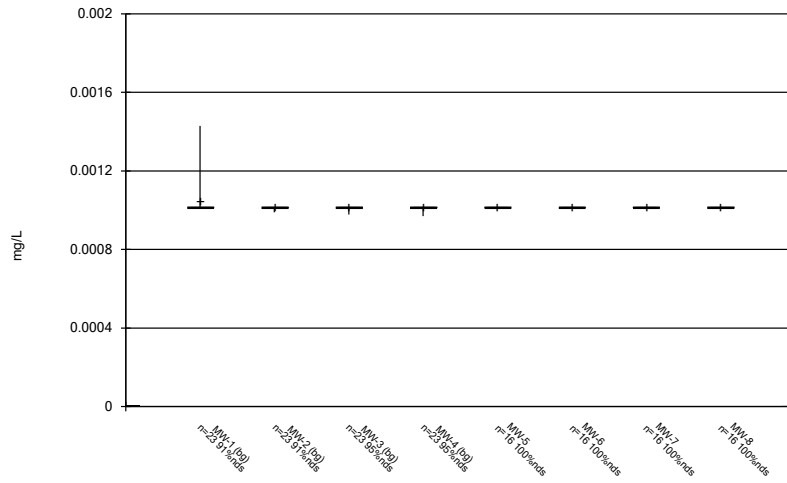
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) | MW-5 | MW-6 | MW-7 | MW-8 |
|------------|-----------|-----------|-----------|-----------|------|------|------|------|
| 4/25/2016  |           | 1260 (D)  | 2720 (D)  | 3300 (D)  | 3660 |      |      |      |
| 4/26/2016  | 2080 (D)  |           |           |           |      |      |      |      |
| 4/27/2016  |           |           |           |           |      | 3290 | 1640 | 2480 |
| 6/20/2016  | 2060 (D)  | 1620 (D)  |           | 3870 (D)  |      |      |      |      |
| 6/21/2016  |           |           |           |           | 3920 | 3250 | 2460 | 2360 |
| 6/22/2016  |           |           | 3250 (D)  |           |      |      |      |      |
| 8/8/2016   | 2070 (D)  | 1740 (D)  |           |           |      |      |      |      |
| 8/9/2016   |           |           | 3050 (D)  | 4140 (D)  |      |      |      |      |
| 8/24/2016  | 2040      | 1720      | 3080      | 4190      |      |      |      |      |
| 10/3/2016  | 2110 (D)  | 1800 (D)  |           | 4190 (D)  |      |      |      |      |
| 10/4/2016  |           |           | 2900 (D)  |           |      |      |      |      |
| 10/26/2016 | 2000      | 1800      | 2940      | 4400      |      |      |      |      |
| 11/21/2016 | 2070 (D)  | 1740 (D)  | 3090 (D)  | 4230 (D)  |      |      |      |      |
| 1/17/2017  | 1930 (D)  | 1960 (D)  |           |           |      |      |      |      |
| 1/18/2017  |           |           | 4020 (D)  | 4120 (D)  |      |      |      |      |
| 3/22/2017  | 2060 (D)  | 1510 (D)  | 4180 (D)  | 3980 (D)  |      |      |      |      |
| 4/18/2017  | 2140      | 1580      | 4440      | 3880      |      |      |      |      |
| 5/30/2017  | 2240 (D)  |           |           |           |      |      |      |      |
| 5/31/2017  |           | 1730 (D)  | 3970 (D)  | 4210 (D)  |      |      |      |      |
| 8/23/2017  | 2160 (D)  | 1550 (D)  | 4050 (D)  | 3990 (D)  |      |      |      |      |
| 10/12/2017 |           |           |           |           | 4000 | 3220 | 2460 | 2530 |
| 10/13/2017 |           |           |           |           | 3960 | 3250 | 2420 | 2740 |
| 10/14/2017 |           |           |           |           | 3910 | 3260 | 2320 | 2630 |
| 10/15/2017 |           |           |           |           | 3890 | 3260 | 1150 | 2530 |
| 10/16/2017 |           |           |           |           | 3980 | 3360 | 2320 | 2740 |
| 10/17/2017 |           |           |           |           | 3940 | 3420 | 2360 | 2650 |
| 11/16/2017 |           |           |           |           | 3930 | 3280 | 2460 | 2650 |
| 5/22/2018  | 2380 (D)  | 1500 (D)  |           |           |      |      |      |      |
| 5/23/2018  |           |           |           | 3740 (D)  | 3660 | 3340 | 2390 | 2750 |
| 5/24/2018  |           |           | 3680 (D)  |           |      |      |      |      |
| 6/12/2018  | 2400      | 1550      | 3820      | 4080      |      |      |      |      |
| 10/17/2018 | 2220      | 1740      | 4730      | 4250      |      |      |      |      |
| 11/19/2018 | 2360      | 1990      | 4710      | 3920      |      |      |      |      |
| 11/20/2018 |           |           |           |           | 3780 | 3330 | 2090 | 2520 |
| 4/10/2019  | 2630      | 1250      | 3680      | 3280      |      |      |      |      |
| 5/14/2019  | 2340 (D)  | 1480      | 3580 (D)  | 3130 (D)  | 3520 |      |      |      |
| 5/15/2019  |           |           |           |           |      | 3130 | 2310 | 2540 |
| 10/8/2019  | 2330      | 1840      | 4720      |           |      |      | 2340 |      |
| 10/9/2019  |           |           |           |           |      |      |      | 2590 |
| 10/10/2019 |           |           |           | 4000      | 3830 | 3260 |      |      |
| 10/16/2019 | 3650      | 1830      | 4210      | 4060      |      |      |      |      |
| 4/6/2020   | 2240      | 1440      | 2630      | 2820      |      |      |      |      |
| 4/7/2020   |           |           |           |           | 3270 |      |      |      |
| 4/8/2020   |           |           |           |           |      | 2940 | 2230 | 2450 |
| 7/13/2020  | 2240      | 1540      | 3650      |           |      |      |      |      |
| 7/14/2020  |           |           |           | 3310      | 3710 | 3270 | 2210 |      |
| 7/15/2020  |           |           |           |           |      |      |      | 2460 |
| 2/22/2021  | 2230      | 1620      | 4670      | 3190      |      |      |      |      |
| 2/23/2021  |           |           |           |           | 3740 | 3230 | 2320 | 2550 |



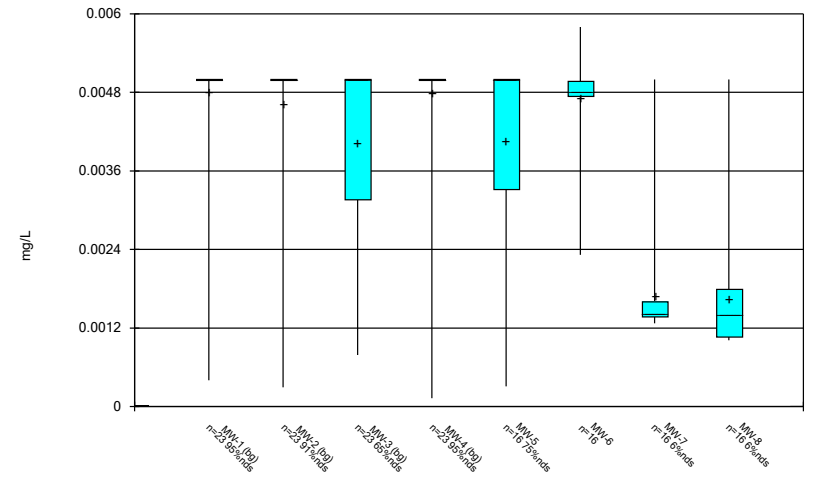
FIGURE B.

Box & Whiskers Plot



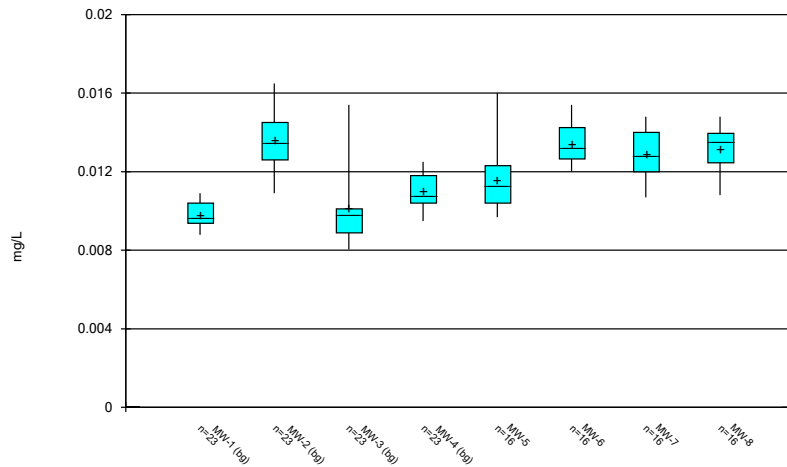
Constituent: Antimony Analysis Run 5/19/2021 5:24 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



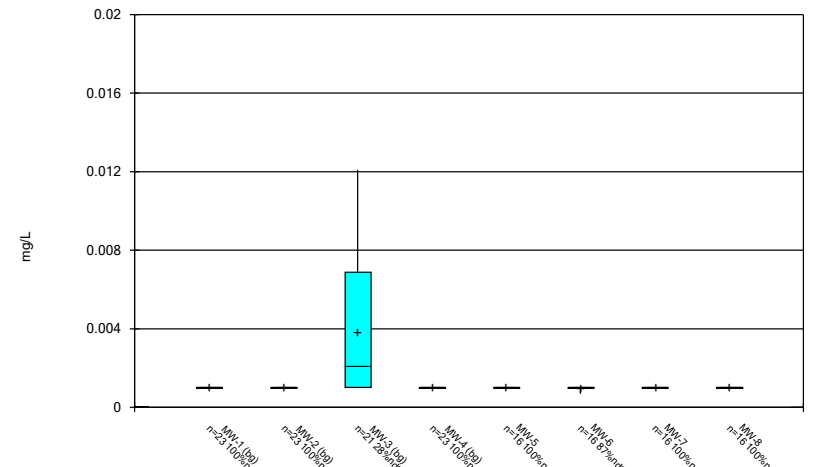
Constituent: Arsenic Analysis Run 5/19/2021 5:24 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



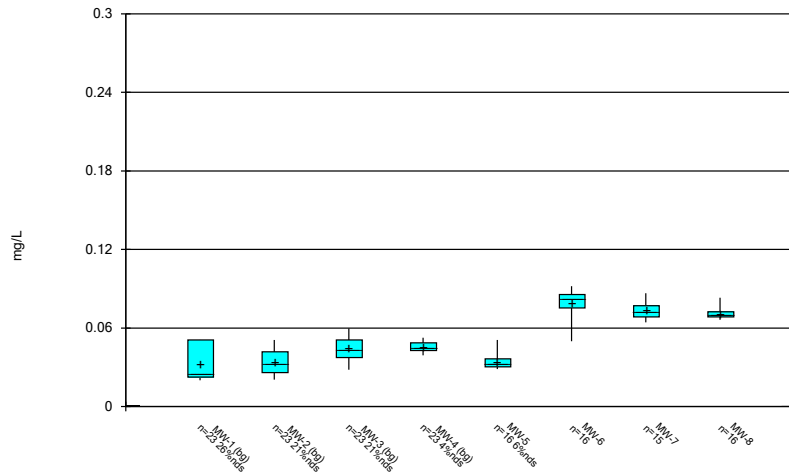
Constituent: Barium Analysis Run 5/19/2021 5:24 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



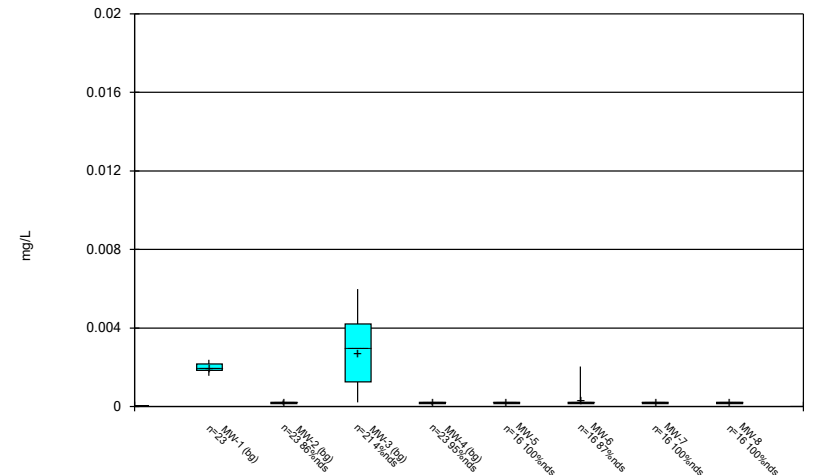
Constituent: Beryllium Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



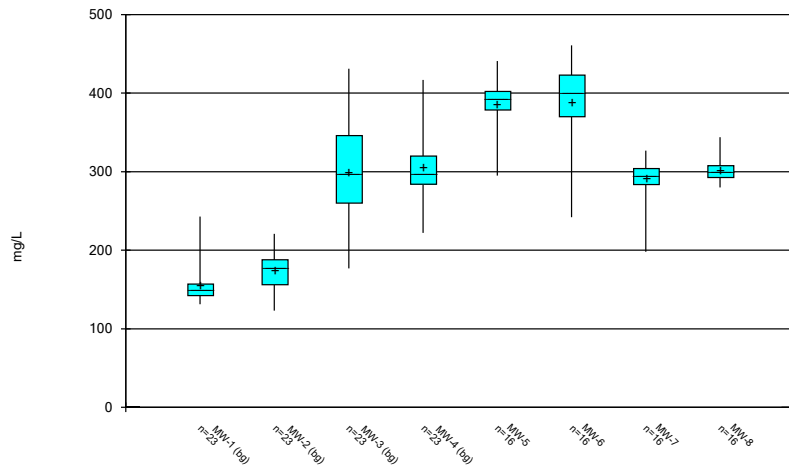
Constituent: Boron, total Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



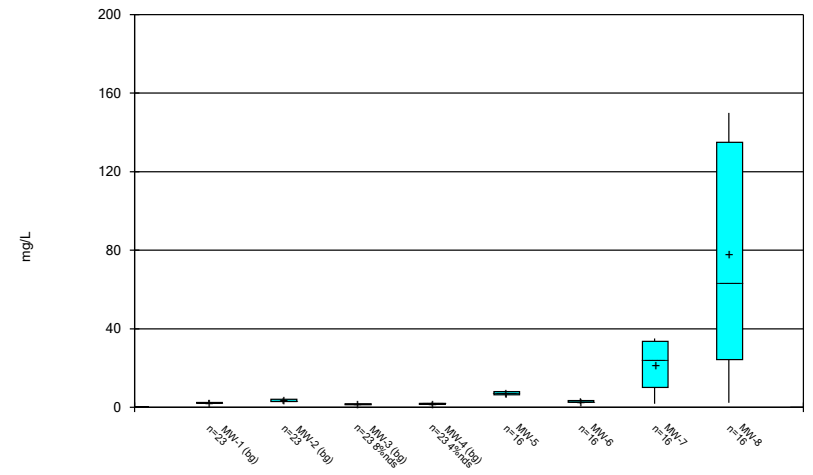
Constituent: Cadmium Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



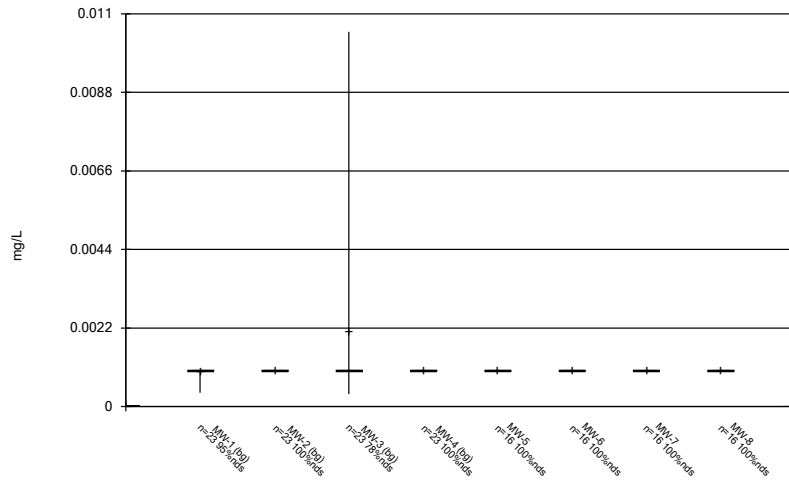
Constituent: Calcium, total Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



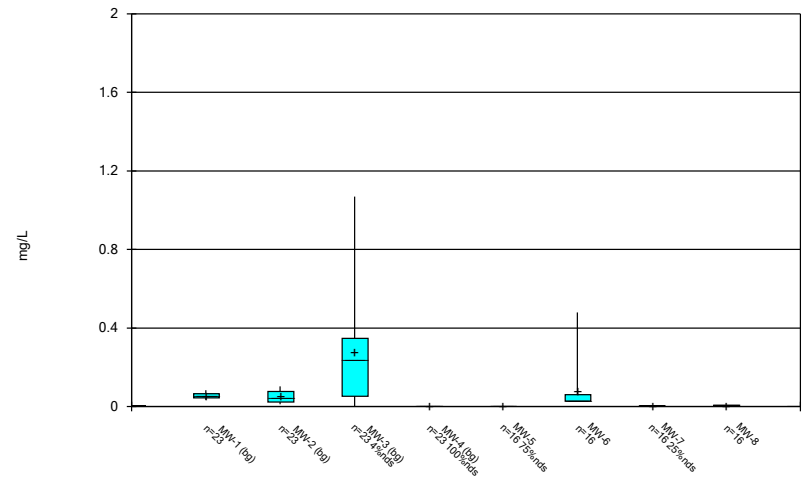
Constituent: Chloride, Total Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



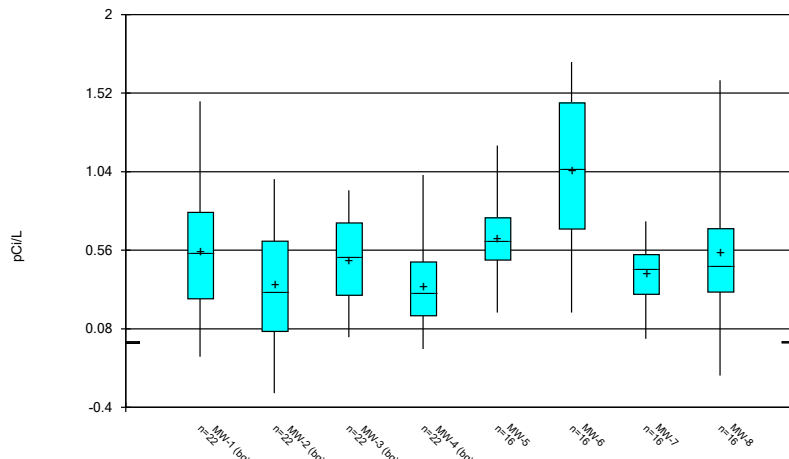
Constituent: Chromium Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



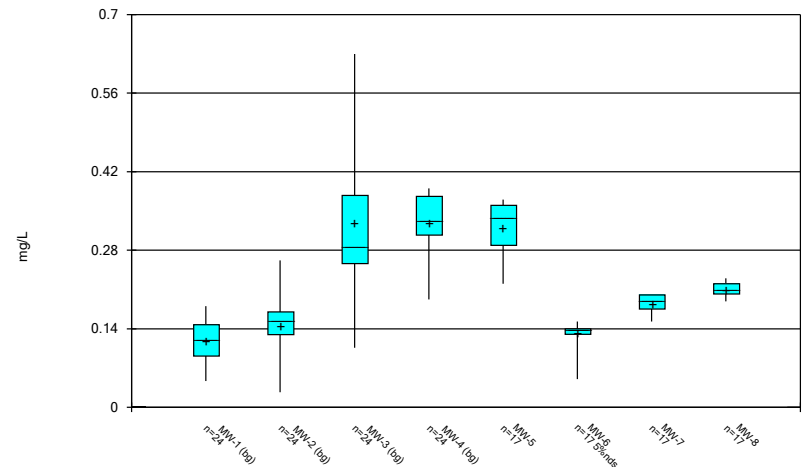
Constituent: Cobalt Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



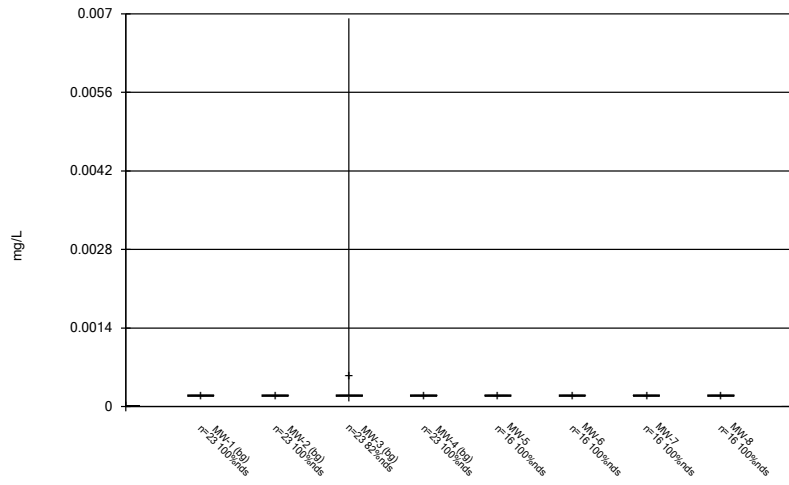
Constituent: Combined Radium 226 + 228 Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



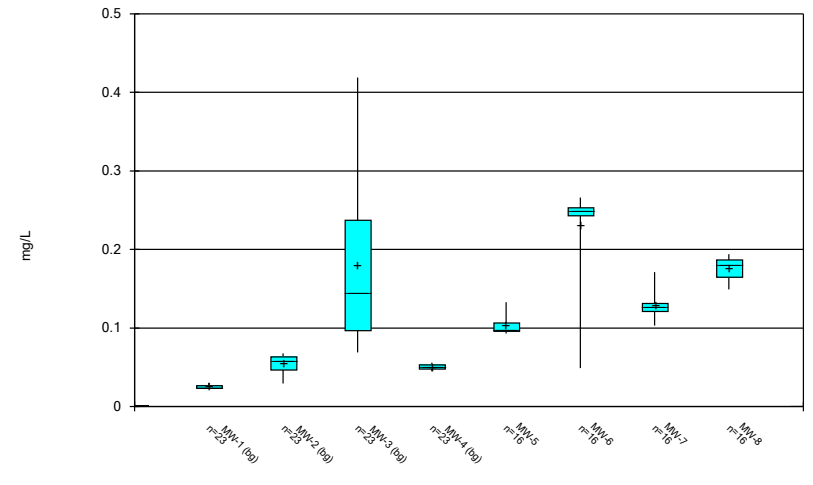
Constituent: Fluoride, total Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



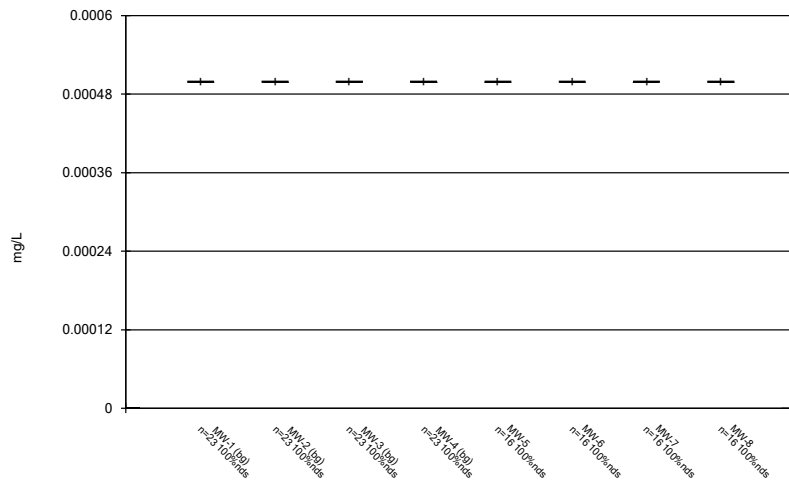
Constituent: Lead Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



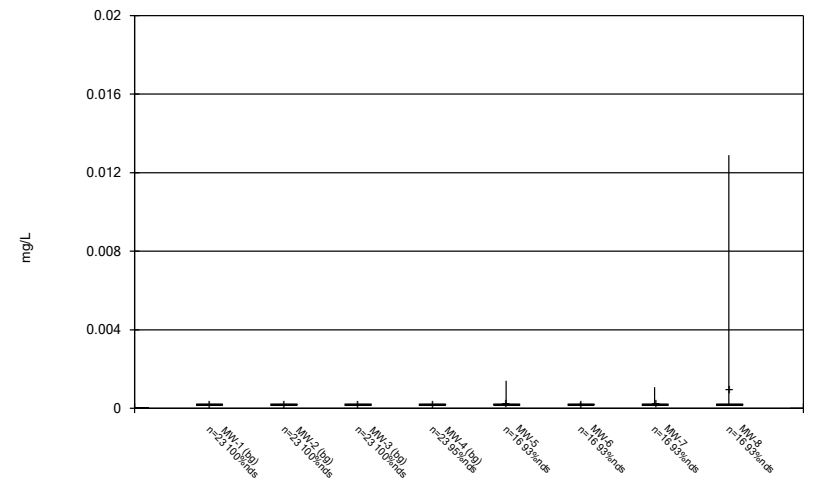
Constituent: Lithium Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



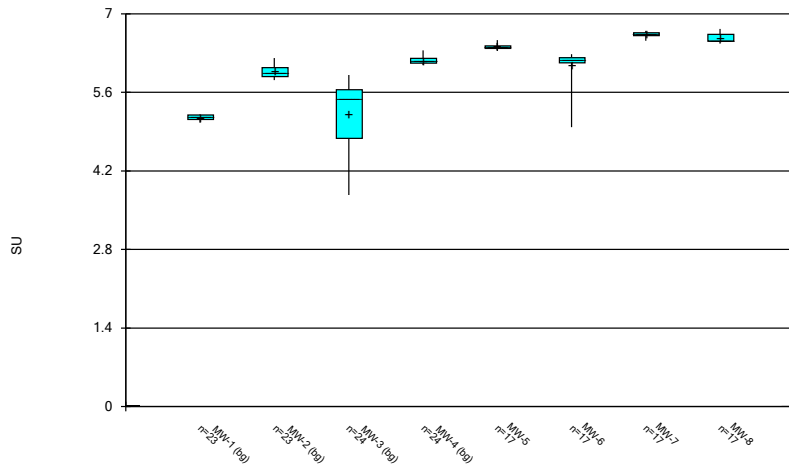
Constituent: Mercury Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



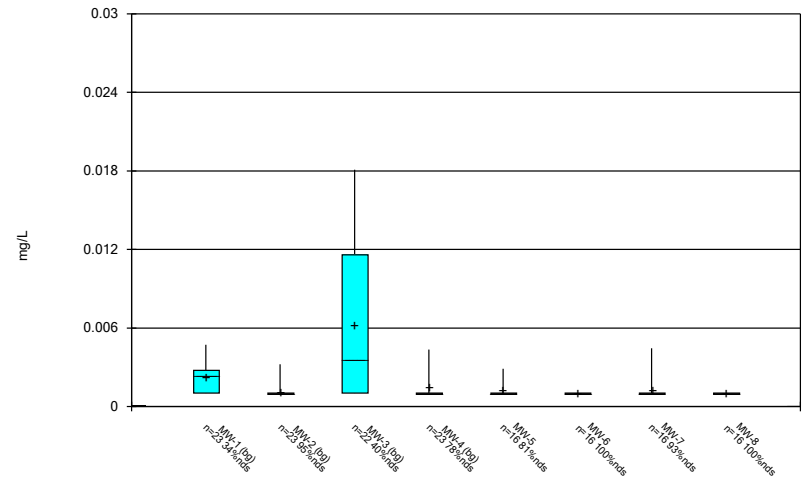
Constituent: Molybdenum Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



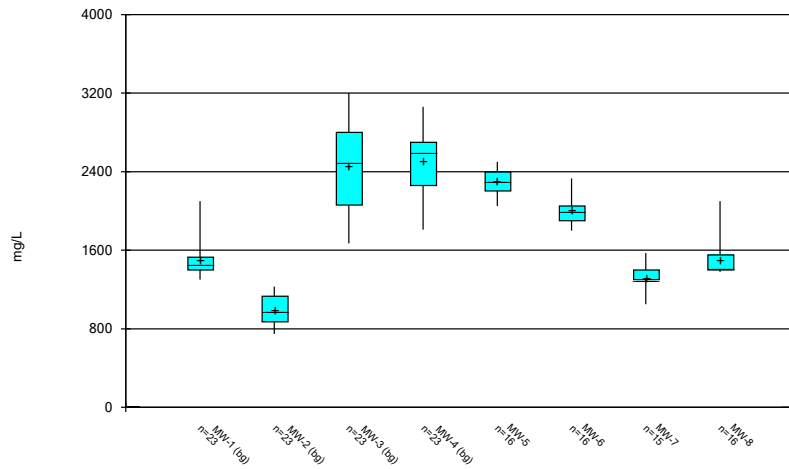
Constituent: pH, Field Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



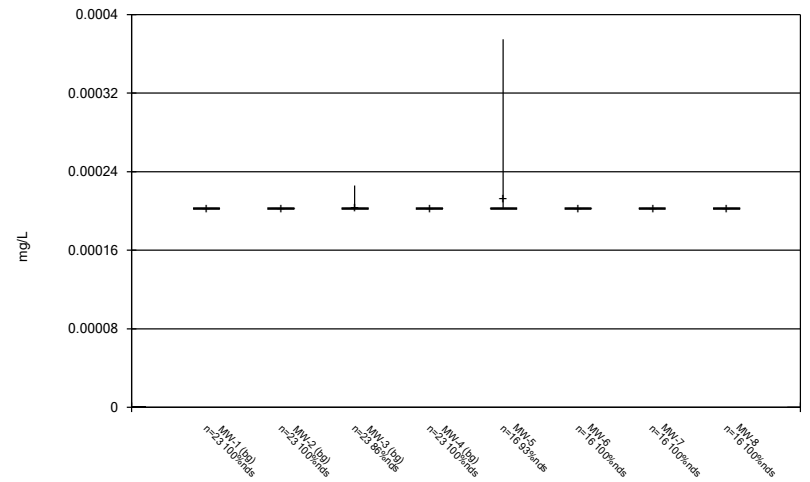
Constituent: Selenium Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



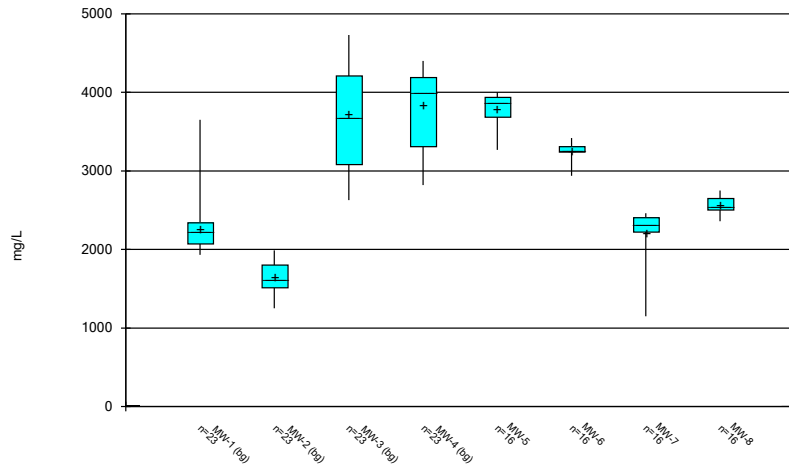
Constituent: Sulfate as SO4 Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



Constituent: Thallium Analysis Run 5/19/2021 5:25 PM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 5/19/2021 5:25 PM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

FIGURE C.



# Outlier Summary

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 5:28 PM

|            | MW-3 Beryllium (mg/L) | MW-7 Boron, total (mg/L) | MW-3 Cadmium (mg/L) | MW-3 Selenium (mg/L) | MW-7 Sulfate as SO4 (mg/L) |
|------------|-----------------------|--------------------------|---------------------|----------------------|----------------------------|
| 4/25/2016  |                       |                          | 0.0121 (O)          |                      |                            |
| 4/27/2016  |                       | 0.253 (O)                |                     |                      |                            |
| 1/18/2017  | 0.0169 (O)            |                          |                     |                      |                            |
| 2/13/2018  |                       |                          | 0.0209 (O)          |                      |                            |
| 5/23/2018  |                       |                          |                     |                      | 1900 (O)                   |
| 11/19/2018 | 0.0185 (O)            |                          |                     |                      |                            |
| 7/13/2020  |                       | 0.00885 (O)              |                     |                      |                            |

FIGURE D.

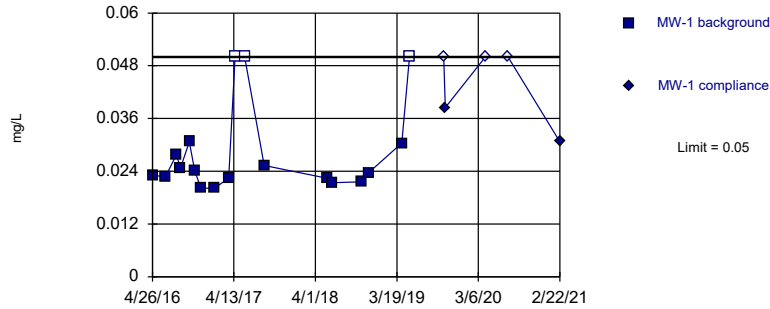
# Appendix III Intrawell Prediction Limits - All Results (No Significant)

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 5:35 PM

| Constituent                         | Well | Upper Lim. | Lower Lim. | Date      | Observ.   | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj.      | Transform | Alpha    | Method                      |
|-------------------------------------|------|------------|------------|-----------|-----------|------|------|---------|-----------|-------|--------------|-----------|----------|-----------------------------|
| Boron, total (mg/L)                 | MW-1 | 0.05       | n/a        | 2/22/2021 | 0.0307J   | No   | 18   | n/a     | n/a       | 16.67 | n/a          | n/a       | 0.005373 | NP Intra (normality) 1 of 2 |
| Boron, total (mg/L)                 | MW-2 | 0.04892    | n/a        | 2/22/2021 | 0.05075ND | No   | 18   | 0.1754  | 0.02252   | 11.11 | None         | sqrt(x)   | 0.00188  | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-3 | 0.05843    | n/a        | 2/22/2021 | 0.05075ND | No   | 18   | 0.0423  | 0.00794   | 16.67 | Kaplan-Meier | No        | 0.00188  | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-4 | 0.1015     | n/a        | 2/22/2021 | 0.0397J   | No   | 18   | n/a     | n/a       | 5.556 | n/a          | n/a       | 0.005373 | NP Intra (normality) 1 of 2 |
| Boron, total (mg/L)                 | MW-5 | 0.1015     | n/a        | 2/23/2021 | 0.0369J   | No   | 12   | n/a     | n/a       | 8.333 | n/a          | n/a       | 0.01077  | NP Intra (normality) 1 of 2 |
| Boron, total (mg/L)                 | MW-6 | 0.09671    | n/a        | 2/23/2021 | 0.0866J   | No   | 12   | 0.07943 | 0.007739  | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-7 | 0.08083    | n/a        | 2/23/2021 | 0.0803J   | No   | 11   | 0.07139 | 0.004105  | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-8 | 0.0831     | n/a        | 2/23/2021 | 0.0731J   | No   | 12   | n/a     | n/a       | 0     | n/a          | n/a       | 0.01077  | NP Intra (normality) 1 of 2 |
| Calcium, total (mg/L)               | MW-1 | 243        | n/a        | 2/22/2021 | 151       | No   | 18   | n/a     | n/a       | 0     | n/a          | n/a       | 0.005373 | NP Intra (normality) 1 of 2 |
| Calcium, total (mg/L)               | MW-2 | 218.6      | n/a        | 2/22/2021 | 178       | No   | 18   | 173.9   | 22.02     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-3 | 416.4      | n/a        | 2/22/2021 | 312       | No   | 18   | 301.6   | 56.48     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-4 | 388.7      | n/a        | 2/22/2021 | 271       | No   | 18   | 311.2   | 38.16     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-5 | 466.9      | n/a        | 2/23/2021 | 394       | No   | 12   | 382.1   | 38.01     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-6 | 471.6      | n/a        | 2/23/2021 | 428       | No   | 12   | 390.4   | 36.38     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-7 | 346.8      | n/a        | 2/23/2021 | 292       | No   | 12   | 2.6e7   | 6944823   | 0     | None         | x^3       | 0.00188  | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-8 | 341.4      | n/a        | 2/23/2021 | 306       | No   | 12   | 304.5   | 16.53     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-1 | 0.1975     | n/a        | 2/22/2021 | 0.082J    | No   | 19   | 0.1261  | 0.03556   | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-2 | 0.2572     | n/a        | 2/22/2021 | 0.209     | No   | 19   | 0.1404  | 0.05808   | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-3 | 0.6475     | n/a        | 2/22/2021 | 0.246     | No   | 19   | -1.063  | 0.3126    | 0     | None         | ln(x)     | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-4 | 0.4323     | n/a        | 2/22/2021 | 0.357     | No   | 19   | 0.1114  | 0.03754   | 0     | None         | x^2       | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-5 | 0.4265     | n/a        | 2/23/2021 | 0.287     | No   | 13   | 0.3334  | 0.04245   | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-6 | 0.1565     | n/a        | 2/23/2021 | 0.139     | No   | 13   | 0.1398  | 0.007628  | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-7 | 0.2139     | n/a        | 2/23/2021 | 0.2       | No   | 13   | 0.1855  | 0.01295   | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-8 | 0.2342     | n/a        | 2/23/2021 | 0.208     | No   | 13   | 0.2142  | 0.009112  | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-1 | 2100       | n/a        | 2/22/2021 | 1400      | No   | 18   | n/a     | n/a       | 0     | n/a          | n/a       | 0.005373 | NP Intra (normality) 1 of 2 |
| Sulfate as SO4 (mg/L)               | MW-2 | 1260       | n/a        | 2/22/2021 | 864       | No   | 18   | 1003    | 126.2     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-3 | 3202       | n/a        | 2/22/2021 | 3040      | No   | 18   | 2431    | 379.6     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-4 | 3041       | n/a        | 2/22/2021 | 2040      | No   | 18   | 2566    | 233.5     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-5 | 2558       | n/a        | 2/23/2021 | 2210      | No   | 12   | 2339    | 98.21     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-6 | 2232       | n/a        | 2/23/2021 | 2010      | No   | 12   | 1983    | 111.5     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-7 | 1613       | n/a        | 2/23/2021 | 1320      | No   | 11   | 1306    | 133.5     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-8 | 2100       | n/a        | 2/23/2021 | 1420      | No   | 12   | n/a     | n/a       | 0     | n/a          | n/a       | 0.01077  | NP Intra (normality) 1 of 2 |
| Total Dissolved Solids [TDS] (mg/L) | MW-1 | 2544       | n/a        | 2/22/2021 | 2230      | No   | 18   | 2183    | 178       | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-2 | 2052       | n/a        | 2/22/2021 | 1620      | No   | 18   | 1640    | 202.8     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-3 | 4938       | n/a        | 2/22/2021 | 4670      | No   | 18   | 3661    | 628.6     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-4 | 4601       | n/a        | 2/22/2021 | 3190      | No   | 18   | 1.6e7   | 2719774   | 0     | None         | x^2       | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-5 | 4190       | n/a        | 2/23/2021 | 3740      | No   | 12   | 3846    | 154.3     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-6 | 3448       | n/a        | 2/23/2021 | 3230      | No   | 12   | 3283    | 74.36     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-7 | 2647       | n/a        | 2/23/2021 | 2320      | No   | 12   | 6.3e16  | 3.0e16    | 0     | None         | x^5       | 0.00188  | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-8 | 2862       | n/a        | 2/23/2021 | 2550      | No   | 12   | 2593    | 120.2     | 0     | None         | No        | 0.00188  | Param Intra 1 of 2          |

Within Limit

Prediction Limit  
Intrawell Non-parametric

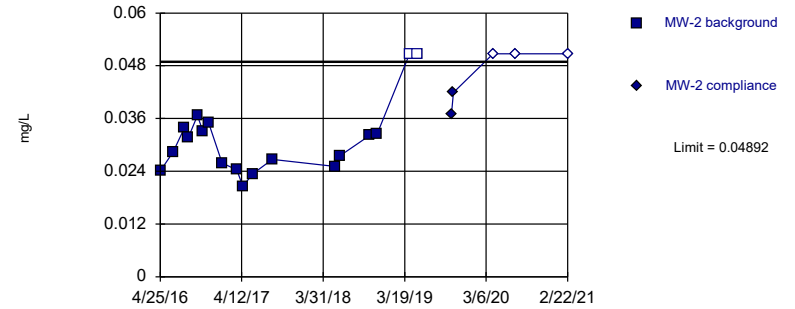


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. 16.67% NDs. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Constituent: Boron, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

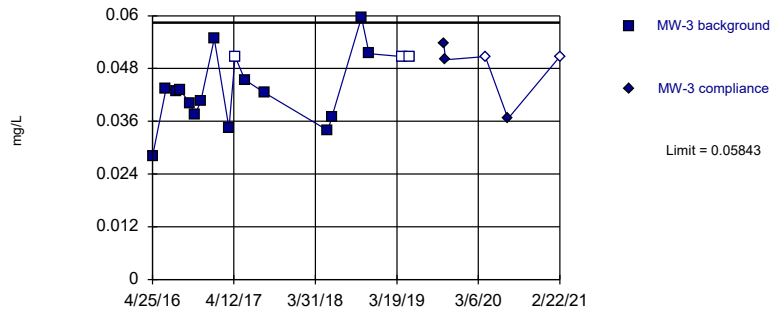


Background Data Summary (based on square root transformation): Mean=0.1754, Std. Dev.=0.02252, n=18, 11.11% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8959, critical = 0.858. Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Boron, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

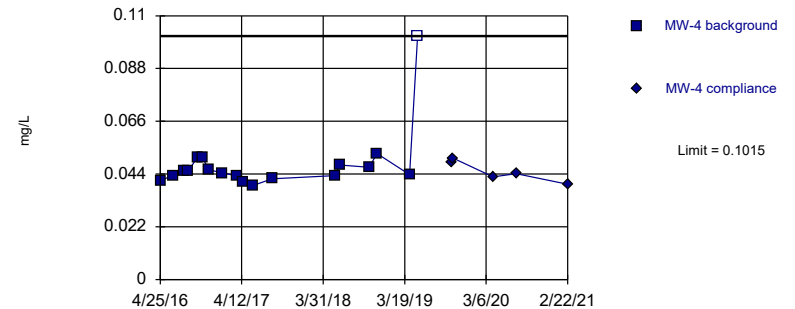


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.0423, Std. Dev.=0.00794, n=18, 16.67% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9792, critical = 0.858. Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Boron, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Non-parametric

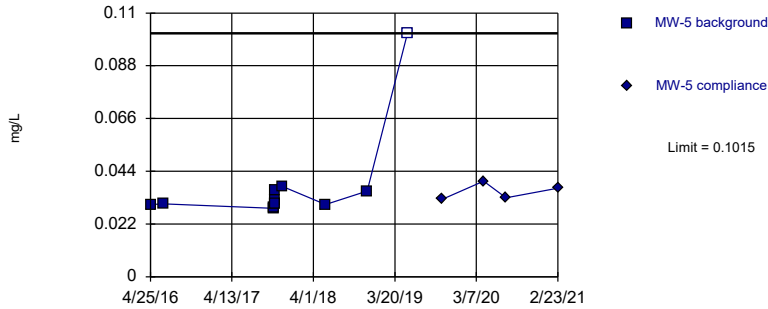


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. 5.556% NDs. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Constituent: Boron, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
 Intrawell Non-parametric

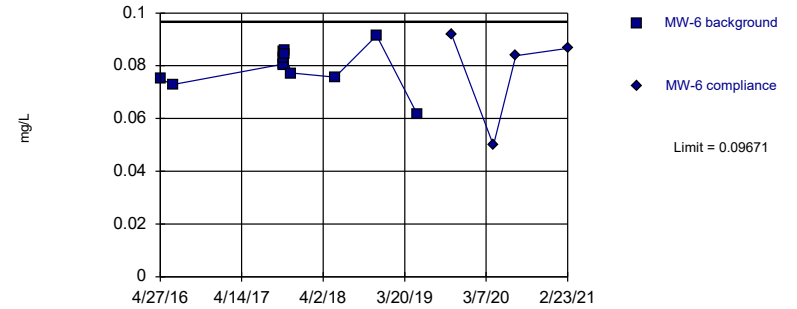


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 12 background values. 8.333% NDs. Well-constituent pair annual alpha = 0.02143. Individual comparison alpha = 0.01077 (1 of 2).

Constituent: Boron, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
 Intrawell Parametric

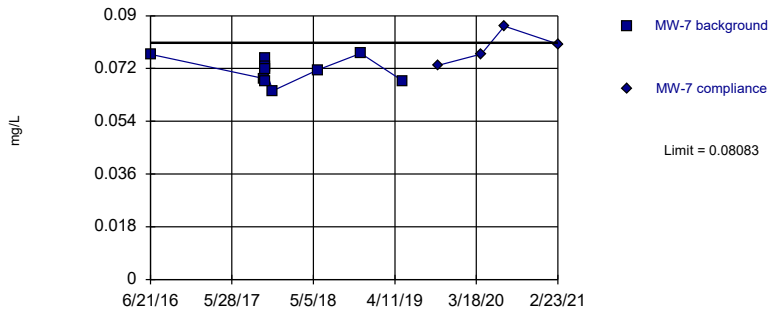


Background Data Summary: Mean=0.07943, Std. Dev.=0.007739, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9479, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Boron, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
 Intrawell Parametric

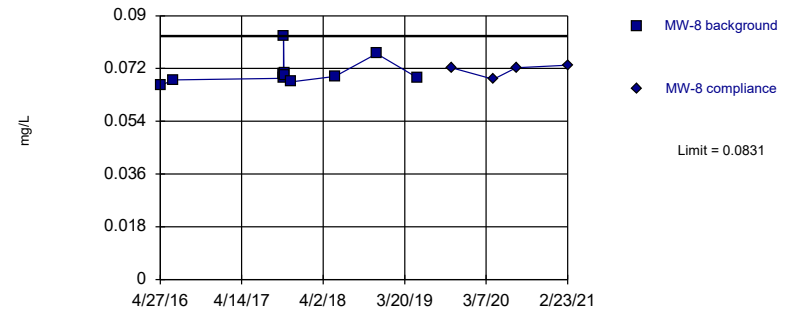


Background Data Summary: Mean=0.07139, Std. Dev.=0.004105, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9512, critical = 0.792. Kappa = 2.3 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Boron, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
 Intrawell Non-parametric

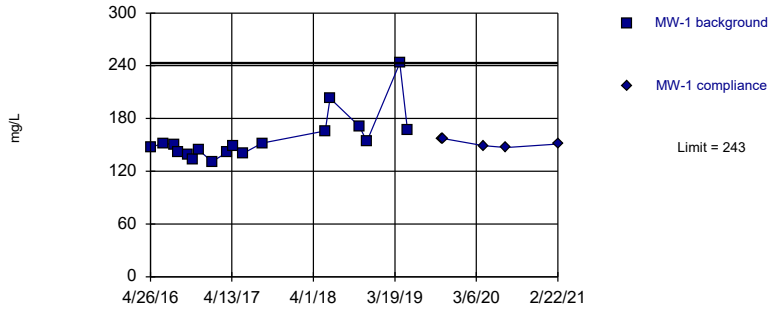


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 12 background values. Well-constituent pair annual alpha = 0.02143. Individual comparison alpha = 0.01077 (1 of 2).

Constituent: Boron, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

### Prediction Limit Intrawell Non-parametric

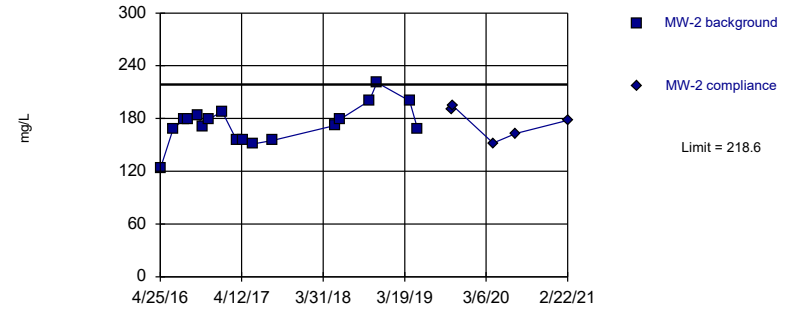


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Constituent: Calcium, total    Analysis Run 5/19/2021 5:33 PM    View: Appendix III - Intrawell  
Plant Gorgas    Client: Southern Company    Data: Gorgas CCR LF

Within Limit

### Prediction Limit Intrawell Parametric

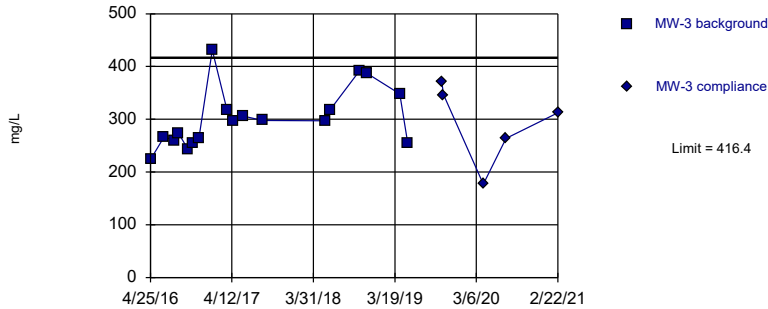


Background Data Summary: Mean=173.9, Std. Dev.=22.02, n=18.    Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9699, critical = 0.858.    Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total    Analysis Run 5/19/2021 5:33 PM    View: Appendix III - Intrawell  
Plant Gorgas    Client: Southern Company    Data: Gorgas CCR LF

Within Limit

### Prediction Limit Intrawell Parametric

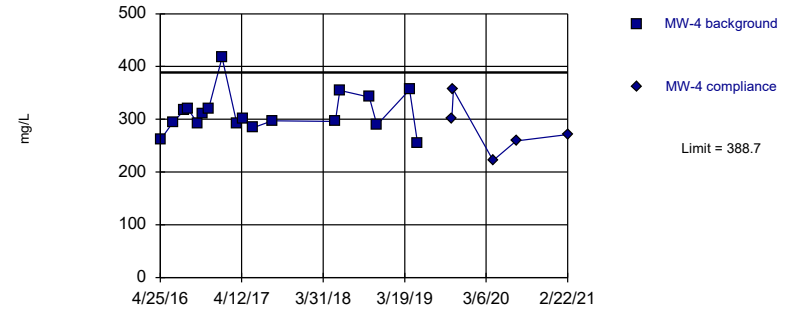


Background Data Summary: Mean=301.6, Std. Dev.=56.48, n=18.    Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9168, critical = 0.858.    Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total    Analysis Run 5/19/2021 5:33 PM    View: Appendix III - Intrawell  
Plant Gorgas    Client: Southern Company    Data: Gorgas CCR LF

Within Limit

### Prediction Limit Intrawell Parametric

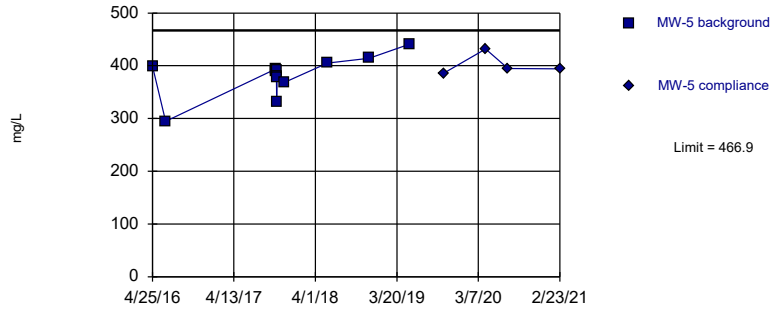


Background Data Summary: Mean=311.2, Std. Dev.=38.16, n=18.    Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9055, critical = 0.858.    Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total    Analysis Run 5/19/2021 5:33 PM    View: Appendix III - Intrawell  
Plant Gorgas    Client: Southern Company    Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

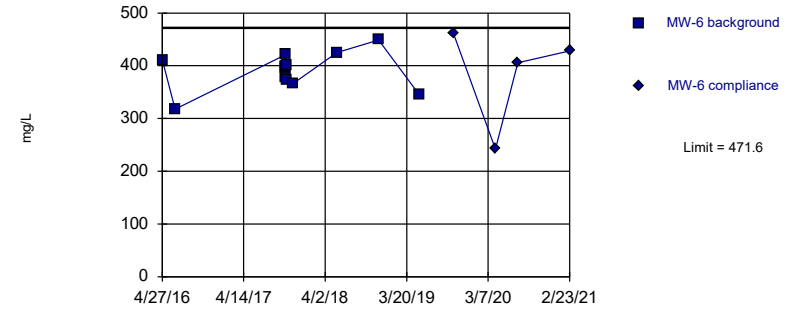


Background Data Summary: Mean=382.1, Std. Dev.=38.01, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9172, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

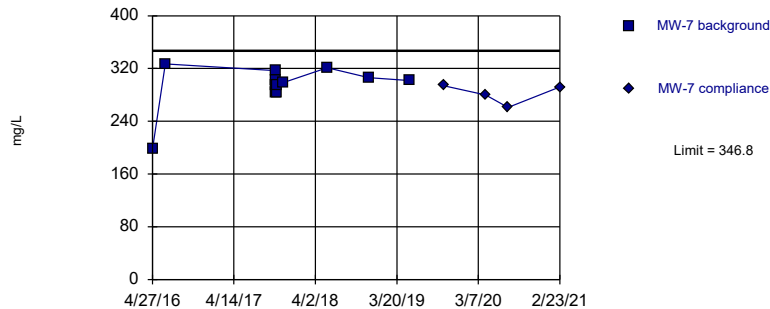


Background Data Summary: Mean=390.4, Std. Dev.=36.38, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9786, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

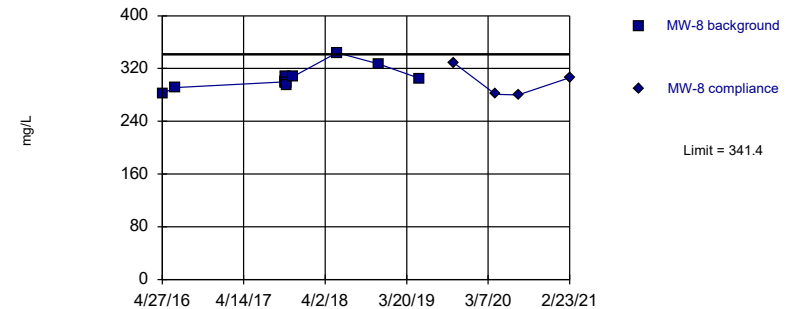


Background Data Summary (based on cube transformation): Mean=2.6e7, Std. Dev.=6944823, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8464, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

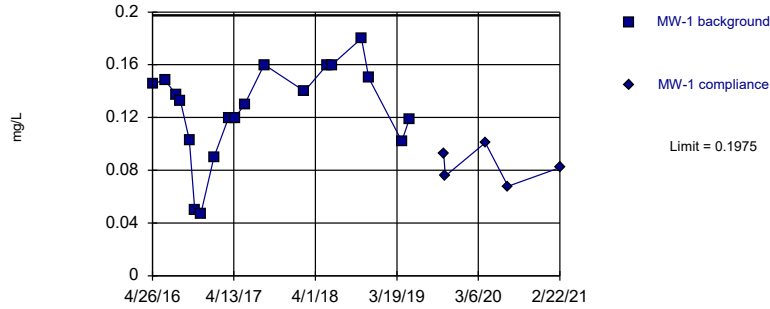


Background Data Summary: Mean=304.5, Std. Dev.=16.53, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8722, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

### Prediction Limit Intrawell Parametric

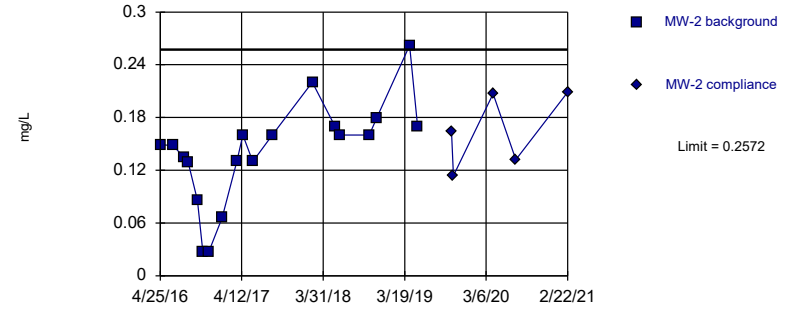


Background Data Summary: Mean=0.1261, Std. Dev.=0.03556, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9188, critical = 0.863. Kappa = 2.01 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

### Prediction Limit Intrawell Parametric

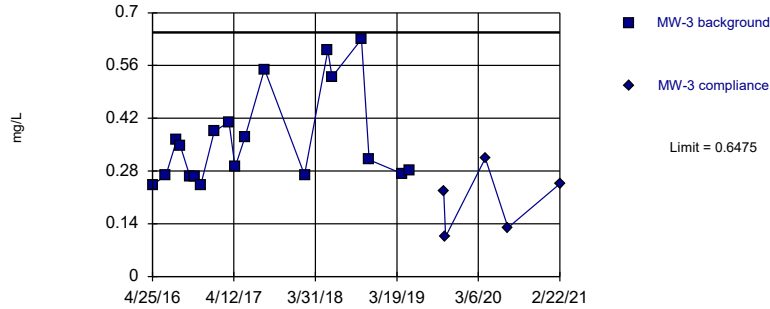


Background Data Summary: Mean=0.1404, Std. Dev.=0.05808, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9263, critical = 0.863. Kappa = 2.01 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

### Prediction Limit Intrawell Parametric

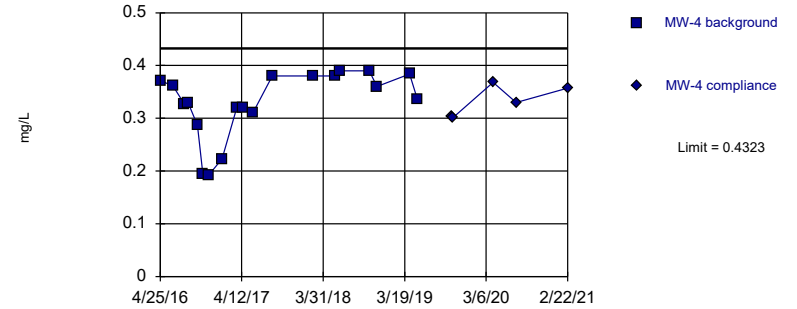


Background Data Summary (based on natural log transformation): Mean=-1.063, Std. Dev.=0.3126, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.875, critical = 0.863. Kappa = 2.01 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

### Prediction Limit Intrawell Parametric



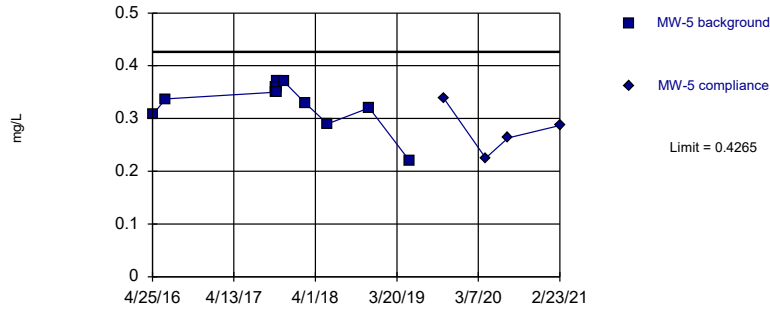
Background Data Summary (based on square transformation): Mean=0.1114, Std. Dev.=0.03754, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8742, critical = 0.863. Kappa = 2.01 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF



Within Limit

Prediction Limit  
Intrawell Parametric

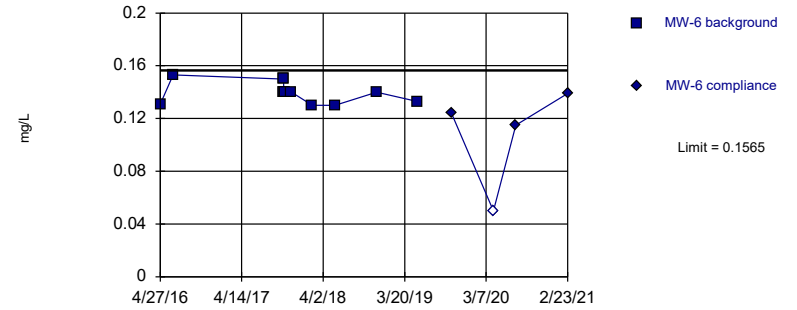


Background Data Summary: Mean=0.3334, Std. Dev.=0.04245, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8179, critical = 0.814. Kappa = 2.193 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

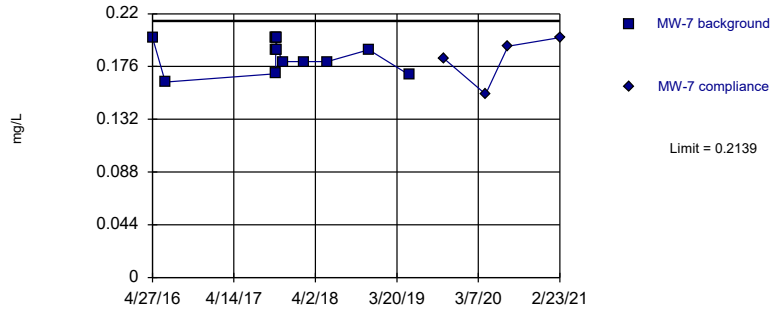


Background Data Summary: Mean=0.1398, Std. Dev.=0.007628, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8775, critical = 0.814. Kappa = 2.193 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

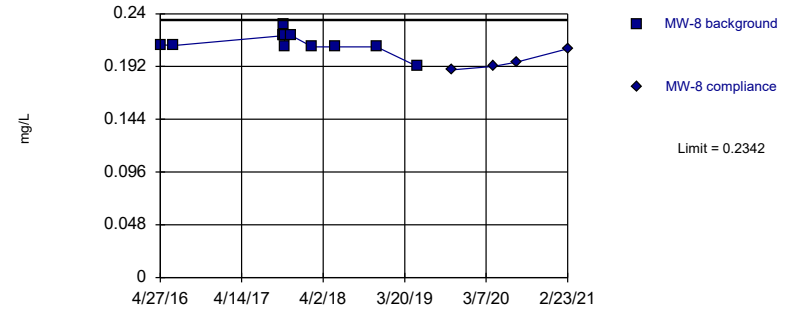


Background Data Summary: Mean=0.1855, Std. Dev.=0.01295, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8949, critical = 0.814. Kappa = 2.193 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

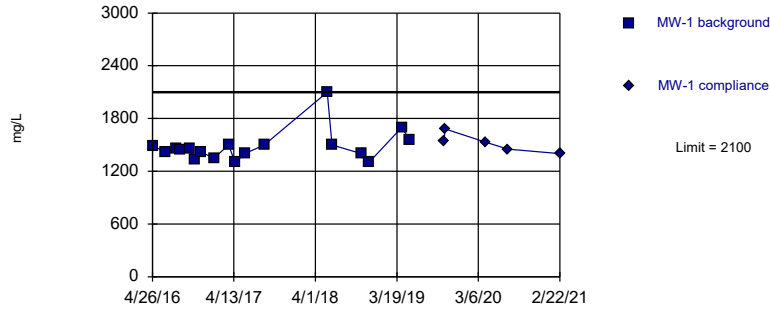


Background Data Summary: Mean=0.2142, Std. Dev.=0.009112, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8671, critical = 0.814. Kappa = 2.193 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

### Prediction Limit Intrawell Non-parametric

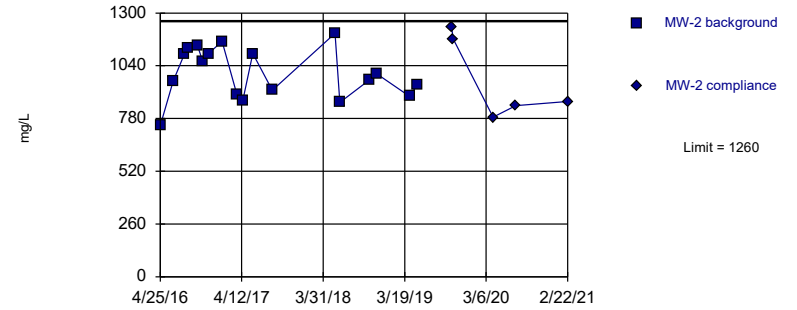


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Constituent: Sulfate as SO4 Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

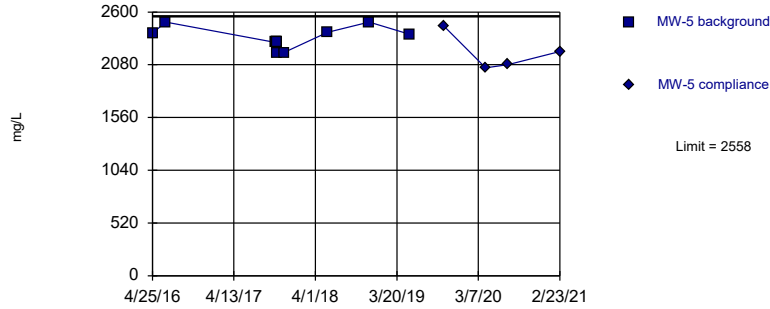
Within Limit

### Prediction Limit Intrawell Parametric



Within Limit

Prediction Limit  
Intrawell Parametric

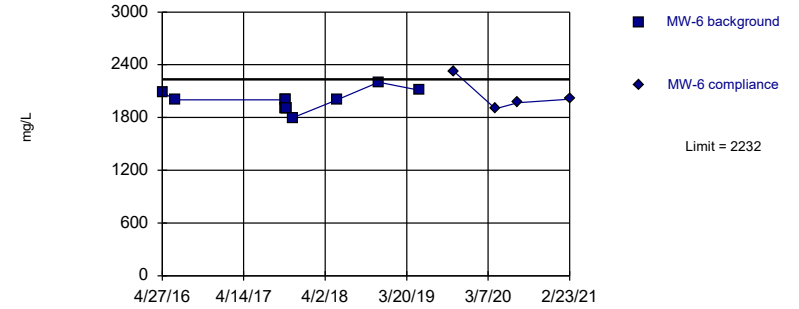


Background Data Summary: Mean=2339, Std. Dev.=98.21, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9007, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate as SO4 Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

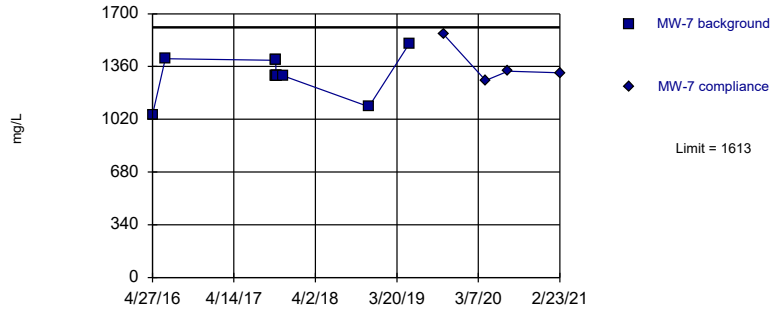


Background Data Summary: Mean=1983, Std. Dev.=111.5, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.939, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate as SO4 Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

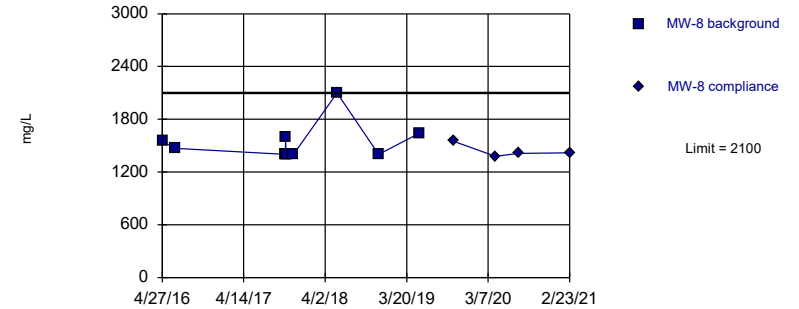


Background Data Summary: Mean=1306, Std. Dev.=133.5, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8855, critical = 0.792. Kappa = 2.3 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate as SO4 Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Non-parametric



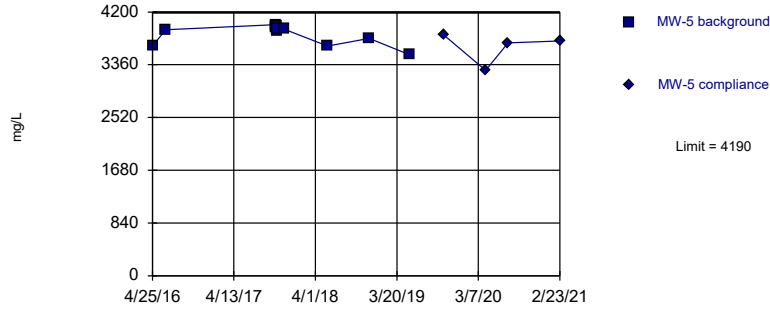
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 12 background values. Well-constituent pair annual alpha = 0.02143. Individual comparison alpha = 0.01077 (1 of 2).

Constituent: Sulfate as SO4 Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF



Within Limit

Prediction Limit  
Intrawell Parametric

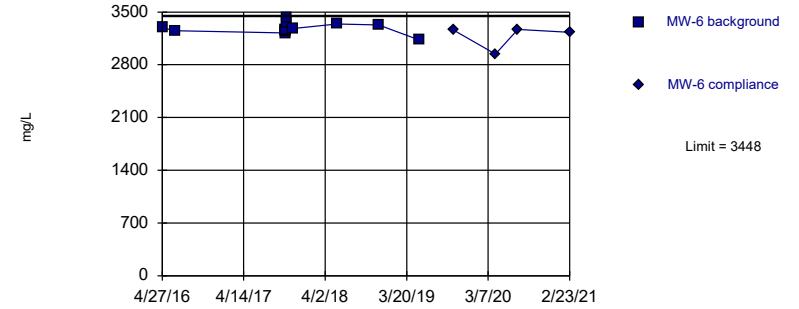


Background Data Summary: Mean=3846, Std. Dev.=154.3, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8398, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

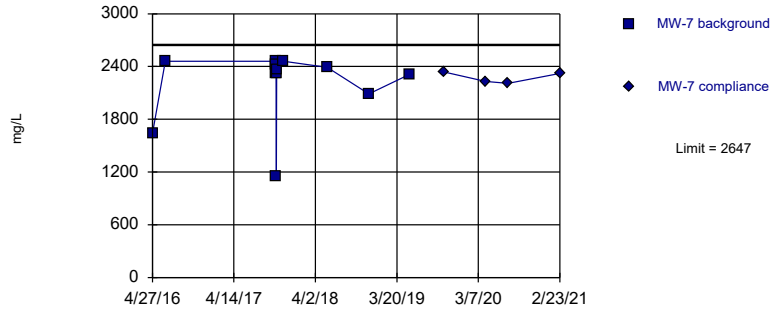


Background Data Summary: Mean=3283, Std. Dev.=74.36, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9669, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

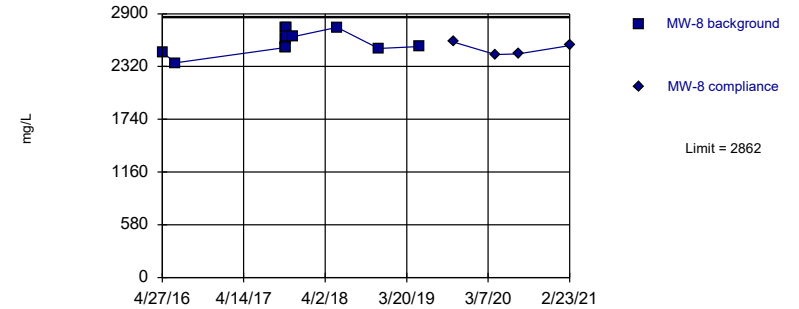


Background Data Summary (based on x^5 transformation): Mean=6.3e16, Std. Dev.=3.0e16, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8216, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=2593, Std. Dev.=120.2, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9303, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 5/19/2021 5:33 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 5/19/2021 5:35 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1       | MW-1       |
|------------|------------|------------|
| 4/26/2016  | 0.0231 (J) |            |
| 6/20/2016  | 0.0227 (J) |            |
| 8/8/2016   | 0.0278 (J) |            |
| 8/24/2016  | 0.0247 (J) |            |
| 10/3/2016  | 0.0307 (J) |            |
| 10/26/2016 | 0.0241 (J) |            |
| 11/21/2016 | 0.0202 (J) |            |
| 1/17/2017  | 0.0201 (J) |            |
| 3/22/2017  | 0.0224 (J) |            |
| 4/18/2017  | <0.1       |            |
| 5/30/2017  | <0.1       |            |
| 8/23/2017  | 0.0253 (J) |            |
| 5/22/2018  | 0.0224 (J) |            |
| 6/12/2018  | 0.0214 (J) |            |
| 10/17/2018 | 0.0216 (J) |            |
| 11/19/2018 | 0.0237 (J) |            |
| 4/10/2019  | 0.0304 (J) |            |
| 5/14/2019  | <0.1       |            |
| 10/8/2019  |            | <0.1       |
| 10/16/2019 |            | 0.0385 (J) |
| 4/6/2020   |            | <0.1       |
| 7/13/2020  |            | <0.1       |
| 2/22/2021  |            | 0.0307 (J) |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 5/19/2021 5:35 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-2       | MW-2       |
|------------|------------|------------|
| 4/25/2016  | 0.0241 (J) |            |
| 6/20/2016  | 0.0284 (J) |            |
| 8/8/2016   | 0.034 (J)  |            |
| 8/24/2016  | 0.0316 (J) |            |
| 10/3/2016  | 0.0367 (J) |            |
| 10/26/2016 | 0.0331 (J) |            |
| 11/21/2016 | 0.035 (J)  |            |
| 1/17/2017  | 0.0259 (J) |            |
| 3/22/2017  | 0.0243 (J) |            |
| 4/18/2017  | 0.0206 (J) |            |
| 5/31/2017  | 0.0234 (J) |            |
| 8/23/2017  | 0.0267 (J) |            |
| 5/22/2018  | 0.0251 (J) |            |
| 6/12/2018  | 0.0275 (J) |            |
| 10/17/2018 | 0.0321 (J) |            |
| 11/19/2018 | 0.0324 (J) |            |
| 4/10/2019  | <0.1015    |            |
| 5/14/2019  | <0.1015    |            |
| 10/8/2019  |            | 0.0371 (J) |
| 10/16/2019 |            | 0.0419 (J) |
| 4/6/2020   |            | <0.1015    |
| 7/13/2020  |            | <0.1015    |
| 2/22/2021  |            | <0.1015    |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 5/19/2021 5:35 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-3       | MW-3       |
|------------|------------|------------|
| 4/25/2016  | 0.028 (J)  |            |
| 6/22/2016  | 0.0433 (J) |            |
| 8/9/2016   | 0.0429 (J) |            |
| 8/24/2016  | 0.0431 (J) |            |
| 10/4/2016  | 0.04 (J)   |            |
| 10/26/2016 | 0.0375 (J) |            |
| 11/21/2016 | 0.0406 (J) |            |
| 1/18/2017  | 0.0548 (J) |            |
| 3/22/2017  | 0.0344 (J) |            |
| 4/18/2017  | <0.1015    |            |
| 5/31/2017  | 0.0454 (J) |            |
| 8/23/2017  | 0.0425 (J) |            |
| 5/24/2018  | 0.0339 (J) |            |
| 6/12/2018  | 0.0371 (J) |            |
| 10/17/2018 | 0.0596 (J) |            |
| 11/19/2018 | 0.0514 (J) |            |
| 4/10/2019  | <0.1015    |            |
| 5/14/2019  | <0.1015    |            |
| 10/8/2019  |            | 0.0537 (J) |
| 10/16/2019 |            | 0.05 (J)   |
| 4/6/2020   |            | <0.1015    |
| 7/13/2020  |            | 0.0366 (J) |
| 2/22/2021  |            | <0.1015    |



# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 5/19/2021 5:35 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-4       | MW-4       |
|------------|------------|------------|
| 4/25/2016  | 0.0414 (J) |            |
| 6/20/2016  | 0.0434 (J) |            |
| 8/9/2016   | 0.0453 (J) |            |
| 8/24/2016  | 0.0451 (J) |            |
| 10/3/2016  | 0.0511 (J) |            |
| 10/26/2016 | 0.0507 (J) |            |
| 11/21/2016 | 0.0458 (J) |            |
| 1/18/2017  | 0.0445 (J) |            |
| 3/22/2017  | 0.0432 (J) |            |
| 4/18/2017  | 0.0409 (J) |            |
| 5/31/2017  | 0.0392 (J) |            |
| 8/23/2017  | 0.042 (J)  |            |
| 5/23/2018  | 0.0433 (J) |            |
| 6/12/2018  | 0.0478 (J) |            |
| 10/17/2018 | 0.0468 (J) |            |
| 11/19/2018 | 0.0526 (J) |            |
| 4/10/2019  | 0.0438 (J) |            |
| 5/14/2019  | <0.203     |            |
| 10/10/2019 |            | 0.0487 (J) |
| 10/16/2019 |            | 0.0505 (J) |
| 4/6/2020   |            | 0.0428 (J) |
| 7/14/2020  |            | 0.0441 (J) |
| 2/22/2021  |            | 0.0397 (J) |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 5/19/2021 5:35 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5       | MW-5       |
|------------|------------|------------|
| 4/25/2016  | 0.0301 (J) |            |
| 6/21/2016  | 0.0304 (J) |            |
| 10/12/2017 | 0.0285 (J) |            |
| 10/13/2017 | 0.0287 (J) |            |
| 10/14/2017 | 0.0305 (J) |            |
| 10/15/2017 | 0.0319 (J) |            |
| 10/16/2017 | 0.0304 (J) |            |
| 10/17/2017 | 0.036 (J)  |            |
| 11/16/2017 | 0.0377 (J) |            |
| 5/23/2018  | 0.0301 (J) |            |
| 11/20/2018 | 0.0357 (J) |            |
| 5/14/2019  | <0.203     |            |
| 10/10/2019 |            | 0.0323 (J) |
| 4/7/2020   |            | 0.0399 (J) |
| 7/14/2020  |            | 0.033 (J)  |
| 2/23/2021  |            | 0.0369 (J) |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 5/19/2021 5:35 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-6       | MW-6       |
|------------|------------|------------|
| 4/27/2016  | 0.075 (J)  |            |
| 6/21/2016  | 0.0729 (J) |            |
| 10/12/2017 | 0.0806 (J) |            |
| 10/13/2017 | 0.0803 (J) |            |
| 10/14/2017 | 0.0828 (J) |            |
| 10/15/2017 | 0.0852 (J) |            |
| 10/16/2017 | 0.0858 (J) |            |
| 10/17/2017 | 0.0846 (J) |            |
| 11/16/2017 | 0.0772 (J) |            |
| 5/23/2018  | 0.0757 (J) |            |
| 11/20/2018 | 0.0915 (J) |            |
| 5/15/2019  | 0.0616 (J) |            |
| 10/10/2019 |            | 0.0919 (J) |
| 4/8/2020   |            | 0.0499 (J) |
| 7/14/2020  |            | 0.0838 (J) |
| 2/23/2021  |            | 0.0866 (J) |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 5/19/2021 5:35 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-7       | MW-7       |
|------------|------------|------------|
| 4/27/2016  | 0.253 (O)  |            |
| 6/21/2016  | 0.0768 (J) |            |
| 10/12/2017 | 0.0685 (J) |            |
| 10/13/2017 | 0.0674 (J) |            |
| 10/14/2017 | 0.0756 (J) |            |
| 10/15/2017 | 0.0719 (J) |            |
| 10/16/2017 | 0.0726 (J) |            |
| 10/17/2017 | 0.0716 (J) |            |
| 11/16/2017 | 0.0644 (J) |            |
| 5/23/2018  | 0.0715 (J) |            |
| 11/20/2018 | 0.0772 (J) |            |
| 5/15/2019  | 0.0678 (J) |            |
| 10/8/2019  |            | 0.073 (J)  |
| 4/8/2020   |            | 0.077 (J)  |
| 7/14/2020  |            | 0.0865 (J) |
| 2/23/2021  |            | 0.0803 (J) |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 5/19/2021 5:35 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-8       | MW-8       |
|------------|------------|------------|
| 4/27/2016  | 0.0662 (J) |            |
| 6/21/2016  | 0.0681 (J) |            |
| 10/12/2017 | 0.0687 (J) |            |
| 10/13/2017 | 0.0831 (J) |            |
| 10/14/2017 | 0.0702 (J) |            |
| 10/15/2017 | 0.0702 (J) |            |
| 10/16/2017 | 0.0707 (J) |            |
| 10/17/2017 | 0.0695 (J) |            |
| 11/16/2017 | 0.0675 (J) |            |
| 5/23/2018  | 0.0693 (J) |            |
| 11/20/2018 | 0.0771 (J) |            |
| 5/15/2019  | 0.0689 (J) |            |
| 10/9/2019  |            | 0.0723 (J) |
| 4/8/2020   |            | 0.0683 (J) |
| 7/15/2020  |            | 0.0723 (J) |
| 2/23/2021  |            | 0.0731 (J) |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 5/19/2021 5:35 PM View: Appendix III - Intravel

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 | MW-1 |
|------------|------|------|
| 4/26/2016  | 147  |      |
| 6/20/2016  | 152  |      |
| 8/8/2016   | 150  |      |
| 8/24/2016  | 142  |      |
| 10/3/2016  | 139  |      |
| 10/26/2016 | 133  |      |
| 11/21/2016 | 144  |      |
| 1/17/2017  | 131  |      |
| 3/22/2017  | 141  |      |
| 4/18/2017  | 149  |      |
| 5/30/2017  | 140  |      |
| 8/23/2017  | 152  |      |
| 5/22/2018  | 166  |      |
| 6/12/2018  | 203  |      |
| 10/17/2018 | 171  |      |
| 11/19/2018 | 154  |      |
| 4/10/2019  | 243  |      |
| 5/14/2019  | 167  |      |
| 10/8/2019  |      | 157  |
| 10/16/2019 |      | 157  |
| 4/6/2020   |      | 149  |
| 7/13/2020  |      | 147  |
| 2/22/2021  |      | 151  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-2 | MW-2 |
|------------|------|------|
| 4/25/2016  | 123  |      |
| 6/20/2016  | 168  |      |
| 8/8/2016   | 180  |      |
| 8/24/2016  | 180  |      |
| 10/3/2016  | 184  |      |
| 10/26/2016 | 171  |      |
| 11/21/2016 | 179  |      |
| 1/17/2017  | 188  |      |
| 3/22/2017  | 155  |      |
| 4/18/2017  | 156  |      |
| 5/31/2017  | 151  |      |
| 8/23/2017  | 155  |      |
| 5/22/2018  | 172  |      |
| 6/12/2018  | 179  |      |
| 10/17/2018 | 200  |      |
| 11/19/2018 | 221  |      |
| 4/10/2019  | 200  |      |
| 5/14/2019  | 168  |      |
| 10/8/2019  |      | 190  |
| 10/16/2019 |      | 194  |
| 4/6/2020   |      | 152  |
| 7/13/2020  |      | 163  |
| 2/22/2021  |      | 178  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-3 | MW-3 |
|------------|------|------|
| 4/25/2016  | 224  |      |
| 6/22/2016  | 266  |      |
| 8/9/2016   | 260  |      |
| 8/24/2016  | 274  |      |
| 10/4/2016  | 243  |      |
| 10/26/2016 | 254  |      |
| 11/21/2016 | 263  |      |
| 1/18/2017  | 431  |      |
| 3/22/2017  | 318  |      |
| 4/18/2017  | 296  |      |
| 5/31/2017  | 306  |      |
| 8/23/2017  | 298  |      |
| 5/24/2018  | 297  |      |
| 6/12/2018  | 318  |      |
| 10/17/2018 | 392  |      |
| 11/19/2018 | 387  |      |
| 4/10/2019  | 348  |      |
| 5/14/2019  | 254  |      |
| 10/8/2019  |      | 371  |
| 10/16/2019 |      | 346  |
| 4/6/2020   |      | 177  |
| 7/13/2020  |      | 264  |
| 2/22/2021  |      | 312  |



# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-4 | MW-4 |
|------------|------|------|
| 4/25/2016  | 261  |      |
| 6/20/2016  | 295  |      |
| 8/9/2016   | 318  |      |
| 8/24/2016  | 319  |      |
| 10/3/2016  | 293  |      |
| 10/26/2016 | 311  |      |
| 11/21/2016 | 320  |      |
| 1/18/2017  | 417  |      |
| 3/22/2017  | 292  |      |
| 4/18/2017  | 302  |      |
| 5/31/2017  | 284  |      |
| 8/23/2017  | 297  |      |
| 5/23/2018  | 296  |      |
| 6/12/2018  | 355  |      |
| 10/17/2018 | 342  |      |
| 11/19/2018 | 289  |      |
| 4/10/2019  | 356  |      |
| 5/14/2019  | 254  |      |
| 10/10/2019 |      | 302  |
| 10/16/2019 |      | 356  |
| 4/6/2020   |      | 222  |
| 7/14/2020  |      | 259  |
| 2/22/2021  |      | 271  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5 | MW-5 |
|------------|------|------|
| 4/25/2016  | 399  |      |
| 6/21/2016  | 295  |      |
| 10/12/2017 | 394  |      |
| 10/13/2017 | 389  |      |
| 10/14/2017 | 391  |      |
| 10/15/2017 | 332  |      |
| 10/16/2017 | 380  |      |
| 10/17/2017 | 377  |      |
| 11/16/2017 | 368  |      |
| 5/23/2018  | 405  |      |
| 11/20/2018 | 414  |      |
| 5/14/2019  | 441  |      |
| 10/10/2019 |      | 386  |
| 4/7/2020   |      | 432  |
| 7/14/2020  |      | 395  |
| 2/23/2021  |      | 394  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-6 | MW-6 |
|------------|------|------|
| 4/27/2016  | 411  |      |
| 6/21/2016  | 318  |      |
| 10/12/2017 | 421  |      |
| 10/13/2017 | 396  |      |
| 10/14/2017 | 400  |      |
| 10/15/2017 | 378  |      |
| 10/16/2017 | 402  |      |
| 10/17/2017 | 373  |      |
| 11/16/2017 | 367  |      |
| 5/23/2018  | 425  |      |
| 11/20/2018 | 449  |      |
| 5/15/2019  | 345  |      |
| 10/10/2019 |      | 461  |
| 4/8/2020   |      | 242  |
| 7/14/2020  |      | 406  |
| 2/23/2021  |      | 428  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-7 | MW-7 |
|------------|------|------|
| 4/27/2016  | 198  |      |
| 6/21/2016  | 327  |      |
| 10/12/2017 | 317  |      |
| 10/13/2017 | 302  |      |
| 10/14/2017 | 283  |      |
| 10/15/2017 | 294  |      |
| 10/16/2017 | 284  |      |
| 10/17/2017 | 294  |      |
| 11/16/2017 | 299  |      |
| 5/23/2018  | 321  |      |
| 11/20/2018 | 306  |      |
| 5/15/2019  | 302  |      |
| 10/8/2019  |      | 294  |
| 4/8/2020   |      | 280  |
| 7/14/2020  |      | 261  |
| 2/23/2021  |      | 292  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-8 | MW-8 |
|------------|------|------|
| 4/27/2016  | 282  |      |
| 6/21/2016  | 291  |      |
| 10/12/2017 | 300  |      |
| 10/13/2017 | 298  |      |
| 10/14/2017 | 299  |      |
| 10/15/2017 | 307  |      |
| 10/16/2017 | 299  |      |
| 10/17/2017 | 294  |      |
| 11/16/2017 | 308  |      |
| 5/23/2018  | 344  |      |
| 11/20/2018 | 327  |      |
| 5/15/2019  | 305  |      |
| 10/9/2019  |      | 329  |
| 4/8/2020   |      | 281  |
| 7/15/2020  |      | 280  |
| 2/23/2021  |      | 306  |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1      | MW-1       |
|------------|-----------|------------|
| 4/26/2016  | 0.146 (J) |            |
| 6/20/2016  | 0.148 (J) |            |
| 8/8/2016   | 0.137 (J) |            |
| 8/24/2016  | 0.133 (J) |            |
| 10/3/2016  | 0.103 (J) |            |
| 10/26/2016 | 0.05 (J)  |            |
| 11/21/2016 | 0.047 (J) |            |
| 1/17/2017  | 0.09 (J)  |            |
| 3/22/2017  | 0.12      |            |
| 4/18/2017  | 0.12      |            |
| 5/30/2017  | 0.13      |            |
| 8/23/2017  | 0.16      |            |
| 2/13/2018  | 0.14 (D)  |            |
| 5/22/2018  | 0.16      |            |
| 6/12/2018  | 0.16      |            |
| 10/17/2018 | 0.18      |            |
| 11/19/2018 | 0.15      |            |
| 4/10/2019  | 0.102     |            |
| 5/14/2019  | 0.119     |            |
| 10/8/2019  |           | 0.0924 (J) |
| 10/16/2019 |           | 0.0756 (J) |
| 4/6/2020   |           | 0.101      |
| 7/13/2020  |           | 0.0678 (J) |
| 2/22/2021  |           | 0.082 (J)  |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-2      | MW-2  |
|------------|-----------|-------|
| 4/25/2016  | 0.149 (J) |       |
| 6/20/2016  | 0.148 (J) |       |
| 8/8/2016   | 0.134 (J) |       |
| 8/24/2016  | 0.129 (J) |       |
| 10/3/2016  | 0.086 (J) |       |
| 10/26/2016 | 0.027 (J) |       |
| 11/21/2016 | 0.027 (J) |       |
| 1/17/2017  | 0.066 (J) |       |
| 3/22/2017  | 0.13      |       |
| 4/18/2017  | 0.16      |       |
| 5/31/2017  | 0.13      |       |
| 8/23/2017  | 0.16      |       |
| 2/13/2018  | 0.22 (D)  |       |
| 5/22/2018  | 0.17      |       |
| 6/12/2018  | 0.16      |       |
| 10/17/2018 | 0.16      |       |
| 11/19/2018 | 0.18      |       |
| 4/10/2019  | 0.262     |       |
| 5/14/2019  | 0.17      |       |
| 10/8/2019  |           | 0.164 |
| 10/16/2019 |           | 0.114 |
| 4/6/2020   |           | 0.207 |
| 7/13/2020  |           | 0.132 |
| 2/22/2021  |           | 0.209 |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-3      | MW-3  |
|------------|-----------|-------|
| 4/25/2016  | 0.243 (J) |       |
| 6/22/2016  | 0.269 (J) |       |
| 8/9/2016   | 0.363     |       |
| 8/24/2016  | 0.346     |       |
| 10/4/2016  | 0.266 (J) |       |
| 10/26/2016 | 0.266 (J) |       |
| 11/21/2016 | 0.244 (J) |       |
| 1/18/2017  | 0.385     |       |
| 3/22/2017  | 0.41      |       |
| 4/18/2017  | 0.29      |       |
| 5/31/2017  | 0.37      |       |
| 8/23/2017  | 0.55      |       |
| 2/13/2018  | 0.27 (D)  |       |
| 5/24/2018  | 0.6       |       |
| 6/12/2018  | 0.53      |       |
| 10/17/2018 | 0.63      |       |
| 11/19/2018 | 0.31      |       |
| 4/10/2019  | 0.273     |       |
| 5/14/2019  | 0.281     |       |
| 10/8/2019  |           | 0.225 |
| 10/16/2019 |           | 0.106 |
| 4/6/2020   |           | 0.314 |
| 7/13/2020  |           | 0.13  |
| 2/22/2021  |           | 0.246 |



# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-4      | MW-4  |
|------------|-----------|-------|
| 4/25/2016  | 0.372     |       |
| 6/20/2016  | 0.361     |       |
| 8/9/2016   | 0.326     |       |
| 8/24/2016  | 0.329     |       |
| 10/3/2016  | 0.287 (J) |       |
| 10/26/2016 | 0.194 (J) |       |
| 11/21/2016 | 0.192 (J) |       |
| 1/18/2017  | 0.223 (J) |       |
| 3/22/2017  | 0.32      |       |
| 4/18/2017  | 0.32      |       |
| 5/31/2017  | 0.31      |       |
| 8/23/2017  | 0.38      |       |
| 2/13/2018  | 0.38 (D)  |       |
| 5/23/2018  | 0.38      |       |
| 6/12/2018  | 0.39      |       |
| 10/17/2018 | 0.39      |       |
| 11/19/2018 | 0.36      |       |
| 4/10/2019  | 0.384     |       |
| 5/14/2019  | 0.335     |       |
| 10/10/2019 |           | 0.304 |
| 10/16/2019 |           | 0.302 |
| 4/6/2020   |           | 0.368 |
| 7/14/2020  |           | 0.33  |
| 2/22/2021  |           | 0.357 |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5     | MW-5  |
|------------|----------|-------|
| 4/25/2016  | 0.307    |       |
| 6/21/2016  | 0.337    |       |
| 10/12/2017 | 0.35     |       |
| 10/13/2017 | 0.36     |       |
| 10/14/2017 | 0.37     |       |
| 10/15/2017 | 0.37     |       |
| 10/16/2017 | 0.36     |       |
| 10/17/2017 | 0.35     |       |
| 11/16/2017 | 0.37     |       |
| 2/14/2018  | 0.33 (D) |       |
| 5/23/2018  | 0.29     |       |
| 11/20/2018 | 0.32     |       |
| 5/14/2019  | 0.22     |       |
| 10/10/2019 |          | 0.338 |
| 4/7/2020   |          | 0.225 |
| 7/14/2020  |          | 0.263 |
| 2/23/2021  |          | 0.287 |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-6      | MW-6  |
|------------|-----------|-------|
| 4/27/2016  | 0.131 (J) |       |
| 6/21/2016  | 0.153 (J) |       |
| 10/12/2017 | 0.15      |       |
| 10/13/2017 | 0.15      |       |
| 10/14/2017 | 0.14      |       |
| 10/15/2017 | 0.14      |       |
| 10/16/2017 | 0.14      |       |
| 10/17/2017 | 0.14      |       |
| 11/16/2017 | 0.14      |       |
| 2/14/2018  | 0.13 (D)  |       |
| 5/23/2018  | 0.13      |       |
| 11/20/2018 | 0.14      |       |
| 5/15/2019  | 0.133     |       |
| 10/10/2019 |           | 0.124 |
| 4/8/2020   |           | <0.1  |
| 7/14/2020  |           | 0.115 |
| 2/23/2021  |           | 0.139 |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-7      | MW-7  |
|------------|-----------|-------|
| 4/27/2016  | 0.2 (J)   |       |
| 6/21/2016  | 0.163 (J) |       |
| 10/12/2017 | 0.17      |       |
| 10/13/2017 | 0.19      |       |
| 10/14/2017 | 0.2       |       |
| 10/15/2017 | 0.2       |       |
| 10/16/2017 | 0.2       |       |
| 10/17/2017 | 0.19      |       |
| 11/16/2017 | 0.18      |       |
| 2/14/2018  | 0.18 (D)  |       |
| 5/23/2018  | 0.18      |       |
| 11/20/2018 | 0.19      |       |
| 5/15/2019  | 0.169     |       |
| 10/8/2019  |           | 0.183 |
| 4/8/2020   |           | 0.153 |
| 7/14/2020  |           | 0.193 |
| 2/23/2021  |           | 0.2   |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-8      | MW-8  |
|------------|-----------|-------|
| 4/27/2016  | 0.212 (J) |       |
| 6/21/2016  | 0.211 (J) |       |
| 10/12/2017 | 0.22      |       |
| 10/13/2017 | 0.23      |       |
| 10/14/2017 | 0.22      |       |
| 10/15/2017 | 0.22      |       |
| 10/16/2017 | 0.22      |       |
| 10/17/2017 | 0.21      |       |
| 11/16/2017 | 0.22      |       |
| 2/14/2018  | 0.21 (D)  |       |
| 5/23/2018  | 0.21      |       |
| 11/20/2018 | 0.21      |       |
| 5/15/2019  | 0.192     |       |
| 10/9/2019  |           | 0.189 |
| 4/8/2020   |           | 0.192 |
| 7/15/2020  |           | 0.196 |
| 2/23/2021  |           | 0.208 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 | MW-1 |
|------------|------|------|
| 4/26/2016  | 1490 |      |
| 6/20/2016  | 1420 |      |
| 8/8/2016   | 1460 |      |
| 8/24/2016  | 1450 |      |
| 10/3/2016  | 1460 |      |
| 10/26/2016 | 1330 |      |
| 11/21/2016 | 1420 |      |
| 1/17/2017  | 1350 |      |
| 3/22/2017  | 1500 |      |
| 4/18/2017  | 1300 |      |
| 5/30/2017  | 1400 |      |
| 8/23/2017  | 1500 |      |
| 5/22/2018  | 2100 |      |
| 6/12/2018  | 1500 |      |
| 10/17/2018 | 1400 |      |
| 11/19/2018 | 1300 |      |
| 4/10/2019  | 1700 |      |
| 5/14/2019  | 1560 |      |
| 10/8/2019  |      | 1540 |
| 10/16/2019 |      | 1680 |
| 4/6/2020   |      | 1530 |
| 7/13/2020  |      | 1450 |
| 2/22/2021  |      | 1400 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-2 | MW-2 |
|------------|------|------|
| 4/25/2016  | 745  |      |
| 6/20/2016  | 964  |      |
| 8/8/2016   | 1100 |      |
| 8/24/2016  | 1130 |      |
| 10/3/2016  | 1140 |      |
| 10/26/2016 | 1060 |      |
| 11/21/2016 | 1100 |      |
| 1/17/2017  | 1160 |      |
| 3/22/2017  | 900  |      |
| 4/18/2017  | 870  |      |
| 5/31/2017  | 1100 |      |
| 8/23/2017  | 920  |      |
| 5/22/2018  | 1200 |      |
| 6/12/2018  | 860  |      |
| 10/17/2018 | 970  |      |
| 11/19/2018 | 1000 |      |
| 4/10/2019  | 889  |      |
| 5/14/2019  | 948  |      |
| 10/8/2019  |      | 1230 |
| 10/16/2019 |      | 1170 |
| 4/6/2020   |      | 786  |
| 7/13/2020  |      | 843  |
| 2/22/2021  |      | 864  |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-3 | MW-3 |
|------------|------|------|
| 4/25/2016  | 1890 |      |
| 6/22/2016  | 2100 |      |
| 8/9/2016   | 2050 |      |
| 8/24/2016  | 2190 |      |
| 10/4/2016  | 1950 |      |
| 10/26/2016 | 1980 |      |
| 11/21/2016 | 2060 |      |
| 1/18/2017  | 2620 |      |
| 3/22/2017  | 3200 |      |
| 4/18/2017  | 2500 |      |
| 5/31/2017  | 2800 |      |
| 8/23/2017  | 2600 |      |
| 5/24/2018  | 2700 |      |
| 6/12/2018  | 2500 |      |
| 10/17/2018 | 2700 |      |
| 11/19/2018 | 3000 |      |
| 4/10/2019  | 2460 |      |
| 5/14/2019  | 2460 |      |
| 10/8/2019  |      | 2950 |
| 10/16/2019 |      | 2820 |
| 4/6/2020   |      | 1670 |
| 7/13/2020  |      | 2130 |
| 2/22/2021  |      | 3040 |



# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-4 | MW-4 |
|------------|------|------|
| 4/25/2016  | 2260 |      |
| 6/20/2016  | 2500 |      |
| 8/9/2016   | 2750 |      |
| 8/24/2016  | 2770 |      |
| 10/3/2016  | 3060 |      |
| 10/26/2016 | 2650 |      |
| 11/21/2016 | 2720 |      |
| 1/18/2017  | 2650 |      |
| 3/22/2017  | 2700 |      |
| 4/18/2017  | 2400 |      |
| 5/31/2017  | 2700 |      |
| 8/23/2017  | 2700 |      |
| 5/23/2018  | 2400 |      |
| 6/12/2018  | 2600 |      |
| 10/17/2018 | 2600 |      |
| 11/19/2018 | 2400 |      |
| 4/10/2019  | 2090 |      |
| 5/14/2019  | 2240 |      |
| 10/10/2019 |      | 2690 |
| 10/16/2019 |      | 3050 |
| 4/6/2020   |      | 1810 |
| 7/14/2020  |      | 1970 |
| 2/22/2021  |      | 2040 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5 | MW-5 |
|------------|------|------|
| 4/25/2016  | 2390 |      |
| 6/21/2016  | 2500 |      |
| 10/12/2017 | 2300 |      |
| 10/13/2017 | 2300 |      |
| 10/14/2017 | 2300 |      |
| 10/15/2017 | 2300 |      |
| 10/16/2017 | 2300 |      |
| 10/17/2017 | 2200 |      |
| 11/16/2017 | 2200 |      |
| 5/23/2018  | 2400 |      |
| 11/20/2018 | 2500 |      |
| 5/14/2019  | 2380 |      |
| 10/10/2019 |      | 2460 |
| 4/7/2020   |      | 2050 |
| 7/14/2020  |      | 2080 |
| 2/23/2021  |      | 2210 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-6 | MW-6 |
|------------|------|------|
| 4/27/2016  | 2090 |      |
| 6/21/2016  | 2000 |      |
| 10/12/2017 | 2000 |      |
| 10/13/2017 | 2000 |      |
| 10/14/2017 | 1900 |      |
| 10/15/2017 | 1900 |      |
| 10/16/2017 | 1900 |      |
| 10/17/2017 | 1900 |      |
| 11/16/2017 | 1800 |      |
| 5/23/2018  | 2000 |      |
| 11/20/2018 | 2200 |      |
| 5/15/2019  | 2110 |      |
| 10/10/2019 |      | 2330 |
| 4/8/2020   |      | 1900 |
| 7/14/2020  |      | 1970 |
| 2/23/2021  |      | 2010 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-7     | MW-7 |
|------------|----------|------|
| 4/27/2016  | 1050     |      |
| 6/21/2016  | 1410     |      |
| 10/12/2017 | 1400     |      |
| 10/13/2017 | 1400     |      |
| 10/14/2017 | 1300     |      |
| 10/15/2017 | 1300     |      |
| 10/16/2017 | 1300     |      |
| 10/17/2017 | 1300     |      |
| 11/16/2017 | 1300     |      |
| 5/23/2018  | 1900 (O) |      |
| 11/20/2018 | 1100     |      |
| 5/15/2019  | 1510     |      |
| 10/8/2019  |          | 1570 |
| 4/8/2020   |          | 1270 |
| 7/14/2020  |          | 1330 |
| 2/23/2021  |          | 1320 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-8 | MW-8 |
|------------|------|------|
| 4/27/2016  | 1550 |      |
| 6/21/2016  | 1470 |      |
| 10/12/2017 | 1400 |      |
| 10/13/2017 | 1600 |      |
| 10/14/2017 | 1400 |      |
| 10/15/2017 | 1400 |      |
| 10/16/2017 | 1400 |      |
| 10/17/2017 | 1400 |      |
| 11/16/2017 | 1400 |      |
| 5/23/2018  | 2100 |      |
| 11/20/2018 | 1400 |      |
| 5/15/2019  | 1640 |      |
| 10/9/2019  |      | 1550 |
| 4/8/2020   |      | 1380 |
| 7/15/2020  |      | 1410 |
| 2/23/2021  |      | 1420 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1     | MW-1 |
|------------|----------|------|
| 4/26/2016  | 2080 (D) |      |
| 6/20/2016  | 2060 (D) |      |
| 8/8/2016   | 2070 (D) |      |
| 8/24/2016  | 2040     |      |
| 10/3/2016  | 2110 (D) |      |
| 10/26/2016 | 2000     |      |
| 11/21/2016 | 2070 (D) |      |
| 1/17/2017  | 1930 (D) |      |
| 3/22/2017  | 2060 (D) |      |
| 4/18/2017  | 2140     |      |
| 5/30/2017  | 2240 (D) |      |
| 8/23/2017  | 2160 (D) |      |
| 5/22/2018  | 2380 (D) |      |
| 6/12/2018  | 2400     |      |
| 10/17/2018 | 2220     |      |
| 11/19/2018 | 2360     |      |
| 4/10/2019  | 2630     |      |
| 5/14/2019  | 2340 (D) |      |
| 10/8/2019  |          | 2330 |
| 10/16/2019 |          | 3650 |
| 4/6/2020   |          | 2240 |
| 7/13/2020  |          | 2240 |
| 2/22/2021  |          | 2230 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-2     | MW-2 |
|------------|----------|------|
| 4/25/2016  | 1260 (D) |      |
| 6/20/2016  | 1620 (D) |      |
| 8/8/2016   | 1740 (D) |      |
| 8/24/2016  | 1720     |      |
| 10/3/2016  | 1800 (D) |      |
| 10/26/2016 | 1800     |      |
| 11/21/2016 | 1740 (D) |      |
| 1/17/2017  | 1960 (D) |      |
| 3/22/2017  | 1510 (D) |      |
| 4/18/2017  | 1580     |      |
| 5/31/2017  | 1730 (D) |      |
| 8/23/2017  | 1550 (D) |      |
| 5/22/2018  | 1500 (D) |      |
| 6/12/2018  | 1550     |      |
| 10/17/2018 | 1740     |      |
| 11/19/2018 | 1990     |      |
| 4/10/2019  | 1250     |      |
| 5/14/2019  | 1480     |      |
| 10/8/2019  |          | 1840 |
| 10/16/2019 |          | 1830 |
| 4/6/2020   |          | 1440 |
| 7/13/2020  |          | 1540 |
| 2/22/2021  |          | 1620 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-3     | MW-3 |
|------------|----------|------|
| 4/25/2016  | 2720 (D) |      |
| 6/22/2016  | 3250 (D) |      |
| 8/9/2016   | 3050 (D) |      |
| 8/24/2016  | 3080     |      |
| 10/4/2016  | 2900 (D) |      |
| 10/26/2016 | 2940     |      |
| 11/21/2016 | 3090 (D) |      |
| 1/18/2017  | 4020 (D) |      |
| 3/22/2017  | 4180 (D) |      |
| 4/18/2017  | 4440     |      |
| 5/31/2017  | 3970 (D) |      |
| 8/23/2017  | 4050 (D) |      |
| 5/24/2018  | 3680 (D) |      |
| 6/12/2018  | 3820     |      |
| 10/17/2018 | 4730     |      |
| 11/19/2018 | 4710     |      |
| 4/10/2019  | 3680     |      |
| 5/14/2019  | 3580 (D) |      |
| 10/8/2019  |          | 4720 |
| 10/16/2019 |          | 4210 |
| 4/6/2020   |          | 2630 |
| 7/13/2020  |          | 3650 |
| 2/22/2021  |          | 4670 |



# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-4     | MW-4 |
|------------|----------|------|
| 4/25/2016  | 3300 (D) |      |
| 6/20/2016  | 3870 (D) |      |
| 8/9/2016   | 4140 (D) |      |
| 8/24/2016  | 4190     |      |
| 10/3/2016  | 4190 (D) |      |
| 10/26/2016 | 4400     |      |
| 11/21/2016 | 4230 (D) |      |
| 1/18/2017  | 4120 (D) |      |
| 3/22/2017  | 3980 (D) |      |
| 4/18/2017  | 3880     |      |
| 5/31/2017  | 4210 (D) |      |
| 8/23/2017  | 3990 (D) |      |
| 5/23/2018  | 3740 (D) |      |
| 6/12/2018  | 4080     |      |
| 10/17/2018 | 4250     |      |
| 11/19/2018 | 3920     |      |
| 4/10/2019  | 3280     |      |
| 5/14/2019  | 3130 (D) |      |
| 10/10/2019 |          | 4000 |
| 10/16/2019 |          | 4060 |
| 4/6/2020   |          | 2820 |
| 7/14/2020  |          | 3310 |
| 2/22/2021  |          | 3190 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5 | MW-5 |
|------------|------|------|
| 4/25/2016  | 3660 |      |
| 6/21/2016  | 3920 |      |
| 10/12/2017 | 4000 |      |
| 10/13/2017 | 3960 |      |
| 10/14/2017 | 3910 |      |
| 10/15/2017 | 3890 |      |
| 10/16/2017 | 3980 |      |
| 10/17/2017 | 3940 |      |
| 11/16/2017 | 3930 |      |
| 5/23/2018  | 3660 |      |
| 11/20/2018 | 3780 |      |
| 5/14/2019  | 3520 |      |
| 10/10/2019 |      | 3830 |
| 4/7/2020   |      | 3270 |
| 7/14/2020  |      | 3710 |
| 2/23/2021  |      | 3740 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-6 | MW-6 |
|------------|------|------|
| 4/27/2016  | 3290 |      |
| 6/21/2016  | 3250 |      |
| 10/12/2017 | 3220 |      |
| 10/13/2017 | 3250 |      |
| 10/14/2017 | 3260 |      |
| 10/15/2017 | 3260 |      |
| 10/16/2017 | 3360 |      |
| 10/17/2017 | 3420 |      |
| 11/16/2017 | 3280 |      |
| 5/23/2018  | 3340 |      |
| 11/20/2018 | 3330 |      |
| 5/15/2019  | 3130 |      |
| 10/10/2019 |      | 3260 |
| 4/8/2020   |      | 2940 |
| 7/14/2020  |      | 3270 |
| 2/23/2021  |      | 3230 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-7 | MW-7 |
|------------|------|------|
| 4/27/2016  | 1640 |      |
| 6/21/2016  | 2460 |      |
| 10/12/2017 | 2460 |      |
| 10/13/2017 | 2420 |      |
| 10/14/2017 | 2320 |      |
| 10/15/2017 | 1150 |      |
| 10/16/2017 | 2320 |      |
| 10/17/2017 | 2360 |      |
| 11/16/2017 | 2460 |      |
| 5/23/2018  | 2390 |      |
| 11/20/2018 | 2090 |      |
| 5/15/2019  | 2310 |      |
| 10/8/2019  |      | 2340 |
| 4/8/2020   |      | 2230 |
| 7/14/2020  |      | 2210 |
| 2/23/2021  |      | 2320 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 5/19/2021 5:36 PM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-8 | MW-8 |
|------------|------|------|
| 4/27/2016  | 2480 |      |
| 6/21/2016  | 2360 |      |
| 10/12/2017 | 2530 |      |
| 10/13/2017 | 2740 |      |
| 10/14/2017 | 2630 |      |
| 10/15/2017 | 2530 |      |
| 10/16/2017 | 2740 |      |
| 10/17/2017 | 2650 |      |
| 11/16/2017 | 2650 |      |
| 5/23/2018  | 2750 |      |
| 11/20/2018 | 2520 |      |
| 5/15/2019  | 2540 |      |
| 10/9/2019  |      | 2590 |
| 4/8/2020   |      | 2450 |
| 7/15/2020  |      | 2460 |
| 2/23/2021  |      | 2550 |

FIGURE E.

# Appendix III Interwell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 5:30 PM

| Constituent            | Well | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha     | Method                      |
|------------------------|------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|-----------|-----------------------------|
| Chloride, Total (mg/L) | MW-5 | 3.82       | n/a        | 2/23/2021 | 6.19    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-7 | 3.82       | n/a        | 2/23/2021 | 7.85    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-8 | 3.82       | n/a        | 2/23/2021 | 17.9    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| pH, Field (SU)         | MW-5 | 6.35       | 3.77       | 2/23/2021 | 6.47    | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-7 | 6.35       | 3.77       | 2/23/2021 | 6.7     | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-8 | 6.35       | 3.77       | 2/23/2021 | 6.73    | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |

# Appendix III Interwell Prediction Limits - All Results

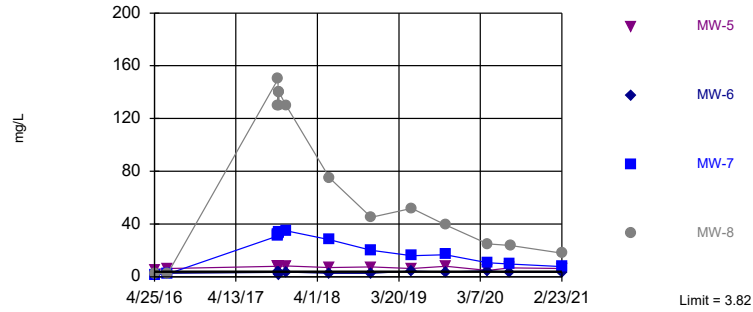
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 5:30 PM

| Constituent            | Well | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha     | Method                      |
|------------------------|------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|-----------|-----------------------------|
| Chloride, Total (mg/L) | MW-5 | 3.82       | n/a        | 2/23/2021 | 6.19    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-6 | 3.82       | n/a        | 2/23/2021 | 3.47    | No   | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-7 | 3.82       | n/a        | 2/23/2021 | 7.85    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-8 | 3.82       | n/a        | 2/23/2021 | 17.9    | Yes  | 92   | 1.292   | 0.1543    | 3.261 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| pH, Field (SU)         | MW-5 | 6.35       | 3.77       | 2/23/2021 | 6.47    | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-6 | 6.35       | 3.77       | 2/23/2021 | 6.13    | No   | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-7 | 6.35       | 3.77       | 2/23/2021 | 6.7     | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-8 | 6.35       | 3.77       | 2/23/2021 | 6.73    | Yes  | 94   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004403 | NP Inter (normality) 1 of 2 |



Exceeds Limit: MW-5, MW-7, MW-8

Prediction Limit  
Interwell Parametric

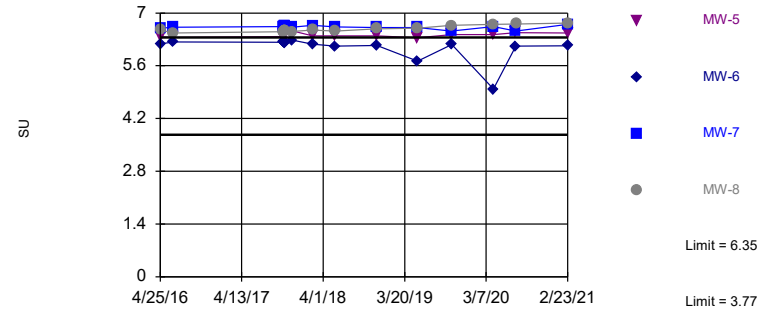


Background Data Summary (based on cube root transformation): Mean=1.292, Std. Dev.=0.1543, n=92, 3.261% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9683, critical = 0.962. Kappa = 1.756 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 4 points to limit.

Constituent: Chloride, Total Analysis Run 5/19/2021 5:29 PM View: Appendix III - Interwell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Exceeds Limits: MW-5, MW-7, MW-8

Prediction Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 94 background values. Annual per-constituent alpha = 0.00352. Individual comparison alpha = 0.0004403 (1 of 2). Comparing 4 points to limit.

Constituent: pH, Field Analysis Run 5/19/2021 5:29 PM View: Appendix III - Interwell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 5/19/2021 5:30 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-3 (bg) | MW-4 (bg) | MW-2 (bg) | MW-5  | MW-1 (bg) | MW-6    | MW-7   | MW-8    |
|------------|-----------|-----------|-----------|-------|-----------|---------|--------|---------|
| 4/25/2016  | 1.32      | 1.53      | 1.9       | 5.44  |           |         |        |         |
| 4/26/2016  |           |           |           |       | 1.94      |         |        |         |
| 4/27/2016  |           |           |           |       |           | 2.19    | 1.71   | 2.34    |
| 6/20/2016  |           | 1.85      | 3.43      |       | 2.09      |         |        |         |
| 6/21/2016  |           |           |           | 6.32  |           | 2.56    | 2.04   | 2.29    |
| 6/22/2016  | 1.46      |           |           |       |           |         |        |         |
| 8/8/2016   |           |           | 3.31      |       | 2.18      |         |        |         |
| 8/9/2016   | 1.35      | 1.95      |           |       |           |         |        |         |
| 8/24/2016  | 1.47      | 2.07      | 3.23      |       | 2.22      |         |        |         |
| 10/3/2016  |           | 2.02      | 3.21      |       | 2.34      |         |        |         |
| 10/4/2016  | 1.59      |           |           |       |           |         |        |         |
| 10/26/2016 | 1.27      | 2.07      | 3.35      |       | 2.34      |         |        |         |
| 11/21/2016 | 1.38      | 2.39      | 3.34      |       | 2.5       |         |        |         |
| 1/17/2017  |           |           | 3.58      |       | 2.68      |         |        |         |
| 1/18/2017  | 1.34      | 1.9       |           |       |           |         |        |         |
| 3/22/2017  | 2         | 1.5 (J)   | 3.4       |       | 3.7       |         |        |         |
| 4/18/2017  | 2.2       | 1.6 (J)   | 2.6       |       | 2.4       |         |        |         |
| 5/30/2017  |           |           |           |       | 2.6       |         |        |         |
| 5/31/2017  | 1.5 (J)   | 2.1       | 4.4       |       |           |         |        |         |
| 8/23/2017  | 1.8 (J)   | 2.3       | 4.4       |       | 2.7       |         |        |         |
| 10/12/2017 |           |           |           | 7.9   |           | 3.4     | 31     | 150     |
| 10/13/2017 |           |           |           | 8 (B) |           | 3 (B)   | 32 (B) | 130 (B) |
| 10/14/2017 |           |           |           | 7.4   |           | 2.8     | 33     | 140     |
| 10/15/2017 |           |           |           | 7.2   |           | 1.9 (J) | 34     | 130     |
| 10/16/2017 |           |           |           | 8.1   |           | 1.8 (J) | 34     | 140     |
| 10/17/2017 |           |           |           | 7.9   |           | 3.1     | 34     | 140     |
| 11/16/2017 |           |           |           | 8.1   |           | 3.5     | 35     | 130     |
| 5/22/2018  |           |           | 3.2       |       | 2.3       |         |        |         |
| 5/23/2018  |           | 2         |           | 7     |           | 2.6     | 28     | 75      |
| 5/24/2018  | 1.6 (J)   |           |           |       |           |         |        |         |
| 6/12/2018  | 1.4 (J)   | 1.7 (J)   | 3.7       |       | 2.3       |         |        |         |
| 10/17/2018 | <2        | 1.5 (J)   | 4.6       |       | 1.7 (J)   |         |        |         |
| 11/19/2018 | <2        | <2        | 3         |       | 1.7 (J)   |         |        |         |
| 11/20/2018 |           |           |           | 7.4   |           | 2.7     | 20     | 45      |
| 4/10/2019  | 2.25      | 1.88      | 1.76      |       | 2.36      |         |        |         |
| 5/14/2019  | 2.28      | 1.82      | 2.98      | 6.24  | 2.28      |         |        |         |
| 5/15/2019  |           |           |           |       |           | 4.45    | 15.9   | 52      |
| 10/8/2019  | 1.36      |           | 4.26      |       | 2.31      |         | 16.8   |         |
| 10/9/2019  |           |           |           |       |           |         |        | 39.2    |
| 10/10/2019 |           | 1.93      |           | 7.88  |           | 3.61    |        |         |
| 10/16/2019 | 1.4       | 1.92      | 4.04      |       | 2.42      |         |        |         |
| 4/6/2020   | 1.72      | 1.5       | 2.43      |       | 2.01      |         |        |         |
| 4/7/2020   |           |           |           | 4.83  |           |         |        |         |
| 4/8/2020   |           |           |           |       |           | 4.63    | 10.6   | 24.9    |
| 7/13/2020  | 1.34      |           | 4.05      |       | 2.1       |         |        |         |
| 7/14/2020  |           | 1.61      |           | 6.84  |           | 3.25    | 9.68   |         |
| 7/15/2020  |           |           |           |       |           |         |        | 23.8    |
| 2/22/2021  | 2.22      | 1.52      | 1.72      |       | 2.16      |         |        |         |
| 2/23/2021  |           |           |           | 6.19  |           | 3.47    | 7.85   | 17.9    |

# Prediction Limit

Constituent: pH, Field (SU) Analysis Run 5/19/2021 5:30 PM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-2 (bg) | MW-4 (bg) | MW-3 (bg) | MW-5 | MW-1 (bg) | MW-7 | MW-6 | MW-8 |
|------------|-----------|-----------|-----------|------|-----------|------|------|------|
| 4/25/2016  | 5.94      | 6.22      | 5.56      | 6.37 |           |      |      |      |
| 4/26/2016  |           |           |           |      | 5.2       |      |      |      |
| 4/27/2016  |           |           |           |      |           | 6.6  | 6.18 | 6.55 |
| 6/20/2016  | 5.96      | 6.21      |           |      | 5.18      |      |      |      |
| 6/21/2016  |           |           |           | 6.35 |           | 6.62 | 6.23 | 6.47 |
| 6/22/2016  |           |           | 5.57      |      |           |      |      |      |
| 8/8/2016   | 5.88      |           |           |      | 5.12      |      |      |      |
| 8/9/2016   |           | 6.11      | 5.67      |      |           |      |      |      |
| 8/24/2016  |           | 6.11      | 5.63      |      |           |      |      |      |
| 10/3/2016  | 5.91 (D)  | 6.13 (D)  |           |      | 5.21 (D)  |      |      |      |
| 10/4/2016  |           |           | 5.69 (D)  |      |           |      |      |      |
| 10/26/2016 | 5.84      | 6.12      | 5.56      |      | 5.2       |      |      |      |
| 11/21/2016 | 5.82 (D)  | 6.09 (D)  | 5.42 (D)  |      | 5.19 (D)  |      |      |      |
| 1/17/2017  | 5.87 (D)  |           |           |      | 5.17 (D)  |      |      |      |
| 1/18/2017  |           | 6.09 (D)  | 5.11 (D)  |      |           |      |      |      |
| 3/22/2017  | 6.01 (D)  | 6.15 (D)  | 4.52 (D)  |      | 5.2 (D)   |      |      |      |
| 4/18/2017  | 6.02      | 6.19      | 5.84      |      | 5.2       |      |      |      |
| 5/30/2017  |           |           |           |      | 5.14 (D)  |      |      |      |
| 5/31/2017  | 5.85 (D)  | 6.13 (D)  | 4.56 (D)  |      |           |      |      |      |
| 8/23/2017  | 5.89 (D)  | 6.12 (D)  | 4.77 (D)  |      | 5.12 (D)  |      |      |      |
| 10/12/2017 |           |           |           | 6.38 |           | 6.64 | 6.22 | 6.5  |
| 10/13/2017 |           |           |           | 6.43 |           | 6.64 | 6.23 | 6.51 |
| 10/14/2017 |           |           |           | 6.41 |           | 6.66 | 6.22 | 6.53 |
| 10/15/2017 |           |           |           | 6.42 |           | 6.67 | 6.22 | 6.53 |
| 10/16/2017 |           |           |           | 6.42 |           | 6.67 | 6.21 | 6.54 |
| 10/17/2017 |           |           |           | 6.41 |           | 6.66 | 6.2  | 6.54 |
| 11/16/2017 |           |           |           | 6.53 |           | 6.62 | 6.28 | 6.51 |
| 2/13/2018  | 6.21      | 6.22      | 5.67      |      | 5.18      |      |      |      |
| 2/14/2018  |           |           |           | 6.39 |           | 6.67 | 6.17 | 6.55 |
| 5/22/2018  | 6.04      |           |           |      | 5.2       |      |      |      |
| 5/23/2018  |           | 6.21      |           | 6.39 |           | 6.63 | 6.12 | 6.52 |
| 5/24/2018  |           |           | 5.19      |      |           |      |      |      |
| 6/12/2018  | 5.95      | 6.16      | 4.79      |      | 5.15      |      |      |      |
| 10/17/2018 | 5.9       | 6.12      | 4.75      |      | 5.12      |      |      |      |
| 11/19/2018 | 6.03      | 6.16      | 3.77 (E)  |      | 5.09      |      |      |      |
| 11/20/2018 |           |           |           | 6.39 |           | 6.61 | 6.14 | 6.58 |
| 4/10/2019  | 6.1       | 6.14      | 5.54      |      | 5.11      |      |      |      |
| 5/14/2019  | 6.07      | 6.23      | 5.71      | 6.34 | 5.19      |      |      |      |
| 5/15/2019  |           |           |           |      |           | 6.61 | 5.72 | 6.6  |
| 10/8/2019  | 5.96      |           | 4.98      |      | 5.12      | 6.52 |      |      |
| 10/9/2019  |           |           |           |      |           |      |      | 6.67 |
| 10/10/2019 |           | 6.15      |           | 6.43 |           |      | 6.16 |      |
| 10/16/2019 | 5.98      | 6.19      | 4.51      |      | 5.16      |      |      |      |
| 4/6/2020   | 6.21      | 6.35      | 5.91      |      | 5.21      |      |      |      |
| 4/7/2020   |           |           |           | 6.43 |           |      |      |      |
| 4/8/2020   |           |           |           |      |           | 6.64 | 4.98 | 6.7  |
| 7/13/2020  | 5.84      |           | 5.16      |      | 5.14      |      |      |      |
| 7/14/2020  |           | 6.2       |           | 6.48 |           | 6.52 | 6.12 |      |
| 7/15/2020  |           |           |           |      |           |      |      | 6.71 |
| 2/22/2021  | 6.1       | 6.19      | 5.59      |      | 5.06      |      |      |      |
| 2/23/2021  |           |           |           | 6.47 |           | 6.7  | 6.13 | 6.73 |

FIGURE F.

# Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 6:43 PM

| Constituent    | Well | Slope   | Calc. | Critical | Sig. | N  | %NDs | Normality | Xform | Alpha | Method |
|----------------|------|---------|-------|----------|------|----|------|-----------|-------|-------|--------|
| pH, Field (SU) | MW-8 | 0.05948 | 96    | 63       | Yes  | 17 | 0    | n/a       | n/a   | 0.01  | NP     |

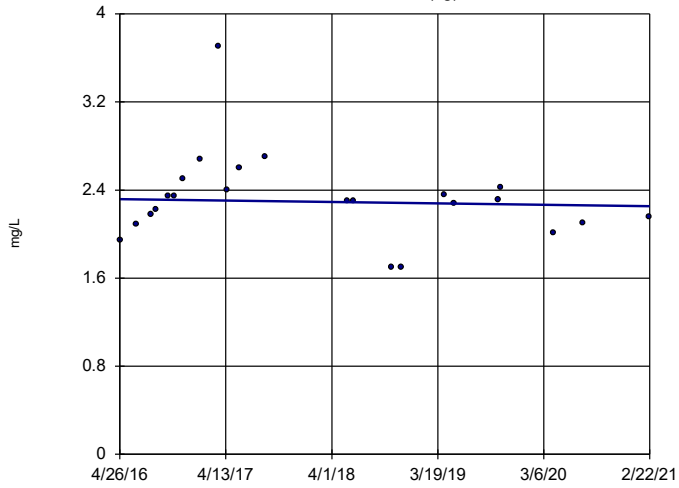
# Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 6:43 PM

| Constituent            | Well        | Slope          | Calc.     | Critical  | Sig.       | N         | %NDs     | Normality  | Xform      | Alpha       | Method    |
|------------------------|-------------|----------------|-----------|-----------|------------|-----------|----------|------------|------------|-------------|-----------|
| Chloride, Total (mg/L) | MW-1 (bg)   | -0.01333       | -10       | -98       | No         | 23        | 0        | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-2 (bg)   | 0.01347        | 2         | 98        | No         | 23        | 0        | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-3 (bg)   | 0.04257        | 44        | 98        | No         | 23        | 8.696    | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-4 (bg)   | -0.06663       | -59       | -98       | No         | 23        | 4.348    | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-5        | -0.1427        | -23       | -58       | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-7        | -6.069         | -21       | -58       | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| Chloride, Total (mg/L) | MW-8        | -32.54         | -46       | -58       | No         | 16        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-1 (bg)   | -0.01537       | -79       | -98       | No         | 23        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-2 (bg)   | 0.03796        | 83        | 98        | No         | 23        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-3 (bg)   | -0.06383       | -38       | -105      | No         | 24        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-4 (bg)   | 0.0165         | 81        | 105       | No         | 24        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-5        | 0.01646        | 44        | 63        | No         | 17        | 0        | n/a        | n/a        | 0.01        | NP        |
| pH, Field (SU)         | MW-7        | 0              | -8        | -63       | No         | 17        | 0        | n/a        | n/a        | 0.01        | NP        |
| <b>pH, Field (SU)</b>  | <b>MW-8</b> | <b>0.05948</b> | <b>96</b> | <b>63</b> | <b>Yes</b> | <b>17</b> | <b>0</b> | <b>n/a</b> | <b>n/a</b> | <b>0.01</b> | <b>NP</b> |

### Sen's Slope Estimator

MW-1 (bg)

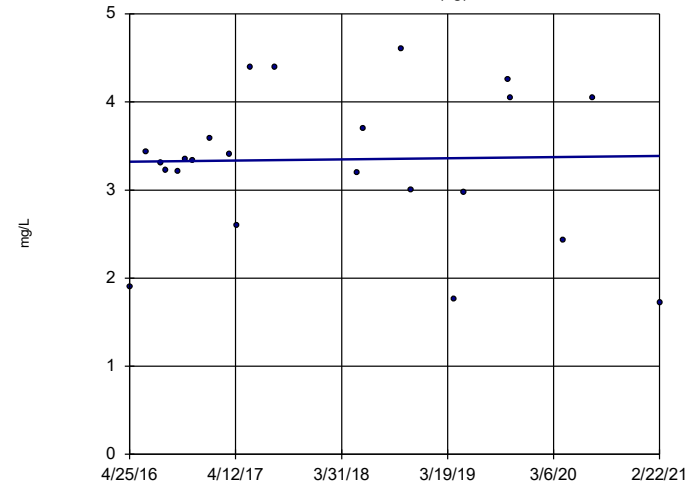


n = 23  
 Slope = -0.01333  
 units per year.  
 Mann-Kendall  
 statistic = -10  
 critical = -98  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 5/19/2021 6:41 PM View: Appendix III  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-2 (bg)

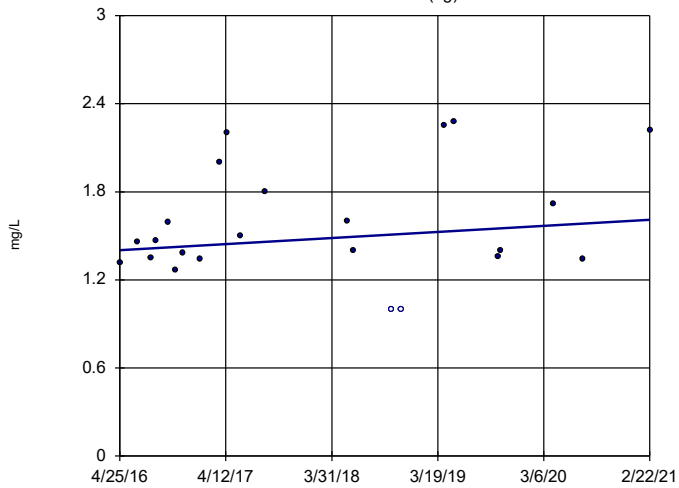


n = 23  
 Slope = 0.01347  
 units per year.  
 Mann-Kendall  
 statistic = 2  
 critical = 98  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 5/19/2021 6:41 PM View: Appendix III  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-3 (bg)

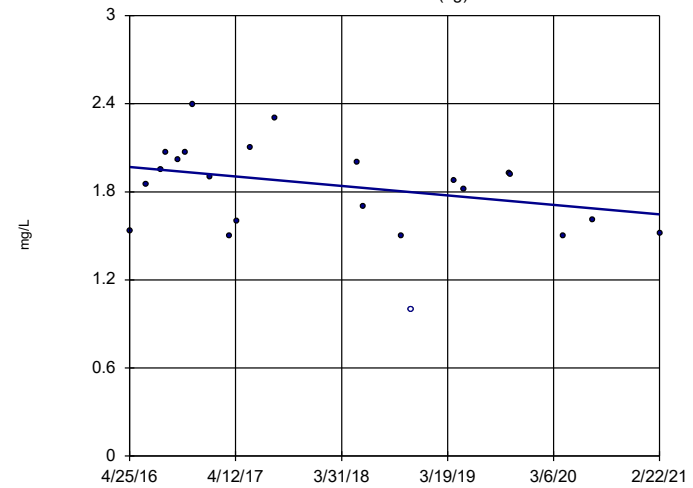


n = 23  
 Slope = 0.04257  
 units per year.  
 Mann-Kendall  
 statistic = 44  
 critical = 98  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 5/19/2021 6:41 PM View: Appendix III  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-4 (bg)

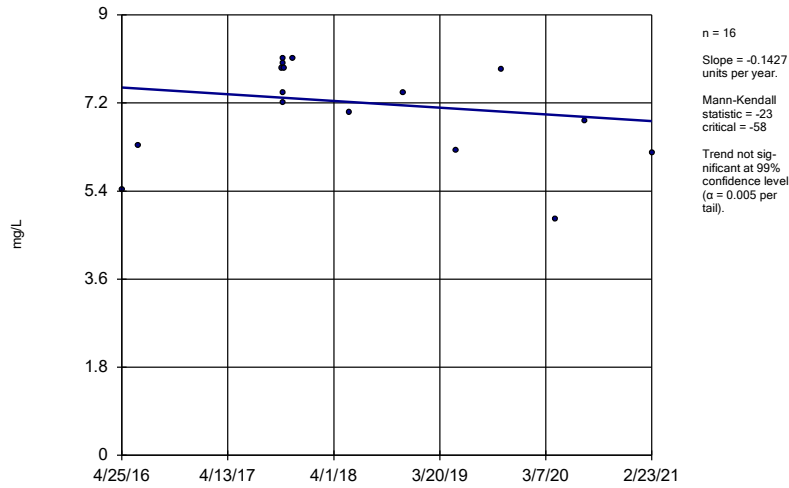


n = 23  
 Slope = -0.06663  
 units per year.  
 Mann-Kendall  
 statistic = -59  
 critical = -98  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 5/19/2021 6:41 PM View: Appendix III  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

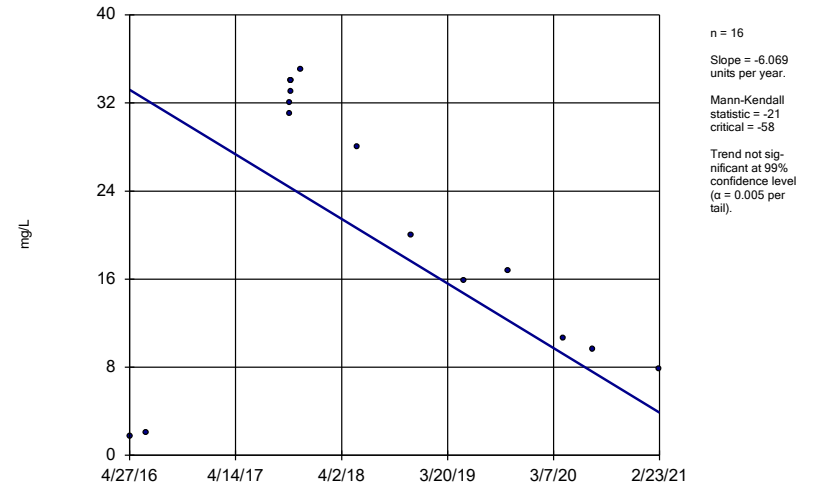
MW-5



Constituent: Chloride, Total Analysis Run 5/19/2021 6:41 PM View: Appendix III  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

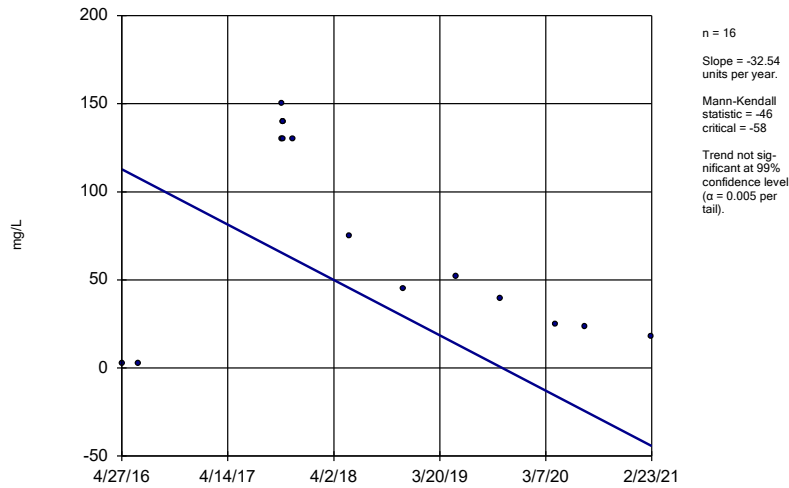
MW-7



Constituent: Chloride, Total Analysis Run 5/19/2021 6:41 PM View: Appendix III  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

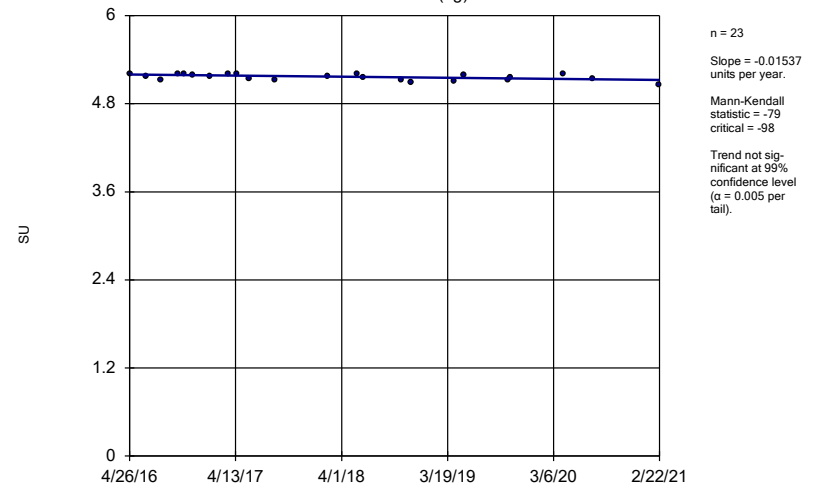
MW-8



Constituent: Chloride, Total Analysis Run 5/19/2021 6:41 PM View: Appendix III  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-1 (bg)

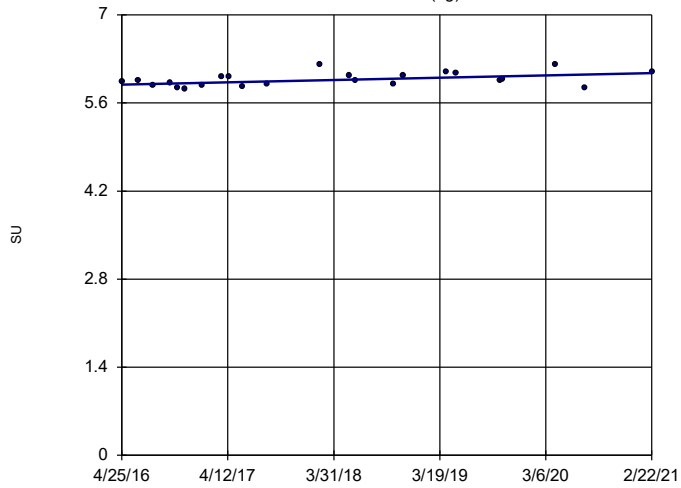


Constituent: pH, Field Analysis Run 5/19/2021 6:41 PM View: Appendix III  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF



### Sen's Slope Estimator

MW-2 (bg)

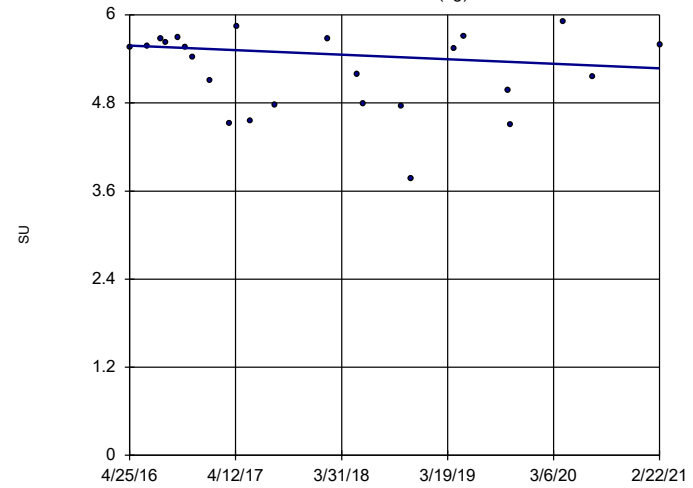


n = 23  
 Slope = 0.03796  
 units per year.  
 Mann-Kendall  
 statistic = 83  
 critical = 98  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 5/19/2021 6:41 PM View: Appendix III  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-3 (bg)

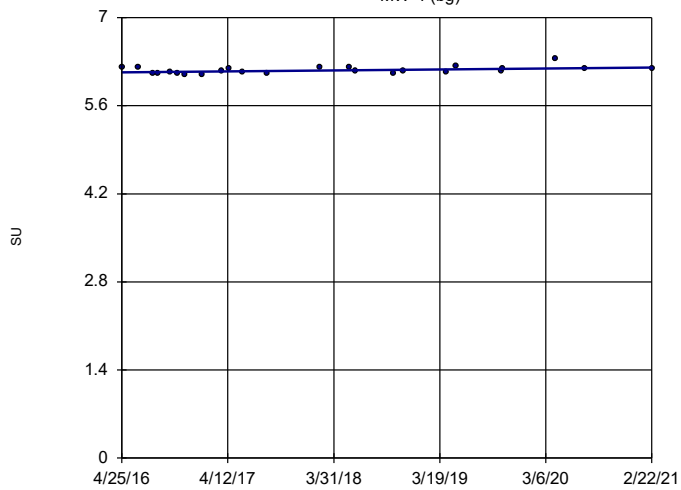


n = 24  
 Slope = -0.06383  
 units per year.  
 Mann-Kendall  
 statistic = -38  
 critical = -105  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 5/19/2021 6:41 PM View: Appendix III  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-4 (bg)

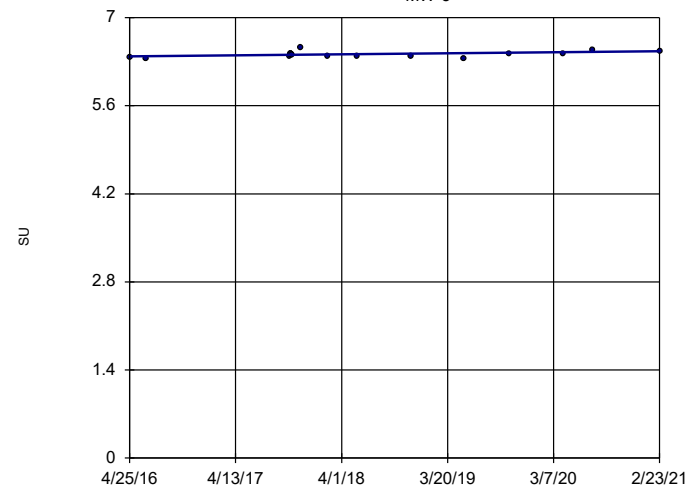


n = 24  
 Slope = 0.0165  
 units per year.  
 Mann-Kendall  
 statistic = 81  
 critical = 105  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 5/19/2021 6:41 PM View: Appendix III  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-5

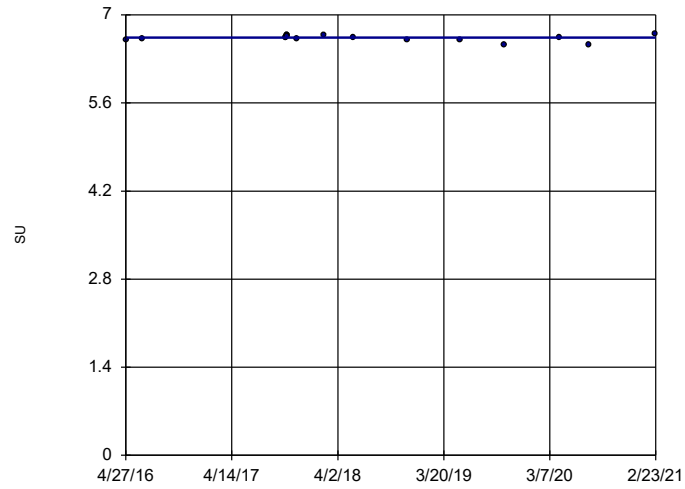


n = 17  
 Slope = 0.01646  
 units per year.  
 Mann-Kendall  
 statistic = 44  
 critical = 63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 5/19/2021 6:41 PM View: Appendix III  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-7

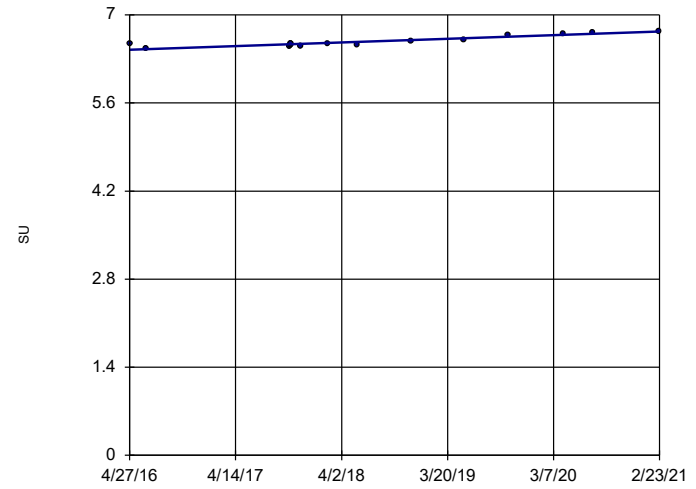


n = 17  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = -8  
critical = -63  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: pH, Field Analysis Run 5/19/2021 6:41 PM View: Appendix III  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-8



n = 17  
Slope = 0.05948  
units per year.  
Mann-Kendall  
statistic = 96  
critical = 63  
Increasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: pH, Field Analysis Run 5/19/2021 6:41 PM View: Appendix III  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

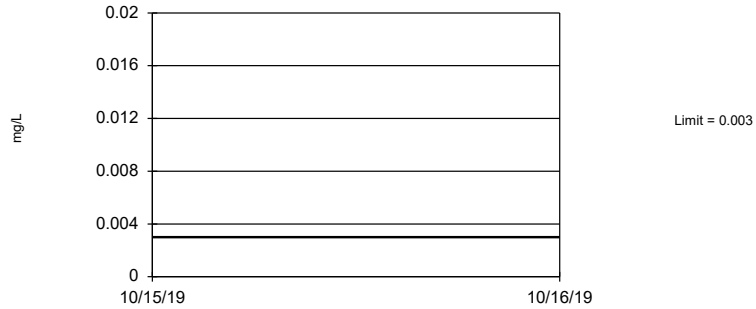
FIGURE G.

# Upper Tolerance Limits - Appendix IV

Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 7/22/2020, 10:42 AM

| Constituent                       | Upper Lim. | Lower Lim. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha   | Method              |
|-----------------------------------|------------|------------|------|---------|-----------|-------|---------|-----------|---------|---------------------|
| Antimony (mg/L)                   | 0.003      | n/a        | 80   | n/a     | n/a       | 92.5  | n/a     | n/a       | 0.01652 | NP Inter(NDs)       |
| Arsenic (mg/L)                    | 0.005      | n/a        | 80   | n/a     | n/a       | 91.25 | n/a     | n/a       | 0.01652 | NP Inter(NDs)       |
| Barium (mg/L)                     | 0.01527    | n/a        | 80   | -4.517  | 0.1705    | 0     | None    | ln(x)     | 0.05    | Inter               |
| Beryllium (mg/L)                  | 0.0121     | n/a        | 78   | n/a     | n/a       | 82.05 | n/a     | n/a       | 0.0183  | NP Inter(NDs)       |
| Cadmium (mg/L)                    | 0.00598    | n/a        | 79   | n/a     | n/a       | 49.37 | n/a     | n/a       | 0.01738 | 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(NDs)       |
| 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 50%. Limit is highest of 80 background values. 92.5% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Antimony Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

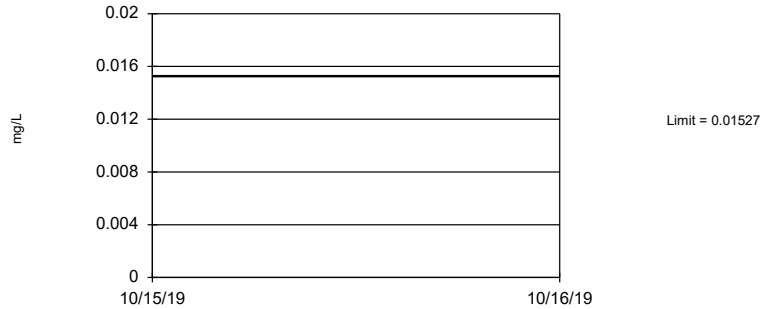
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 80 background values. 91.25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Arsenic Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

### Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary (based on natural log transformation): Mean=-4.517, Std. Dev.=0.1705, n=80. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9594, critical = 0.957. Report alpha = 0.05.

Constituent: Barium Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

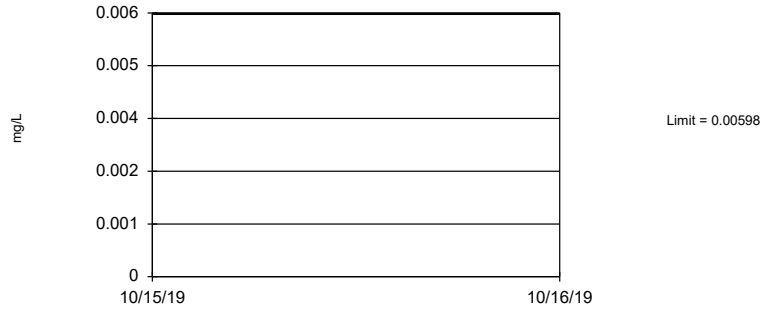
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 78 background values. 82.05% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.0183.

Constituent: Beryllium Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

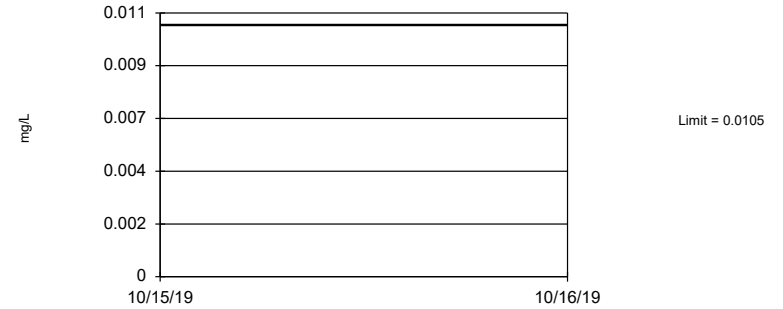
### Tolerance Limit Interwell Non-parametric



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. 49.37% 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: Cadmium Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

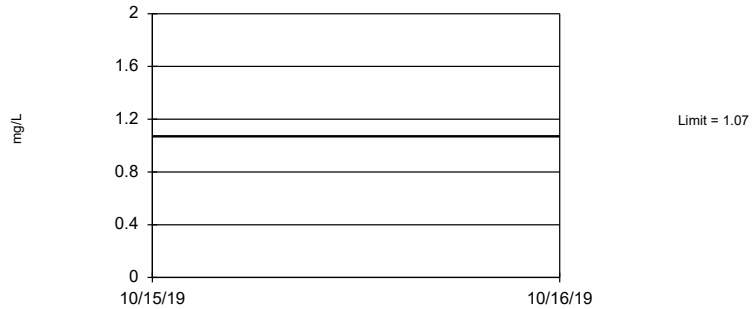
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 80 background values. 95% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Chromium Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. 25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Cobalt Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

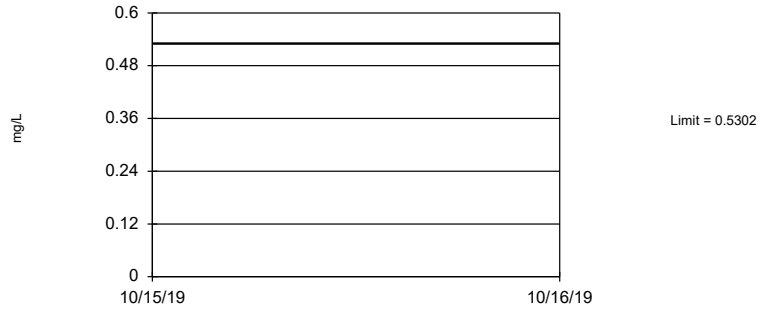
### Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary: Mean=0.4542, Std. Dev.=0.3266, n=76. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9823, critical = 0.957. Report alpha = 0.05.

Constituent: Combined Radium 226 + 228 Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

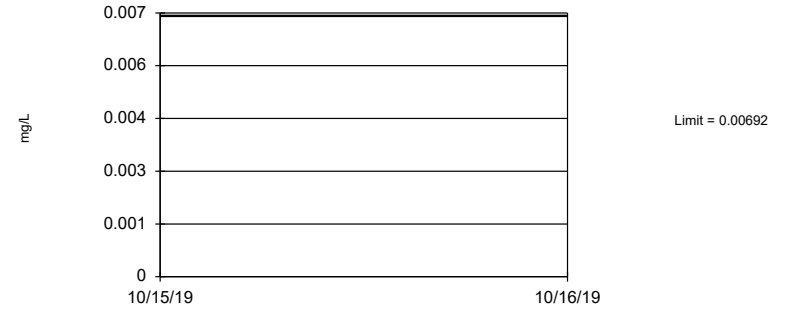
### Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary (based on square root transformation): Mean=0.4636, Std. Dev.=0.1353, n=84. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9797, critical = 0.96. Report alpha = 0.05.

Constituent: Fluoride Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

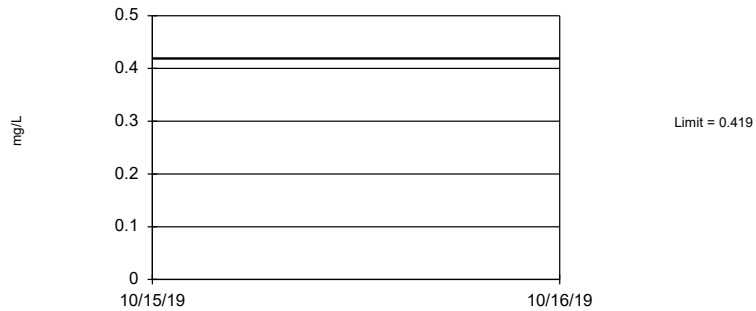
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 80 background values. 96.25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Lead Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

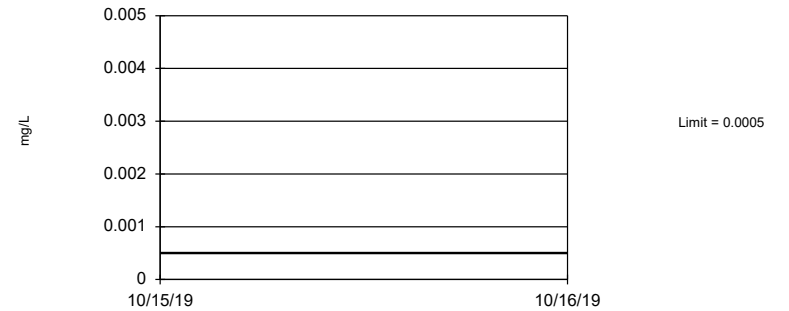
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Lithium Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

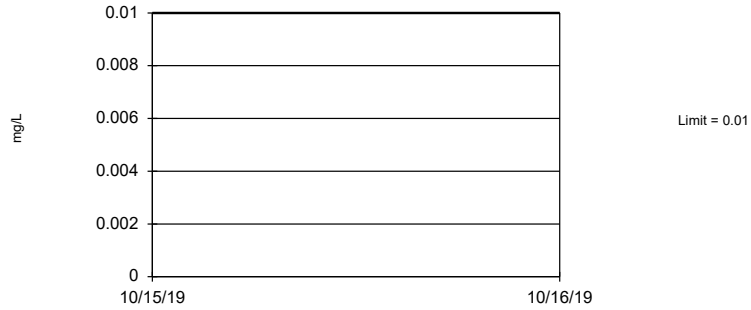
### Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. All background values were censored; limit is most recent reporting limit. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Mercury Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

Tolerance Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. All background values were censored; limit is most recent reporting limit. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Molybdenum Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

Tolerance Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 79 background values. 67.09% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01738.

Constituent: Selenium Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF

Tolerance Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 80 background values. 96.25% NDs. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01652.

Constituent: Thallium Analysis Run 7/22/2020 10:41 AM View: UTL's - Appendix IV  
Plant William C Gorgas Client: Southern Company Data: Gorgas CCR LF



FIGURE H.

| <b>GORGAS CCR LANDFILL GWPS</b> |              |                   |             |
|---------------------------------|--------------|-------------------|-------------|
| <b>Analyte</b>                  | <b>Units</b> | <b>Background</b> | <b>GWPS</b> |
| Antimony                        | mg/L         | 0.003             | 0.006       |
| Arsenic                         | mg/L         | 0.005             | 0.01        |
| Barium                          | mg/L         | 0.01527           | 2           |
| Beryllium                       | mg/L         | 0.0121            | 0.004       |
| Cadmium                         | mg/L         | 0.00598           | 0.005       |
| Chromium                        | mg/L         | 0.0105            | 0.1         |
| Cobalt                          | mg/L         | 1.07              | 1.07        |
| Combined Radium-226/228         | pCi/L        | 1.098             | 5           |
| Fluoride                        | mg/L         | 0.5302            | 4           |
| Lead                            | mg/L         | 0.00692           | 0.015       |
| Lithium                         | mg/L         | 0.419             | 0.419       |
| Mercury                         | mg/L         | 0.0005            | 0.002       |
| Molybdenum                      | mg/L         | 0.01              | 0.1         |
| Selenium                        | mg/L         | 0.0158            | 0.05        |
| Thallium                        | mg/L         | 0.001             | 0.002       |

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.
4. GWPS established during second semi-annual sampling event in 2019.

FIGURE I.

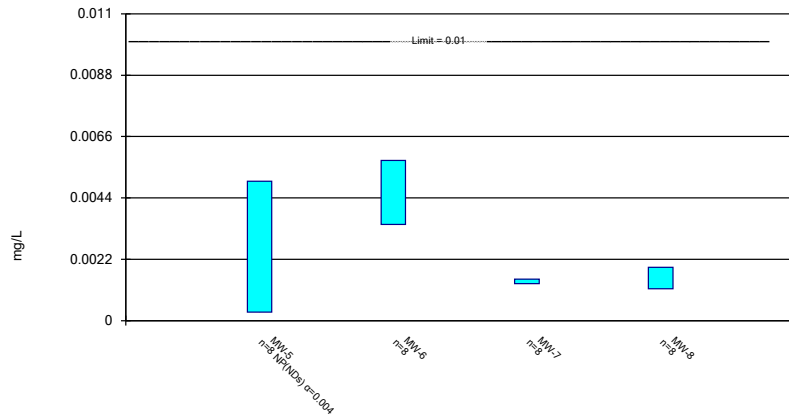
# Confidence Intervals - All Results (No Significant)

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 5/19/2021, 7:14 PM

| Constituent                       | Well | Upper Lim. | Lower Lim. | Compliance | Sig. | N | Mean      | Std. Dev.  | %NDs | ND Adj.      | Transform | Alpha | Method         |
|-----------------------------------|------|------------|------------|------------|------|---|-----------|------------|------|--------------|-----------|-------|----------------|
| Arsenic (mg/L)                    | MW-5 | 0.005      | 0.000309   | 0.01       | No   | 8 | 0.003559  | 0.002028   | 62.5 | None         | No        | 0.004 | NP (NDs)       |
| Arsenic (mg/L)                    | MW-6 | 0.005742   | 0.00345    | 0.01       | No   | 8 | 0.004596  | 0.001081   | 0    | None         | No        | 0.01  | Param.         |
| Arsenic (mg/L)                    | MW-7 | 0.001492   | 0.001323   | 0.01       | No   | 8 | 0.001408  | 0.00007978 | 0    | None         | No        | 0.01  | Param.         |
| Arsenic (mg/L)                    | MW-8 | 0.001915   | 0.001145   | 0.01       | No   | 8 | 0.00153   | 0.0003631  | 0    | None         | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-5 | 0.01326    | 0.01049    | 2          | No   | 8 | 0.01188   | 0.001309   | 0    | None         | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-6 | 0.01519    | 0.01261    | 2          | No   | 8 | 0.0139    | 0.001221   | 0    | None         | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-7 | 0.01447    | 0.01163    | 2          | No   | 8 | 0.01305   | 0.001338   | 0    | None         | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-8 | 0.01418    | 0.01245    | 2          | No   | 8 | 0.01331   | 0.0008167  | 0    | None         | No        | 0.01  | Param.         |
| Beryllium (mg/L)                  | MW-6 | 0.001015   | 0.000677   | 0.004      | No   | 8 | 0.0009444 | 0.0001341  | 75   | None         | No        | 0.004 | NP (NDs)       |
| Cadmium (mg/L)                    | MW-6 | 0.00204    | 0.000203   | 0.005      | No   | 8 | 0.0005145 | 0.0006576  | 75   | None         | No        | 0.004 | NP (NDs)       |
| Cobalt (mg/L)                     | MW-5 | 0.005      | 0.00102    | 1.07       | No   | 8 | 0.004502  | 0.001407   | 87.5 | None         | No        | 0.004 | NP (NDs)       |
| Cobalt (mg/L)                     | MW-6 | 0.2328     | 0.02697    | 1.07       | No   | 8 | 0.1324    | 0.16       | 0    | None         | ln(x)     | 0.01  | Param.         |
| Cobalt (mg/L)                     | MW-7 | 0.005248   | 0.002382   | 1.07       | No   | 8 | 0.004111  | 0.001367   | 25   | Kaplan-Meier | No        | 0.01  | Param.         |
| Cobalt (mg/L)                     | MW-8 | 0.008443   | 0.004917   | 1.07       | No   | 8 | 0.00668   | 0.001663   | 0    | None         | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-5 | 0.84       | 0.5025     | 5          | No   | 8 | 0.6713    | 0.1592     | 0    | None         | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-6 | 1.552      | 0.5018     | 5          | No   | 8 | 1.027     | 0.4952     | 0    | None         | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-7 | 0.7035     | 0.1893     | 5          | No   | 8 | 0.4464    | 0.2426     | 0    | None         | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-8 | 0.9437     | 0.2933     | 5          | No   | 8 | 0.6083    | 0.349      | 0    | None         | sqrt(x)   | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-5 | 0.3322     | 0.2361     | 4          | No   | 8 | 0.2841    | 0.04534    | 0    | None         | No        | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-6 | 0.1402     | 0.1063     | 4          | No   | 8 | 0.1201    | 0.02945    | 12.5 | None         | x^4       | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-7 | 0.1966     | 0.1654     | 4          | No   | 8 | 0.181     | 0.01474    | 0    | None         | No        | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-8 | 0.21       | 0.189      | 4          | No   | 8 | 0.2009    | 0.009433   | 0    | None         | No        | 0.004 | NP (normality) |
| Lithium (mg/L)                    | MW-5 | 0.133      | 0.0981     | 0.419      | No   | 8 | 0.1118    | 0.01438    | 0    | None         | No        | 0.004 | NP (normality) |
| Lithium (mg/L)                    | MW-6 | 0.2659     | 0.1688     | 0.419      | No   | 8 | 0.2101    | 0.07407    | 0    | None         | x^3       | 0.01  | Param.         |
| Lithium (mg/L)                    | MW-7 | 0.131      | 0.103      | 0.419      | No   | 8 | 0.1236    | 0.009899   | 0    | None         | No        | 0.004 | NP (normality) |
| Lithium (mg/L)                    | MW-8 | 0.1854     | 0.1516     | 0.419      | No   | 8 | 0.1685    | 0.01594    | 0    | None         | No        | 0.01  | Param.         |
| Molybdenum (mg/L)                 | MW-5 | 0.01       | 0.0014     | 0.1        | No   | 8 | 0.008925  | 0.003041   | 87.5 | None         | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-6 | 0.01       | 0.000285   | 0.1        | No   | 8 | 0.008786  | 0.003435   | 87.5 | None         | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-7 | 0.01       | 0.00107    | 0.1        | No   | 8 | 0.008884  | 0.003157   | 87.5 | None         | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-8 | 0.0129     | 0.01       | 0.1        | No   | 8 | 0.01036   | 0.001025   | 87.5 | None         | No        | 0.004 | NP (NDs)       |
| Selenium (mg/L)                   | MW-5 | 0.01       | 0.00233    | 0.05       | No   | 8 | 0.009041  | 0.002712   | 87.5 | None         | No        | 0.004 | NP (NDs)       |

### Parametric and Non-Parametric (NP) Confidence Interval

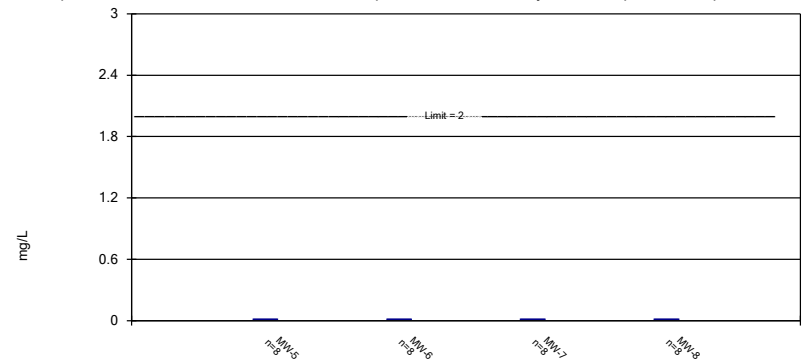
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/19/2021 7:13 PM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Parametric Confidence Interval

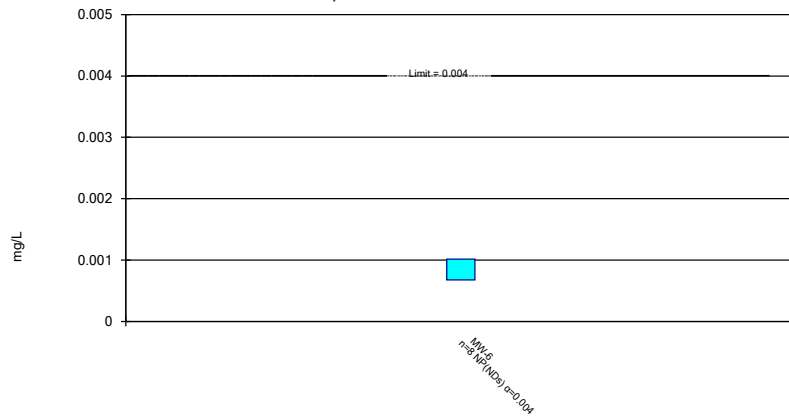
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/19/2021 7:13 PM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Non-Parametric Confidence Interval

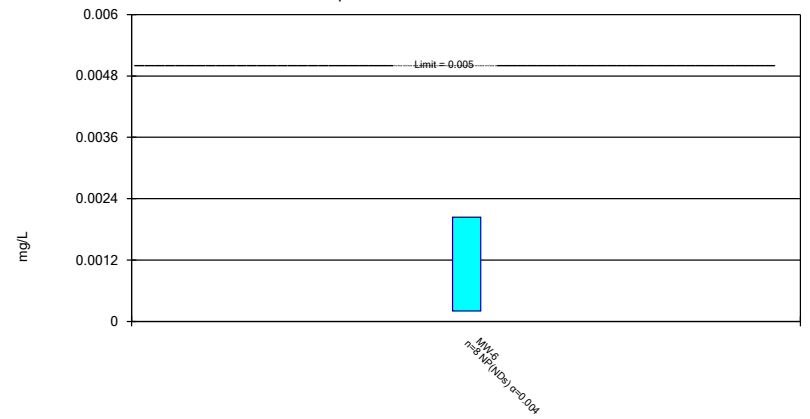
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 5/19/2021 7:13 PM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Non-Parametric Confidence Interval

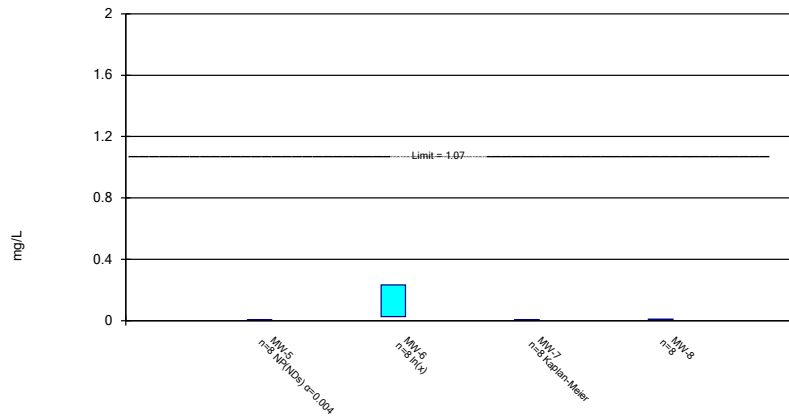
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 5/19/2021 7:13 PM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Parametric and Non-Parametric (NP) Confidence Interval

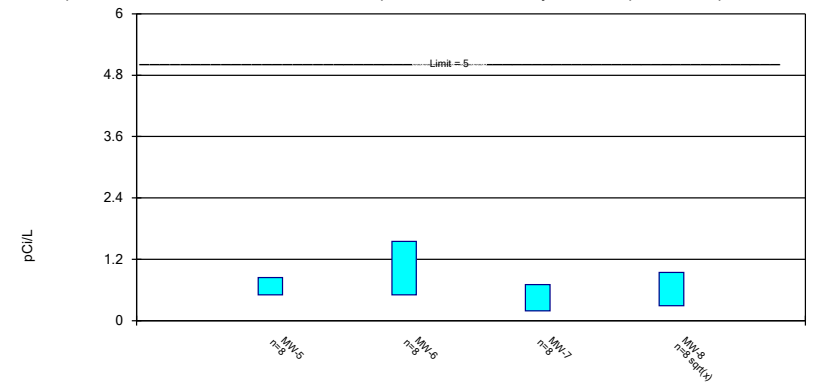
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/19/2021 7:13 PM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Parametric Confidence Interval

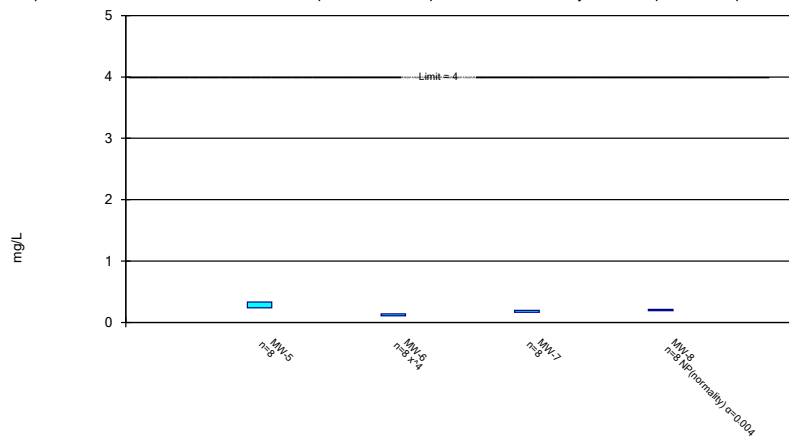
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/19/2021 7:13 PM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Parametric and Non-Parametric (NP) Confidence Interval

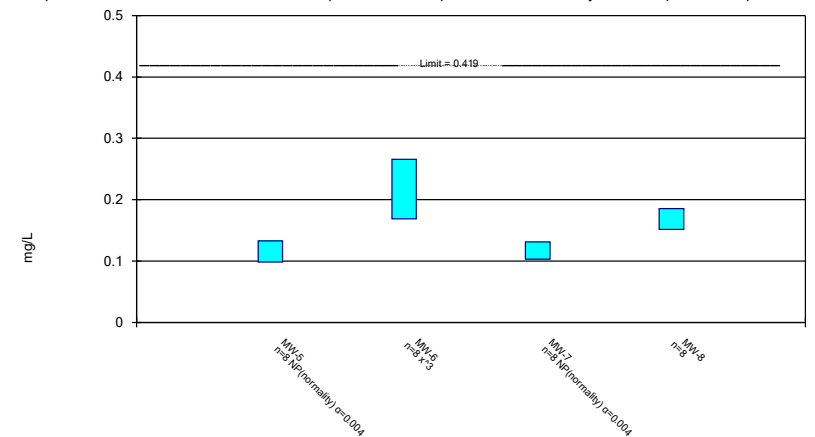
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride, total Analysis Run 5/19/2021 7:13 PM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Parametric and Non-Parametric (NP) Confidence Interval

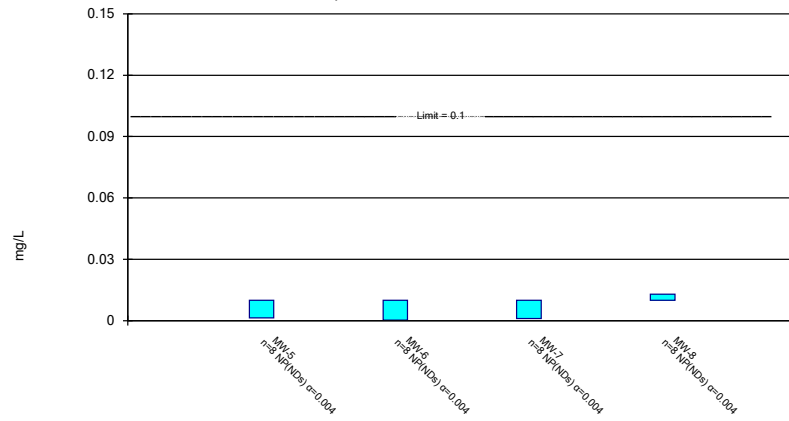
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/19/2021 7:13 PM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Non-Parametric Confidence Interval

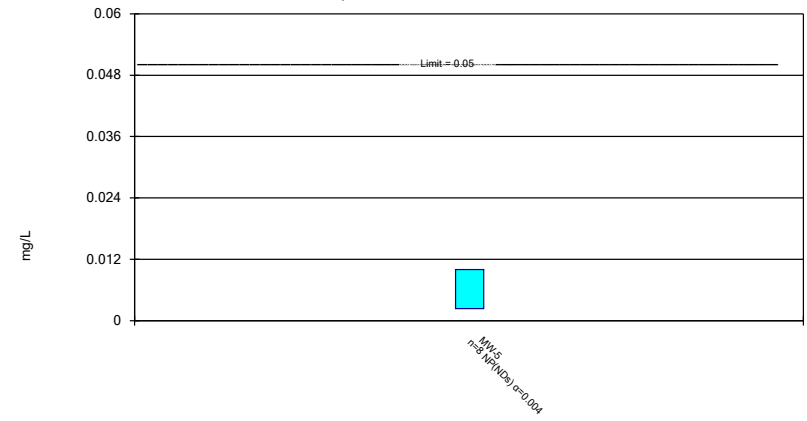
Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 5/19/2021 7:13 PM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

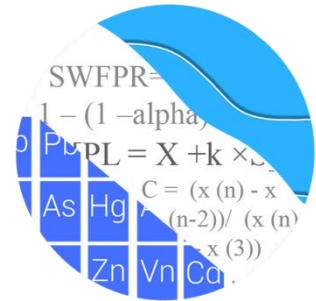


Constituent: Selenium Analysis Run 5/19/2021 7:13 PM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

**2nd**  
**Semi-Annual**  
**Monitoring Event**



# GROUNDWATER STATS CONSULTING



December 10, 2021

Southern Company Services  
Attn: Mr. Greg Dyer  
3535 Colonnade Parkway  
Birmingham, AL 35243

Re: Plant Gorgas CCR Landfill  
Background Update & 2<sup>nd</sup> Semi-Annual Statistical Analysis – July 2021

Dear Mr. Dyer,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the background update and statistical analysis of groundwater data for the July 2021 2<sup>nd</sup> semi-annual sample event for Alabama Power Company's Plant Gorgas CCR Landfill. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities (CCR Rule, 2015) as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began at this site for the CCR program in 2016. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** MW-1, MW-2, MW-3, and MW-4
- **Downgradient wells:** MW-5, MW-6, MW-7, and MW-8

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was prepared according to the Statistical Analysis Plan approved by Dr. Kirk Cameron, PhD Statistician with MacStat Consulting, primary author of the USEPA Unified Guidance, and Senior Advisor to Groundwater Stats Consulting. The analysis was reviewed Dr. Jim Loftis, Civil & Environmental Engineering professor emeritus at Colorado State University and senior advisor to Groundwater Stats Consulting.

The CCR program consists of the constituents listed below. The terms “parameters” and “constituents” are used interchangeably.

**Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS

**Appendix IV** (Assessment Monitoring) - antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A list of Appendix IV downgradient well/constituent pairs containing 100% non-detects follows this letter.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). A substitution of the most recent reporting limit is used for non-detect data. Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells.

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on analysis of the spatial variability of groundwater quality data among wells upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves are provided in this report to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests that the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations. Power curves are based on the following statistical methods and site/data characteristics:

- Semi-Annual Sampling
- Intrawell Prediction Limits with 1-of-2 resample plan
- Interwell Prediction Limits with 1-of-2 resample plan
- # Background Samples (Intrawell): 15
- # Background Samples (Interwell): 96
- # Constituents: 7
- # Downgradient wells: 4

## Summary of Statistical Methods – Appendix III Parameters

Based on the earlier evaluation described above, the following statistical methods were selected:

- Intrawell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, fluoride, sulfate, and TDS
- Interwell prediction limits, combined with a 1-of-2 resample plan for chloride and pH

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the annual false positive rate associated with parametric limits is fixed at 10% as recommended by the EPA Unified Guidance (2009), the false positive rate associated with nonparametric limits is not fixed and depends upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (USEPA, 2009), data are analyzed using either parametric or non-parametric prediction limits as appropriate. Non-detects are handled as follows:

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the intrawell case, data for all wells and constituents may be re-evaluated when a minimum of 4 new data points are available to determine whether earlier concentrations are representative of present-day groundwater

quality. In the interwell case, prediction limits are updated with upgradient well data following each sampling event after careful screening for any new outliers. While not required for this report in some cases, deselecting the earlier portion of data may be necessary prior to construction of limits so that resulting statistical limits are conservative (lower) from a regulatory perspective and capable of rapidly detecting changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

## **Background Update Summaries**

### **Fall 2019**

Intrawell prediction limits, which compare the most recent compliance sample from a given well to historical data from the same well, are updated by testing for the appropriateness of consolidating new sampling observations with the screened background data and were last updated in September 2019. As discussed in the Statistical Analysis Plan (August 2020), intrawell prediction limits are used to evaluate boron, calcium, fluoride, sulfate, and TDS at all wells due to natural spatial variation for these parameters. Historical data were evaluated for updating with newer data through May 2019 through the use of time series graphs and Tukey's outlier test to identify potential outliers when necessary, as well as the Mann Whitney test for equality of medians. This process is described below for the 2021 update and requires a minimum of four new data points. During the 2019 screening, all background data sets for constituents using intrawell prediction limits were updated through May 2019 and a summary of these results was included with the Mann Whitney test section in that report.

Interwell prediction limits are used to compare the most recent sample from each downgradient well to statistical limits constructed from pooled upgradient well data for chloride and pH. As mentioned above, these limits are updated following each sampling event after careful screening for new outliers. Data from upgradient wells are also periodically re-screened for newly developing trends, which may require adjustment of the background period to eliminate the trend. No adjustments were required in upgradient wells for constituents evaluated using interwell prediction limits.

### **Fall 2021**

#### Outlier Analysis

Prior to constructing prediction limits, proposed background data--through February 2021 for intrawell parameters and through July 2021 for interwell parameters--were

reviewed through visual screening to identify any newly suspected outliers at all wells for boron, calcium, fluoride, sulfate, and TDS and at upgradient wells for chloride and pH. When identified as outliers, values were flagged with "o" and excluded to reduce variation, better represent background conditions, and provide limits that are conservative from a regulatory perspective.

During this analysis, high non-detect values for boron in upgradient well MW-4 and downgradient well MW-5, as well as a low non-detect value for fluoride in downgradient well MW-6 were flagged as outliers. Additionally, a low detected value of pH in upgradient well MW-3, high detected values of sulfate at upgradient well MW-1 and downgradient wells MW-7 and MW-8, and a high detected value TDS in upgradient well MW-1 were also flagged as outliers. As mentioned above, flagged data are displayed in a lighter font and as a disconnected symbol on the time series reports, as well as in a lighter font on the accompanying data pages. A list of flagged outliers follows this report (Figure C).

#### Intrawell – Mann-Whitney Evaluation

For constituents requiring intrawell prediction limits, the Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through May 2019 to compliance data through February 2021 (Figure D). When no statistically significant difference in medians between the two groups is found at a 99% confidence level, background data may be updated with newer compliance data. Statistically significant differences (either an increase or decrease in median concentrations) were found between the two groups for the following well/constituent pairs:

##### Increasing

- Boron: MW-2 (upgradient)

##### Decreasing

- Fluoride: MW-8

Typically, when the test concludes that the medians of the two groups are statistically significantly different, particularly in the downgradient wells, the background data are not updated to include the newer data unless it can be reasonably justified that the change in concentrations reflects a naturally occurring shift unrelated to practices at the site. In studies such as the current one, in which at least one of the segments being compared is of short duration, the comparison is complicated by the fact that normal short-term variation may be mistaken for long-term change in medians.

While the Mann-Whitney test identified a statistically significant increase in median concentrations for boron in well MW-2, the difference resulted from reported non-detect

or trace values in the most recent data. The test also identified a statistically significant decrease in the median concentration for fluoride in downgradient well MW-8; however, the magnitude of the decrease was marginal compared to the historical concentrations. Therefore, all background data sets for CCR Appendix III constituents that use intrawell methods were updated. All records will be re-evaluated during the next background update.

### Interwell – Trend Test Evaluation

The Sen's Slope/Mann Kendall trend test was used to evaluate the entire record of data through July 2021 from upgradient wells for parameters utilizing interwell prediction limits. When statistically significant increasing trends are identified in upgradient wells, the earlier portion of data may require deselection prior to construction of interwell statistical limits if the trending data would result in statistical limits that are not conservative from a regulatory perspective. No statistically significant trends were noted in upgradient wells; therefore, no adjustments were made at this time. A summary of the results follows this letter (Figure E).

## **Evaluation of Appendix III Parameters – July 2021**

### Prediction Limits

Intrawell prediction limits, combined with a 1-of-2 resample plan, were constructed for boron, calcium, fluoride, sulfate, and TDS at each well using screened background data through February 2021 (Figure F). Intrawell limits constructed from carefully screened background data from within each well serve to provide statistical limits that are representative of the background data population, and that will rapidly identify a change in more recent compliance data from within a given well. This statistical method removes the element of variation across wells and eliminates the chance of mistaking natural spatial variation for a release from the facility. The July 2021 observation is compared to its respective background from the same well to determine whether initial exceedances are present.

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed for chloride and pH (Figure G). Interwell prediction limits pool upgradient well data through July 2021 to establish a background limit for an individual constituent. The July 2021 sample from each downgradient well is compared to the background limit to determine whether initial exceedances are present.

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified, and further research is required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If a resample falls within the statistical limit, the initial exceedance is considered to be a false positive result; therefore, no further action is necessary.

Complete prediction limits results and a summary of exceedances follow this letter. Exceedances were identified for the following well/constituent pairs:

Intrawell:

- Fluoride: MW-7 and MW-8

Interwell:

- Chloride: MW-5, MW-6, MW-7, and MW-8
- pH: MW-5, MW-7, and MW-8

#### Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure H). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. The existence of similar trends in both upgradient and downgradient wells is an indication of natural variability in groundwater that is unrelated to practices at the site. A summary of the trend test results follows this letter. No statistically significant decreasing trends were identified. Statistically significant trends were identified for the following well/constituent pairs:

Increasing

- Fluoride: MW-2 (upgradient)
- pH: MW-8

Decreasing

- None

#### **Evaluation of Appendix IV Parameters – July 2021**

Data from upgradient wells for Appendix IV parameters were assessed for outliers during this analysis. In addition to previously flagged outliers, high values for cobalt and lead in

upgradient well MW-3 were flagged in order to construct statistical limits that are conservative (i.e., lower) from a regulatory perspective. A previously flagged value of selenium (0.0209 mg/L) was unflagged in well MW-3. A summary of flagged outliers follows this report (Figure C).

In accordance with Alabama Department of Environmental Management, the Groundwater Protections Standards (GWPS) were updated during this 2021 2<sup>nd</sup> semi-annual statistical analysis. The GWPS will be updated again during the 2023 2<sup>nd</sup> semi-annual statistical analysis. The methodology used to create these GWPS is described below.

### Interwell Upper Tolerance Limits

First, background limits were determined using tolerance limits constructed from pooled upgradient well data through July 2021 (Figure I). The tolerance limits contain a known fraction (coverage) of the background population with a known level of confidence. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. As requested by ADEM to eliminate variation among upgradient well data, nonparametric tolerance limits, which use the highest value in background as the statistical limit, were constructed.

### Groundwater Protection Standards

These background limits were then compared to the Maximum Contaminant Levels (MCLs) for each parameter, and the higher of the two was used as the GWPS (Figure J) in the confidence interval comparisons described below. Exceptions are noted in Figure J for beryllium and cadmium. For these two parameters, the MCL's were used as the GWPS rather than the higher background UTLs to maintain the more conservative standard.

### Confidence Intervals

Confidence intervals were then constructed on downgradient wells using a maximum of the most recent 8 samples through July 2021 for each of the Appendix IV parameters (Figure K). These intervals were constructed as either parametric or nonparametric confidence intervals depending on the data distribution and percentage of non-detects. When data followed a normal or transformed-normal distribution, parametric confidence intervals were used for Appendix IV parameters. Nonparametric confidence intervals, which use the highest and lowest values in background as interval limits, were constructed when data did not follow a normal or transformed-normal distribution or when there were greater than 50% non-detects.



As mentioned above, well/constituent pairs containing 100% non-detects for the most recent 8 samples did not require statistics; therefore, they were deselected prior to construction of confidence intervals. A list of deselected well/constituent pairs follows this report. Each confidence interval was compared with the corresponding GWPS. Only when the entire confidence interval is above the GWPS is the well/constituent pair considered to exceed its respective standard. Both a tabular summary and graphical presentation of the confidence interval results follow this letter. No exceedances were noted for any of the well/constituent pairs.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Gorgas CCR Landfill. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

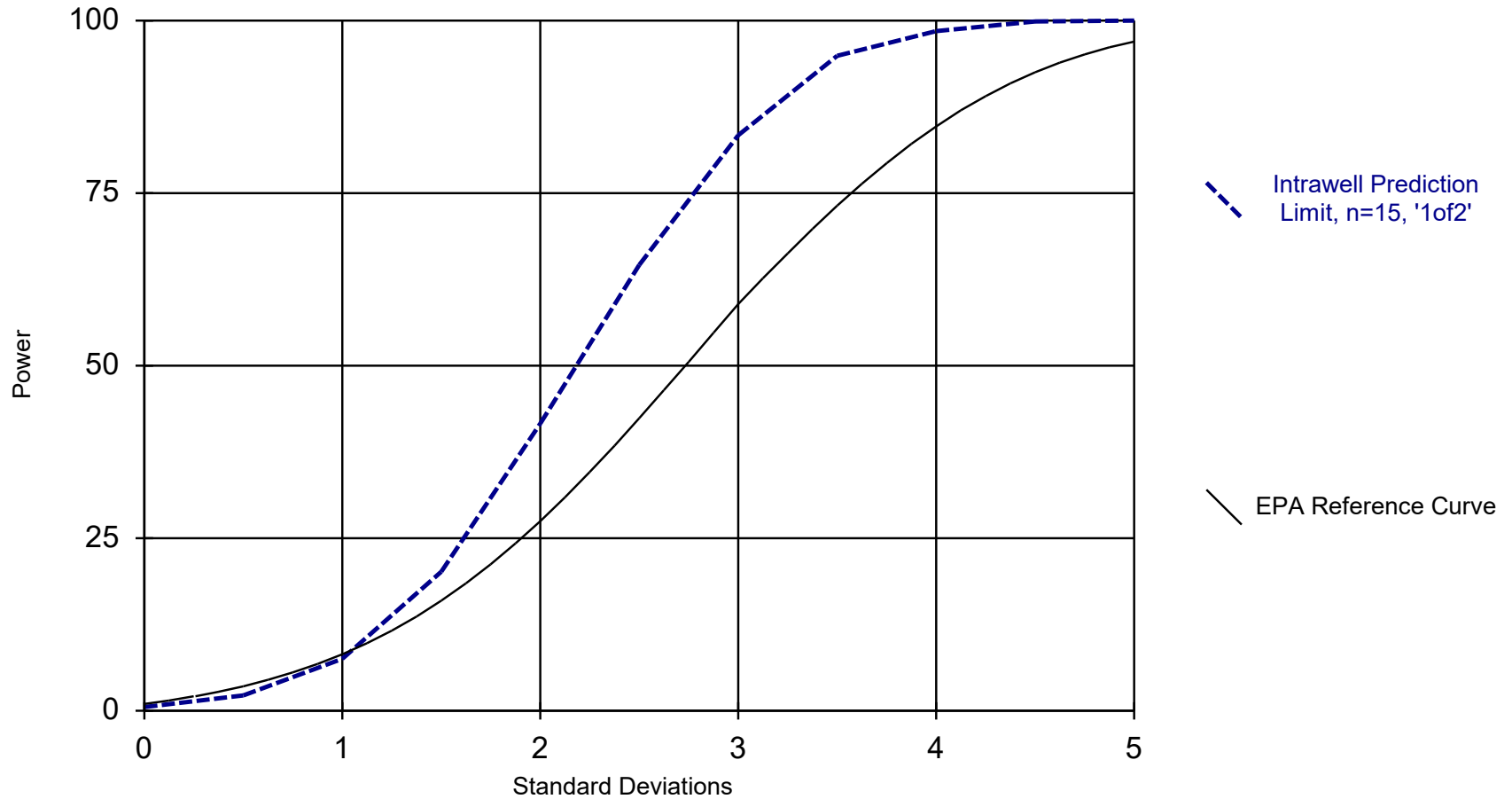


Andrew Collins  
Project Manager



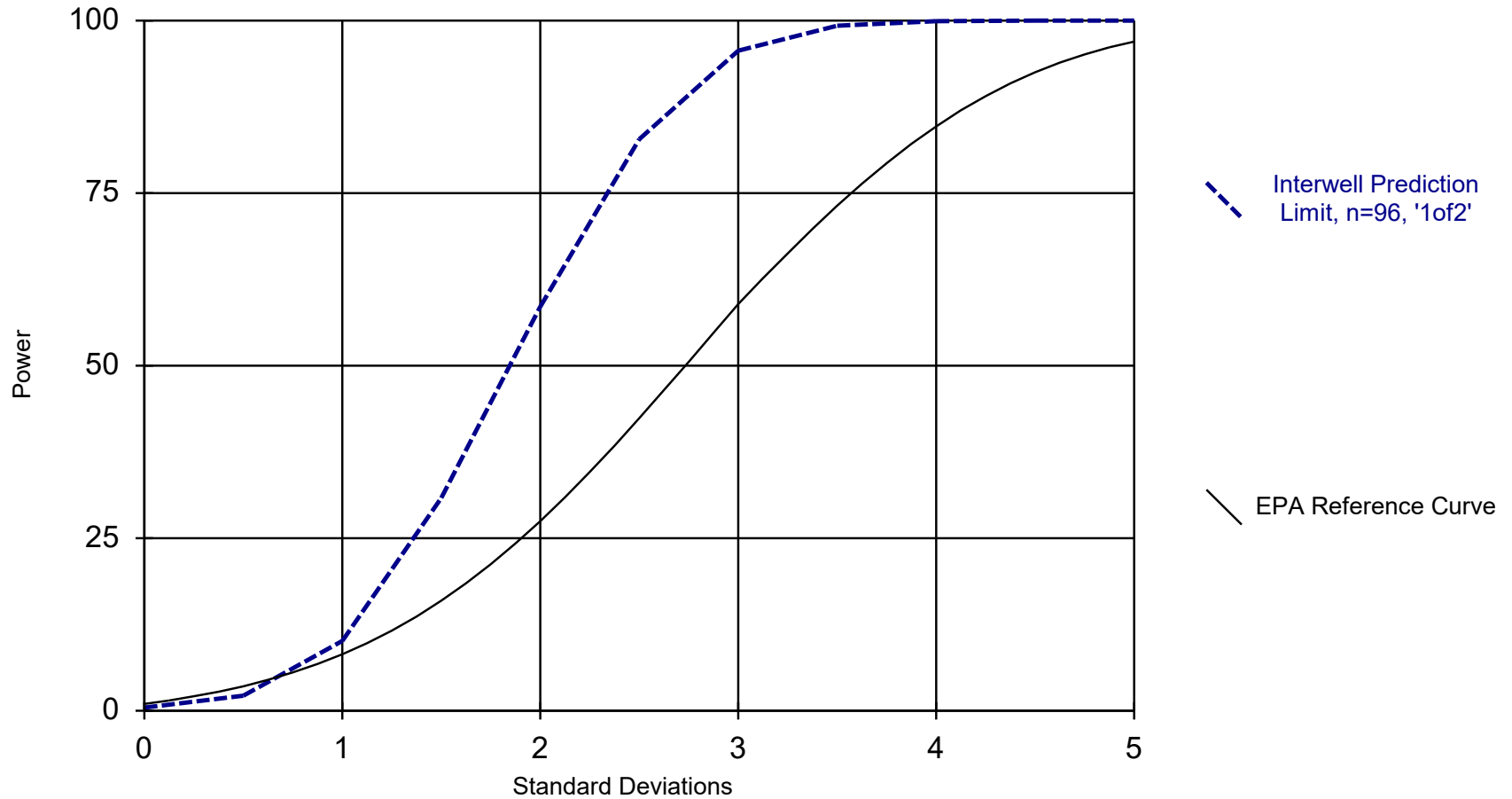
Kristina Rayner  
Groundwater Statistician

### Intrawell Power Curve



Kappa = 2.115, based on 4 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

### Interwell Power Curve



Kappa = 1.752, based on 4 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

# 100% Non-Detects: Appendix IV Downgradient

Analysis Run 11/10/2021 8:52 PM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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Antimony (mg/L)  
MW-5, MW-6, MW-7, MW-8

Beryllium (mg/L)  
MW-5, MW-7, MW-8

Cadmium (mg/L)  
MW-5, MW-7, MW-8

Chromium (mg/L)  
MW-5, MW-6, MW-7, MW-8

Lead (mg/L)  
MW-5, MW-6, MW-7

Mercury (mg/L)  
MW-5, MW-6, MW-7, MW-8

Selenium (mg/L)  
MW-6, MW-7, MW-8

Thallium (mg/L)  
MW-5, MW-6, MW-7, MW-8

# Welch's t-test/Mann-Whitney - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:43 AM

| <u>Constituent</u>            | <u>Well</u>      | <u>Calc.</u>  | <u>0.01</u> | <u>Method</u> |
|-------------------------------|------------------|---------------|-------------|---------------|
| <b>Boron, total (mg/L)</b>    | <b>MW-2 (bg)</b> | <b>2.809</b>  | <b>Yes</b>  | <b>Mann-W</b> |
| <b>Fluoride, total (mg/L)</b> | <b>MW-8</b>      | <b>-2.771</b> | <b>Yes</b>  | <b>Mann-W</b> |

# Welch's t-test/Mann-Whitney - All Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:43 AM

| <u>Constituent</u>                  | <u>Well</u>      | <u>Calc.</u>  | <u>0.01</u> | <u>Method</u> |
|-------------------------------------|------------------|---------------|-------------|---------------|
| Boron, total (mg/L)                 | MW-1 (bg)        | 2.52          | No          | Mann-W        |
| <b>Boron, total (mg/L)</b>          | <b>MW-2 (bg)</b> | <b>2.809</b>  | <b>Yes</b>  | <b>Mann-W</b> |
| Boron, total (mg/L)                 | MW-3 (bg)        | 0.9363        | No          | Mann-W        |
| Boron, total (mg/L)                 | MW-4 (bg)        | -0.1567       | No          | Mann-W        |
| Boron, total (mg/L)                 | MW-5             | 1.896         | No          | Mann-W        |
| Boron, total (mg/L)                 | MW-6             | 0.7882        | No          | Mann-W        |
| Boron, total (mg/L)                 | MW-7             | 2.285         | No          | Mann-W        |
| Boron, total (mg/L)                 | MW-8             | 1.032         | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-1 (bg)        | 0.485         | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-2 (bg)        | 0.03731       | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-3 (bg)        | 0.1119        | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-4 (bg)        | -1.23         | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-5             | 0.8495        | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-6             | 0.7882        | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-7             | -1.887        | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-8             | -0.6675       | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-1 (bg)        | -2.562        | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-2 (bg)        | 0.7841        | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-3 (bg)        | -2.56         | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-4 (bg)        | -0.6406       | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-5             | -1.989        | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-6             | -2.214        | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-7             | -0.05761      | No          | Mann-W        |
| <b>Fluoride, total (mg/L)</b>       | <b>MW-8</b>      | <b>-2.771</b> | <b>Yes</b>  | <b>Mann-W</b> |
| Sulfate as SO4 (mg/L)               | MW-1 (bg)        | 1.297         | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-2 (bg)        | -0.485        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-3 (bg)        | 0.7086        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-4 (bg)        | -1.308        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-5             | -1.541        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-6             | 0.5582        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-7             | 0.5988        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-8             | 0             | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-1 (bg)        | 1.151         | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-2 (bg)        | 0.1493        | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-3 (bg)        | 0.7828        | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-4 (bg)        | -1.752        | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-5             | -1.76         | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-6             | -1.4          | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-7             | -0.9149       | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-8             | -1.276        | No          | Mann-W        |

# Appendix III Trend Test - Upgradient Wells - All Results (No Significant)

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:50 AM

| <u>Constituent</u>     | <u>Well</u> | <u>Slope</u> | <u>Calc.</u> | <u>Critical</u> | <u>Sig.</u> | <u>N</u> | <u>%NDs</u> | <u>Normality</u> | <u>Xform</u> | <u>Alpha</u> | <u>Method</u> |
|------------------------|-------------|--------------|--------------|-----------------|-------------|----------|-------------|------------------|--------------|--------------|---------------|
| Chloride, Total (mg/L) | MW-1 (bg)   | -0.0204      | -17          | -105            | No          | 24       | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L) | MW-2 (bg)   | -0.05131     | -15          | -105            | No          | 24       | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L) | MW-3 (bg)   | 0.06882      | 59           | 105             | No          | 24       | 8.333       | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L) | MW-4 (bg)   | -0.06862     | -70          | -105            | No          | 24       | 4.167       | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)         | MW-1 (bg)   | -0.01437     | -88          | -105            | No          | 24       | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)         | MW-2 (bg)   | 0.04162      | 102          | 105             | No          | 24       | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)         | MW-3 (bg)   | -0.008517    | -8           | -105            | No          | 24       | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)         | MW-4 (bg)   | 0.01244      | 57           | 111             | No          | 25       | 0           | n/a              | n/a          | 0.01         | NP            |

# Appendix III Intrawell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:48 AM

| Constituent            | Well | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs | ND Adj. | Transform | Alpha   | Method             |
|------------------------|------|------------|------------|-----------|---------|------|------|---------|-----------|------|---------|-----------|---------|--------------------|
| Fluoride, total (mg/L) | MW-7 | 0.2144     | n/a        | 7/20/2021 | 0.286   | Yes  | 17   | 0.1848  | 0.01443   | 0    | None    | No        | 0.00188 | Param Intra 1 of 2 |
| Fluoride, total (mg/L) | MW-8 | 0.2341     | n/a        | 7/20/2021 | 0.262   | Yes  | 17   | 0.21    | 0.01171   | 0    | None    | No        | 0.00188 | Param Intra 1 of 2 |



# Appendix III Intrawell Prediction Limits - All Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:48 AM

| Constituent                         | Well        | Upper Lim.    | Lower Lim. | Date             | Observ.      | Sig.       | Bg N      | Bg Mean       | Std. Dev.      | %NDs     | ND Adj.      | Transform | Alpha          | Method                      |
|-------------------------------------|-------------|---------------|------------|------------------|--------------|------------|-----------|---------------|----------------|----------|--------------|-----------|----------------|-----------------------------|
| Boron, total (mg/L)                 | MW-1        | 0.05075       | n/a        | 7/12/2021        | 0.05075ND    | No         | 23        | n/a           | n/a            | 26.09    | n/a          | n/a       | 0.003415       | NP Intra (normality) 1 of 2 |
| Boron, total (mg/L)                 | MW-2        | 0.04152       | n/a        | 7/12/2021        | 0.05075ND    | No         | 23        | 0.1724        | 0.01607        | 21.74    | Kaplan-Meier | sqrt(x)   | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-3        | 0.05868       | n/a        | 7/12/2021        | 0.05075ND    | No         | 23        | 0.04304       | 0.008019       | 21.74    | Kaplan-Meier | No        | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-4        | 0.05253       | n/a        | 7/12/2021        | 0.0411J      | No         | 22        | 0.04512       | 0.003776       | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-5        | 0.04034       | n/a        | 7/21/2021        | 0.0319J      | No         | 15        | 0.03281       | 0.003562       | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-6        | 0.1015        | n/a        | 7/20/2021        | 0.0608J      | No         | 16        | 0.07909       | 0.01082        | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-7        | 0.0854        | n/a        | 7/20/2021        | 0.0721J      | No         | 15        | 0.07347       | 0.005639       | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-8        | 0.0831        | n/a        | 7/20/2021        | 0.0656J      | No         | 16        | n/a           | n/a            | 0        | n/a          | n/a       | 0.006456       | NP Intra (normality) 1 of 2 |
| Calcium, total (mg/L)               | MW-1        | 243           | n/a        | 7/12/2021        | 149          | No         | 23        | n/a           | n/a            | 0        | n/a          | n/a       | 0.003415       | NP Intra (normality) 1 of 2 |
| Calcium, total (mg/L)               | MW-2        | 214.8         | n/a        | 7/12/2021        | 159          | No         | 23        | 174.2         | 20.8           | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-3        | 416           | n/a        | 7/12/2021        | 252          | No         | 23        | 300           | 59.54          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-4        | 386.1         | n/a        | 7/12/2021        | 242          | No         | 23        | 304.8         | 41.68          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-5        | 459.6         | n/a        | 7/21/2021        | 384          | No         | 16        | 387           | 34.95          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-6        | 500.3         | n/a        | 7/20/2021        | 348          | No         | 16        | 388.9         | 53.66          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-7        | 343.5         | n/a        | 7/20/2021        | 254          | No         | 16        | 85434         | 15683          | 0        | None         | x^2       | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-8        | 340           | n/a        | 7/20/2021        | 281          | No         | 16        | 303.1         | 17.76          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-1        | 0.1878        | n/a        | 7/12/2021        | 0.125        | No         | 24        | 0.1172        | 0.03644        | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-2        | 0.2528        | n/a        | 7/12/2021        | 0.196        | No         | 24        | 0.1456        | 0.05538        | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-3        | 0.5886        | n/a        | 7/12/2021        | 0.287        | No         | 24        | 0.3299        | 0.1336         | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-4        | 0.4215        | n/a        | 7/12/2021        | 0.35         | No         | 24        | 0.1114        | 0.03425        | 0        | None         | x^2       | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-5        | 0.42          | n/a        | 7/21/2021        | 0.331        | No         | 17        | 0.3204        | 0.0485         | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-6        | 0.1576        | n/a        | 7/20/2021        | 0.131        | No         | 16        | 0.1372        | 0.009847       | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| <b>Fluoride, total (mg/L)</b>       | <b>MW-7</b> | <b>0.2144</b> | <b>n/a</b> | <b>7/20/2021</b> | <b>0.286</b> | <b>Yes</b> | <b>17</b> | <b>0.1848</b> | <b>0.01443</b> | <b>0</b> | <b>None</b>  | <b>No</b> | <b>0.00188</b> | <b>Param Intra 1 of 2</b>   |
| <b>Fluoride, total (mg/L)</b>       | <b>MW-8</b> | <b>0.2341</b> | <b>n/a</b> | <b>7/20/2021</b> | <b>0.262</b> | <b>Yes</b> | <b>17</b> | <b>0.21</b>   | <b>0.01171</b> | <b>0</b> | <b>None</b>  | <b>No</b> | <b>0.00188</b> | <b>Param Intra 1 of 2</b>   |
| Sulfate as SO4 (mg/L)               | MW-1        | 1665          | n/a        | 7/12/2021        | 1560         | No         | 22        | 1461          | 104.1          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-2        | 1274          | n/a        | 7/12/2021        | 763          | No         | 23        | 997.8         | 141.7          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-3        | 3272          | n/a        | 7/12/2021        | 2380         | No         | 23        | 2451          | 421.1          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-4        | 3143          | n/a        | 7/12/2021        | 1930         | No         | 23        | 2511          | 324            | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-5        | 2582          | n/a        | 7/21/2021        | 2240         | No         | 16        | 2304          | 133.9          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-6        | 2274          | n/a        | 7/20/2021        | 1930         | No         | 16        | 2001          | 131.7          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-7        | 1604          | n/a        | 7/20/2021        | 1170         | No         | 15        | 1324          | 132.3          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-8        | 1640          | n/a        | 7/20/2021        | 1500         | No         | 15        | n/a           | n/a            | 0        | n/a          | n/a       | 0.007533       | NP Intra (normality) 1 of 2 |
| Total Dissolved Solids [TDS] (mg/L) | MW-1        | 2519          | n/a        | 7/12/2021        | 2210         | No         | 22        | 2197          | 164            | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-2        | 2021          | n/a        | 7/12/2021        | 1390         | No         | 23        | 1643          | 193.7          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-3        | 5051          | n/a        | 7/12/2021        | 3510         | No         | 23        | 3729          | 678.1          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-4        | 4600          | n/a        | 7/12/2021        | 3000         | No         | 23        | 1.5e7         | 3201096        | 0        | None         | x^2       | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-5        | 4202          | n/a        | 7/21/2021        | 3570         | No         | 16        | 3794          | 196.6          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-6        | 3466          | n/a        | 7/20/2021        | 3090         | No         | 16        | 1.1e7         | 676605         | 0        | None         | x^2       | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-7        | 2590          | n/a        | 7/20/2021        | 2110         | No         | 16        | 6.3e16        | 2.6e16         | 0        | None         | x^5       | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-8        | 2808          | n/a        | 7/20/2021        | 2420         | No         | 16        | 2573          | 113.3          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |

# Appendix III Interwell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:52 AM

| Constituent            | Well | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha     | Method                      |
|------------------------|------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|-----------|-----------------------------|
| Chloride, Total (mg/L) | MW-5 | 3.775      | n/a        | 7/21/2021 | 6.73    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-6 | 3.775      | n/a        | 7/20/2021 | 4.04    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-7 | 3.775      | n/a        | 7/20/2021 | 6.35    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-8 | 3.775      | n/a        | 7/20/2021 | 14.3    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| pH, Field (SU)         | MW-5 | 6.35       | 4.51       | 7/21/2021 | 6.4     | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-7 | 6.35       | 4.51       | 7/20/2021 | 6.58    | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-8 | 6.35       | 4.51       | 7/20/2021 | 6.64    | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |

# Appendix III Interwell Prediction Limits - All Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:52 AM

| Constituent            | Well | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha     | Method                      |
|------------------------|------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|-----------|-----------------------------|
| Chloride, Total (mg/L) | MW-5 | 3.775      | n/a        | 7/21/2021 | 6.73    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-6 | 3.775      | n/a        | 7/20/2021 | 4.04    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-7 | 3.775      | n/a        | 7/20/2021 | 6.35    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-8 | 3.775      | n/a        | 7/20/2021 | 14.3    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| pH, Field (SU)         | MW-5 | 6.35       | 4.51       | 7/21/2021 | 6.4     | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-6 | 6.35       | 4.51       | 7/20/2021 | 5.99    | No   | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-7 | 6.35       | 4.51       | 7/20/2021 | 6.58    | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-8 | 6.35       | 4.51       | 7/20/2021 | 6.64    | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |

# Appendix III Trend Test - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:54 AM

| <u>Constituent</u>     | <u>Well</u> | <u>Slope</u> | <u>Calc.</u> | <u>Critical</u> | <u>Sig.</u> | <u>N</u> | <u>%NDs</u> | <u>Normality</u> | <u>Xform</u> | <u>Alpha</u> | <u>Method</u> |
|------------------------|-------------|--------------|--------------|-----------------|-------------|----------|-------------|------------------|--------------|--------------|---------------|
| Fluoride, total (mg/L) | MW-2 (bg)   | 0.01443      | 123          | 111             | Yes         | 25       | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)         | MW-8        | 0.05301      | 105          | 68              | Yes         | 18       | 0           | n/a              | n/a          | 0.01         | NP            |

# Appendix III Trend Test - All Results

Plant Gorgas    Client: Southern Company    Data: Gorgas CCR LF    Printed 11/16/2021, 10:54 AM

| <u>Constituent</u>            | <u>Well</u>      | <u>Slope</u>   | <u>Calc.</u> | <u>Critical</u> | <u>Sig.</u> | <u>N</u>  | <u>%NDs</u> | <u>Normality</u> | <u>Xform</u> | <u>Alpha</u> | <u>Method</u> |
|-------------------------------|------------------|----------------|--------------|-----------------|-------------|-----------|-------------|------------------|--------------|--------------|---------------|
| Chloride, Total (mg/L)        | MW-1 (bg)        | -0.0204        | -17          | -105            | No          | 24        | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-2 (bg)        | -0.05131       | -15          | -105            | No          | 24        | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-3 (bg)        | 0.06882        | 59           | 105             | No          | 24        | 8.333       | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-4 (bg)        | -0.06862       | -70          | -105            | No          | 24        | 4.167       | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-5             | -0.1427        | -29          | -63             | No          | 17        | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-6             | 0.3235         | 62           | 63              | No          | 17        | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-7             | -6.069         | -33          | -63             | No          | 17        | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-8             | -30.38         | -58          | -63             | No          | 17        | 0           | n/a              | n/a          | 0.01         | NP            |
| Fluoride, total (mg/L)        | MW-1 (bg)        | -0.006304      | -46          | -111            | No          | 25        | 0           | n/a              | n/a          | 0.01         | NP            |
| <b>Fluoride, total (mg/L)</b> | <b>MW-2 (bg)</b> | <b>0.01443</b> | <b>123</b>   | <b>111</b>      | <b>Yes</b>  | <b>25</b> | <b>0</b>    | <b>n/a</b>       | <b>n/a</b>   | <b>0.01</b>  | <b>NP</b>     |
| Fluoride, total (mg/L)        | MW-3 (bg)        | -0.007263      | -15          | -111            | No          | 25        | 0           | n/a              | n/a          | 0.01         | NP            |
| Fluoride, total (mg/L)        | MW-4 (bg)        | 0.005907       | 41           | 111             | No          | 25        | 0           | n/a              | n/a          | 0.01         | NP            |
| Fluoride, total (mg/L)        | MW-7             | 0              | 7            | 68              | No          | 18        | 0           | n/a              | n/a          | 0.01         | NP            |
| Fluoride, total (mg/L)        | MW-8             | -0.003792      | -58          | -68             | No          | 18        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-1 (bg)        | -0.01437       | -88          | -105            | No          | 24        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-2 (bg)        | 0.04162        | 102          | 105             | No          | 24        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-3 (bg)        | -0.008517      | -8           | -105            | No          | 24        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-4 (bg)        | 0.01244        | 57           | 111             | No          | 25        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-5             | 0.01006        | 41           | 68              | No          | 18        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-7             | -0.008049      | -21          | -68             | No          | 18        | 0           | n/a              | n/a          | 0.01         | NP            |
| <b>pH, Field (SU)</b>         | <b>MW-8</b>      | <b>0.05301</b> | <b>105</b>   | <b>68</b>       | <b>Yes</b>  | <b>18</b> | <b>0</b>    | <b>n/a</b>       | <b>n/a</b>   | <b>0.01</b>  | <b>NP</b>     |

# Upper Tolerance Limits Summary Table

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:57 AM

| <u>Constituent</u>                | <u>Well</u> | <u>Upper Lim.</u> | <u>Date</u> | <u>Observ.</u> | <u>Sig.</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)                   | n/a         | 0.00143           | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 93.75       | n/a            | n/a              | 0.007269     | NP Inter      |
| Arsenic (mg/L)                    | n/a         | 0.005             | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 83.33       | n/a            | n/a              | 0.007269     | NP Inter      |
| Barium (mg/L)                     | n/a         | 0.0165            | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 0           | n/a            | n/a              | 0.007269     | NP Inter      |
| Beryllium (mg/L)                  | n/a         | 0.0121            | n/a         | n/a            | n/a         | 94          | n/a            | n/a              | 84.04       | n/a            | n/a              | 0.008054     | NP Inter      |
| Cadmium (mg/L)                    | n/a         | 0.00598           | n/a         | n/a            | n/a         | 94          | n/a            | n/a              | 45.74       | n/a            | n/a              | 0.008054     | NP Inter      |
| Chromium (mg/L)                   | n/a         | 0.0105            | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 89.58       | n/a            | n/a              | 0.007269     | NP Inter      |
| Cobalt (mg/L)                     | n/a         | 0.49              | n/a         | n/a            | n/a         | 94          | n/a            | n/a              | 26.6        | n/a            | n/a              | 0.008054     | NP Inter      |
| Combined Radium 226 + 228 (pCi/L) | n/a         | 1.47              | n/a         | n/a            | n/a         | 92          | n/a            | n/a              | 0           | n/a            | n/a              | 0.008924     | NP Inter      |
| Fluoride, total (mg/L)            | n/a         | 0.63              | n/a         | n/a            | n/a         | 100         | n/a            | n/a              | 0           | n/a            | n/a              | 0.005921     | NP Inter      |
| Lead (mg/L)                       | n/a         | 0.00108           | n/a         | n/a            | n/a         | 95          | n/a            | n/a              | 95.79       | n/a            | n/a              | 0.007651     | NP Inter      |
| Lithium (mg/L)                    | n/a         | 0.419             | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 0           | n/a            | n/a              | 0.007269     | NP Inter      |
| Mercury (mg/L)                    | n/a         | 0.0005            | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 100         | n/a            | n/a              | 0.007269     | NP Inter      |
| Molybdenum (mg/L)                 | n/a         | 0.0002            | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 97.92       | n/a            | n/a              | 0.007269     | NP Inter      |
| Selenium (mg/L)                   | n/a         | 0.0209            | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 60.42       | n/a            | n/a              | 0.007269     | NP Inter      |
| Thallium (mg/L)                   | n/a         | 0.000226          | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 96.88       | n/a            | n/a              | 0.007269     | NP Inter      |

| <b>GORGAS CCR LANDFILL GWPS</b> |              |                   |             |
|---------------------------------|--------------|-------------------|-------------|
| <b>Analyte</b>                  | <b>Units</b> | <b>Background</b> | <b>GWPS</b> |
| Antimony                        | mg/L         | 0.00143           | 0.006       |
| Arsenic                         | mg/L         | 0.005             | 0.01        |
| Barium                          | mg/L         | 0.0165            | 2           |
| Beryllium                       | mg/L         | 0.0121            | 0.004       |
| Cadmium                         | mg/L         | 0.00598           | 0.005       |
| Chromium                        | mg/L         | 0.0105            | 0.1         |
| Cobalt                          | mg/L         | 0.49              | 0.49        |
| Combined Radium-226/228         | pCi/L        | 1.47              | 5           |
| Fluoride                        | mg/L         | 0.63              | 4           |
| Lead                            | mg/L         | 0.00108           | 0.015       |
| Lithium                         | mg/L         | 0.419             | 0.419       |
| Mercury                         | mg/L         | 0.0005            | 0.002       |
| Molybdenum                      | mg/L         | 0.0002            | 0.1         |
| Selenium                        | mg/L         | 0.0209            | 0.05        |
| Thallium                        | mg/L         | 0.000226          | 0.002       |

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.
4. GWPS established during second semi-annual sampling event in 2021.

# Confidence Intervals - All Results (No Significant)

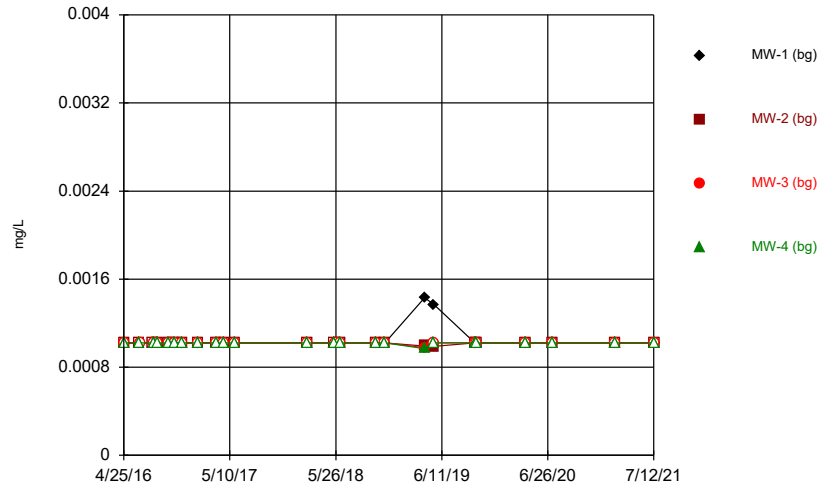
Plant Gorgas    Client: Southern Company    Data: Gorgas CCR LF    Printed 11/16/2021, 11:02 AM

| Constituent                       | Well | Upper Lim. | Lower Lim. | Compliance | Sig. | N | Mean      | Std. Dev.  | %NDs | ND Adj. | Transform | Alpha | Method         |
|-----------------------------------|------|------------|------------|------------|------|---|-----------|------------|------|---------|-----------|-------|----------------|
| Arsenic (mg/L)                    | MW-5 | 0.0025     | 0.000309   | 0.01       | No   | 8 | 0.001741  | 0.0009299  | 50   | None    | No        | 0.004 | NP (normality) |
| Arsenic (mg/L)                    | MW-6 | 0.005713   | 0.003434   | 0.01       | No   | 8 | 0.004574  | 0.001075   | 0    | None    | No        | 0.01  | Param.         |
| Arsenic (mg/L)                    | MW-7 | 0.001559   | 0.001339   | 0.01       | No   | 8 | 0.001449  | 0.0001038  | 0    | None    | No        | 0.01  | Param.         |
| Arsenic (mg/L)                    | MW-8 | 0.001824   | 0.001051   | 0.01       | No   | 8 | 0.001438  | 0.0003642  | 0    | None    | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-5 | 0.01328    | 0.01052    | 2          | No   | 8 | 0.0119    | 0.001301   | 0    | None    | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-6 | 0.01521    | 0.01261    | 2          | No   | 8 | 0.01391   | 0.001225   | 0    | None    | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-7 | 0.01472    | 0.01196    | 2          | No   | 8 | 0.01334   | 0.001303   | 0    | None    | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-8 | 0.0143     | 0.0122     | 2          | No   | 8 | 0.0135    | 0.0008018  | 0    | None    | No        | 0.004 | NP (normality) |
| Beryllium (mg/L)                  | MW-6 | 0.001015   | 0.00048    | 0.004      | No   | 8 | 0.0008775 | 0.0002073  | 62.5 | None    | No        | 0.004 | NP (NDs)       |
| Cadmium (mg/L)                    | MW-6 | 0.00204    | 0.000203   | 0.005      | No   | 8 | 0.0005616 | 0.0006455  | 62.5 | None    | No        | 0.004 | NP (NDs)       |
| Cobalt (mg/L)                     | MW-5 | 0.005      | 0.00102    | 0.49       | No   | 8 | 0.004036  | 0.001786   | 75   | None    | No        | 0.004 | NP (NDs)       |
| Cobalt (mg/L)                     | MW-6 | 0.3021     | 0.0258     | 0.49       | No   | 8 | 0.1556    | 0.1565     | 0    | None    | sqrt(x)   | 0.01  | Param.         |
| Cobalt (mg/L)                     | MW-7 | 0.005712   | 0.002663   | 0.49       | No   | 8 | 0.004187  | 0.001438   | 12.5 | None    | No        | 0.01  | Param.         |
| Cobalt (mg/L)                     | MW-8 | 0.008493   | 0.005549   | 0.49       | No   | 8 | 0.007021  | 0.001389   | 0    | None    | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-5 | 0.7821     | 0.5192     | 5          | No   | 8 | 0.6506    | 0.124      | 0    | None    | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-6 | 1.606      | 0.5355     | 5          | No   | 8 | 1.071     | 0.5048     | 0    | None    | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-7 | 0.6249     | 0.1729     | 5          | No   | 8 | 0.3989    | 0.2132     | 0    | None    | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-8 | 0.8997     | 0.2834     | 5          | No   | 8 | 0.5816    | 0.3549     | 0    | None    | x^(1/3)   | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-5 | 0.3325     | 0.236      | 4          | No   | 8 | 0.2843    | 0.04549    | 0    | None    | No        | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-6 | 0.1388     | 0.1217     | 4          | No   | 8 | 0.1303    | 0.008031   | 0    | None    | No        | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-7 | 0.286      | 0.153      | 4          | No   | 8 | 0.1943    | 0.03989    | 0    | None    | No        | 0.004 | NP (normality) |
| Fluoride, total (mg/L)            | MW-8 | 0.262      | 0.189      | 4          | No   | 8 | 0.2074    | 0.02372    | 0    | None    | No        | 0.004 | NP (normality) |
| Lead (mg/L)                       | MW-8 | 0.000203   | 0.00009    | 0.015      | No   | 8 | 0.0001889 | 0.00003995 | 87.5 | None    | No        | 0.004 | NP (NDs)       |
| Lithium (mg/L)                    | MW-5 | 0.1277     | 0.0993     | 0.419      | No   | 8 | 0.1135    | 0.01341    | 0    | None    | No        | 0.01  | Param.         |
| Lithium (mg/L)                    | MW-6 | 0.2668     | 0.1421     | 0.419      | No   | 8 | 0.2024    | 0.07349    | 0    | None    | x^2       | 0.01  | Param.         |
| Lithium (mg/L)                    | MW-7 | 0.1334     | 0.1051     | 0.419      | No   | 8 | 0.1193    | 0.01332    | 0    | None    | No        | 0.01  | Param.         |
| Lithium (mg/L)                    | MW-8 | 0.1812     | 0.1478     | 0.419      | No   | 8 | 0.1645    | 0.01579    | 0    | None    | No        | 0.01  | Param.         |
| Molybdenum (mg/L)                 | MW-5 | 0.01       | 0.00126    | 0.1        | No   | 8 | 0.007832  | 0.004014   | 75   | None    | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-6 | 0.01       | 0.00007    | 0.1        | No   | 8 | 0.007544  | 0.004547   | 75   | None    | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-7 | 0.01       | 0.00086    | 0.1        | No   | 8 | 0.007741  | 0.004183   | 75   | None    | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-8 | 0.0129     | 0.00033    | 0.1        | No   | 8 | 0.009154  | 0.003707   | 75   | None    | No        | 0.004 | NP (NDs)       |
| Selenium (mg/L)                   | MW-5 | 0.01       | 0.00178    | 0.05       | No   | 8 | 0.008014  | 0.003681   | 75   | None    | No        | 0.004 | NP (NDs)       |



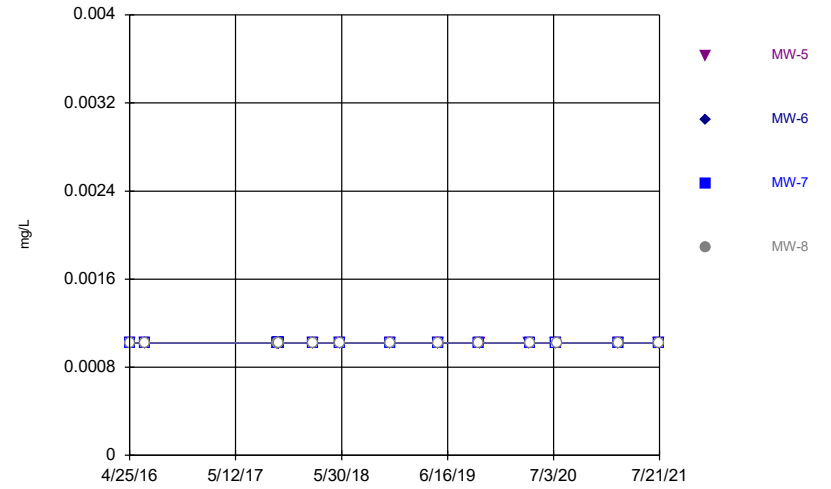
FIGURE A.

Time Series



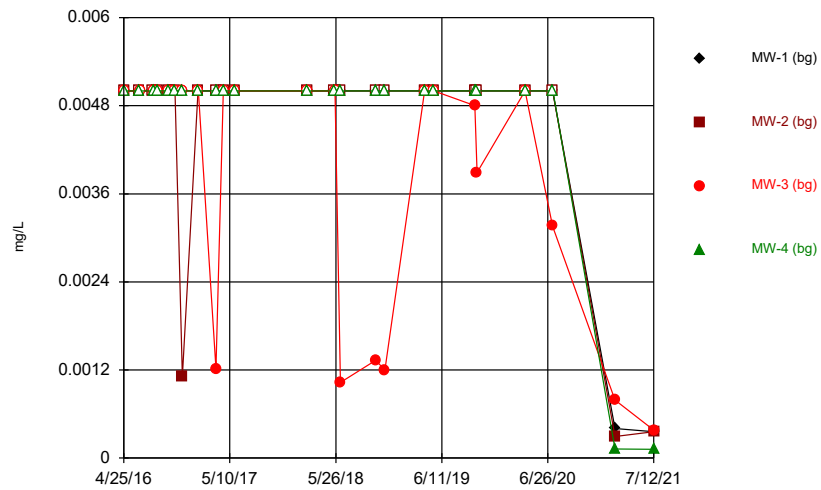
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Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



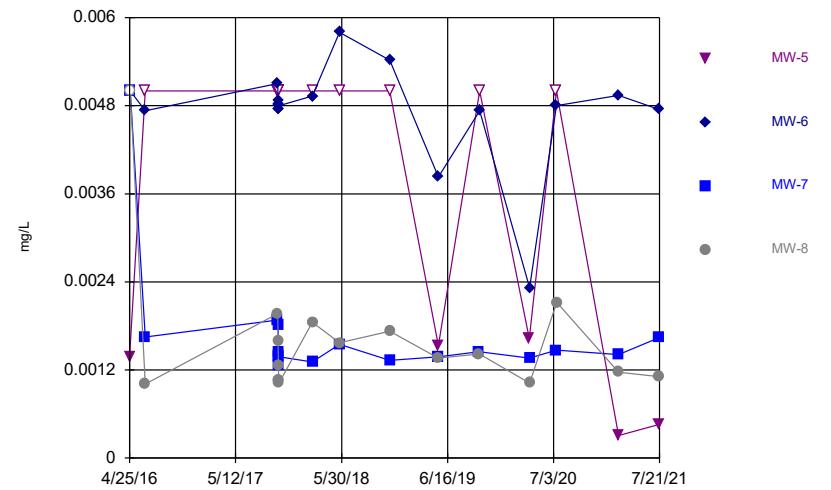
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Time Series



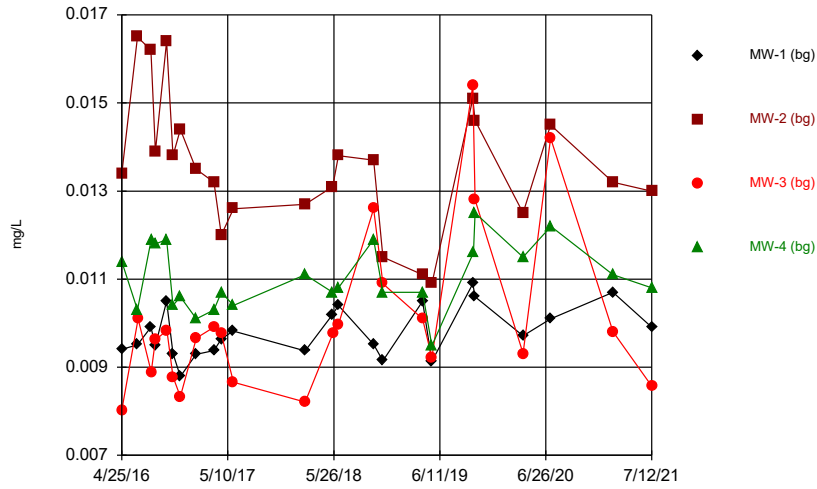
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Time Series



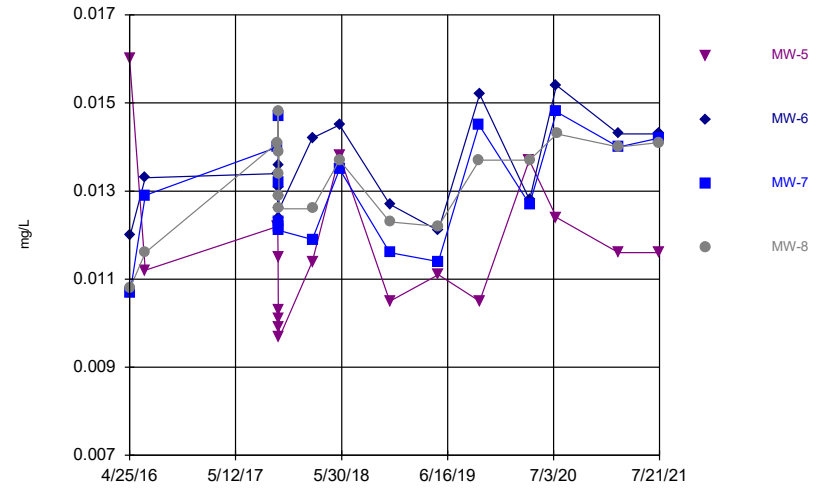
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Time Series



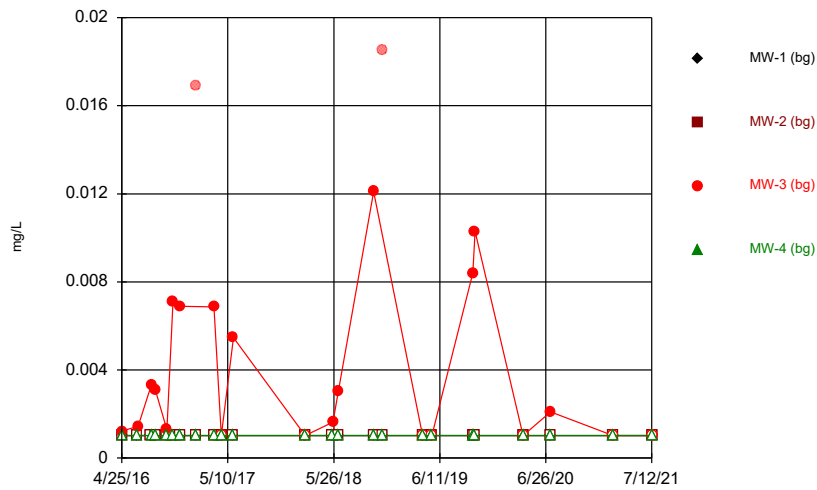
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Time Series



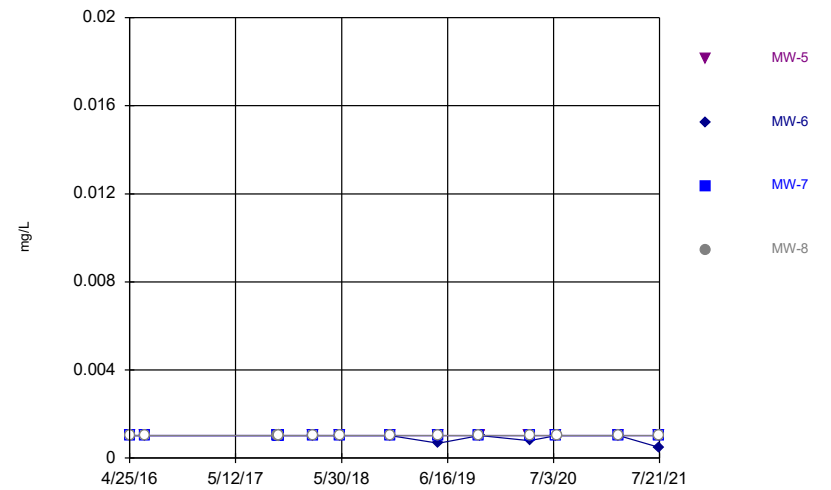
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Time Series



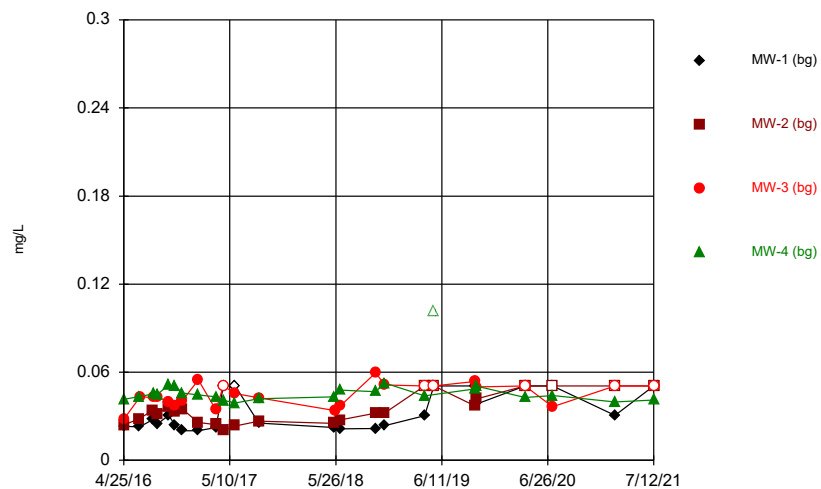
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Time Series



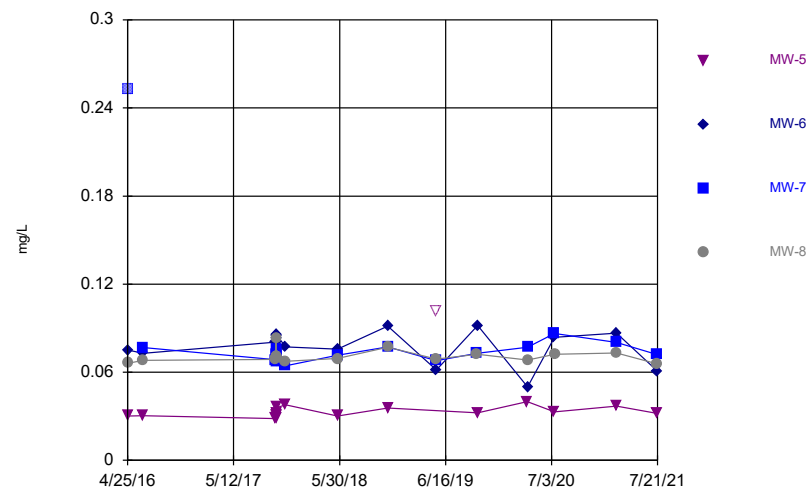
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### Time Series



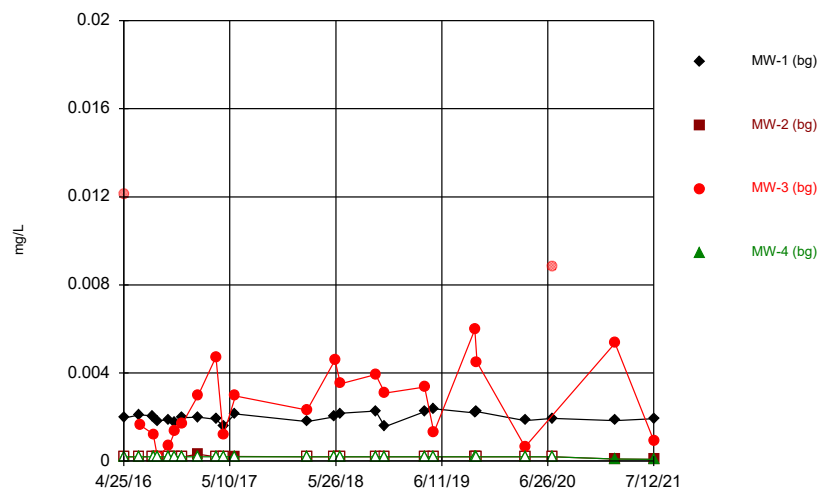
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### Time Series



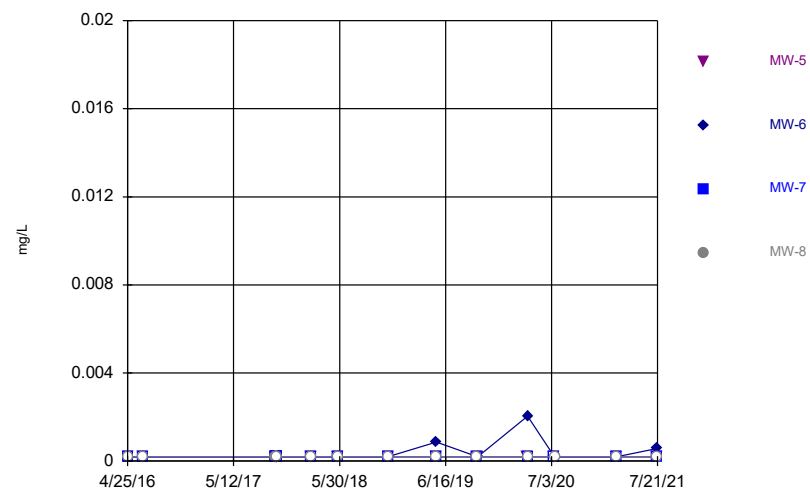
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### Time Series



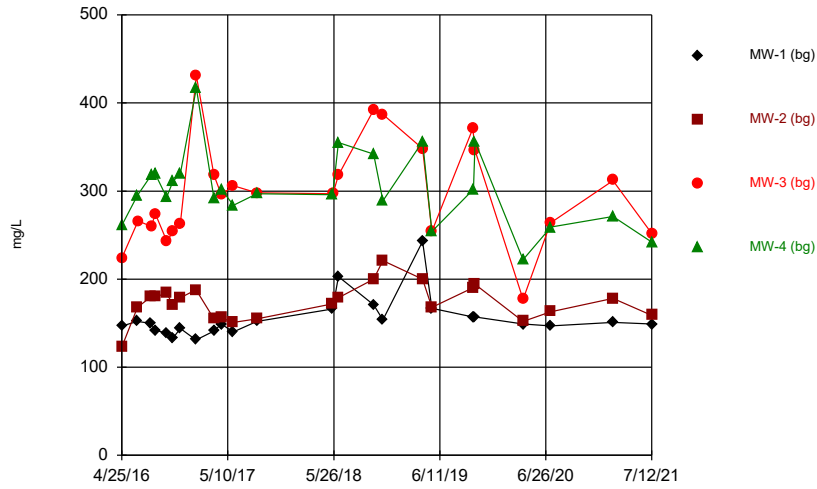
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### Time Series



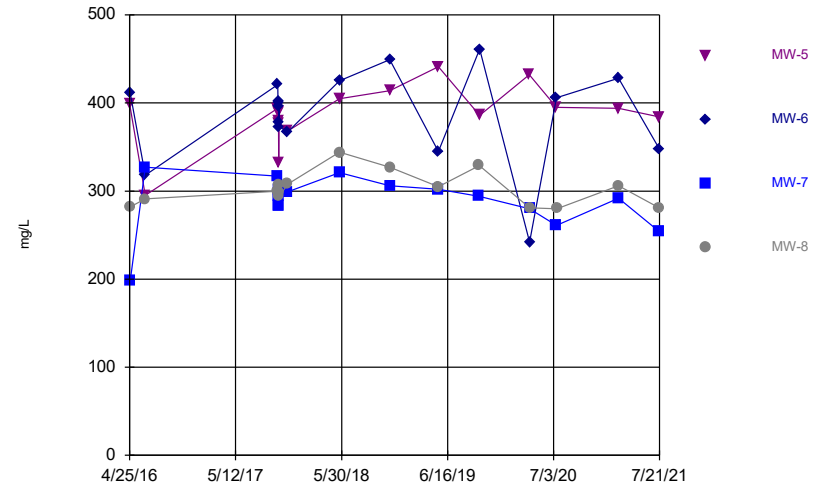
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Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



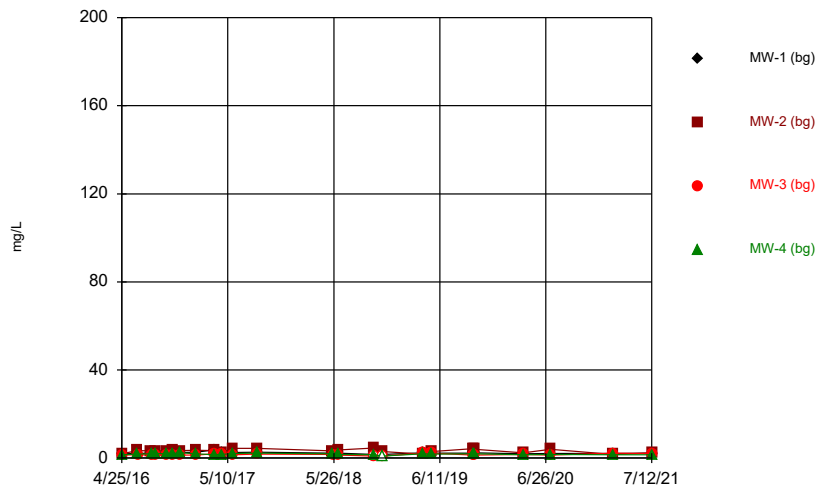
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 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



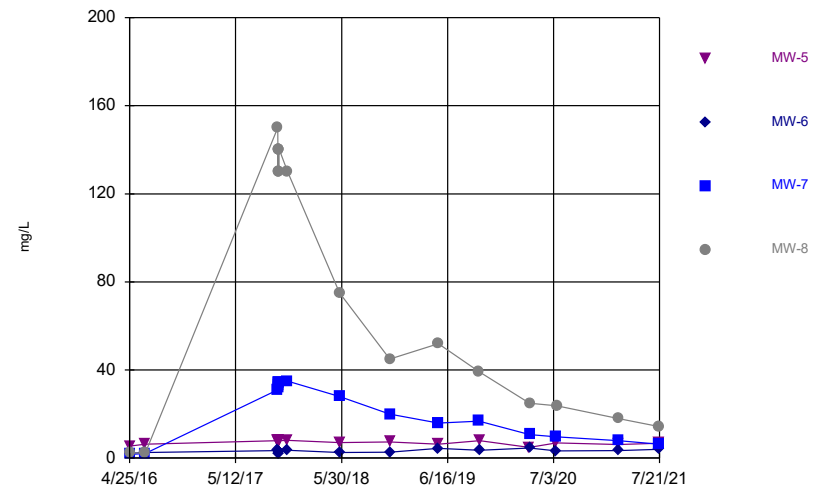
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 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



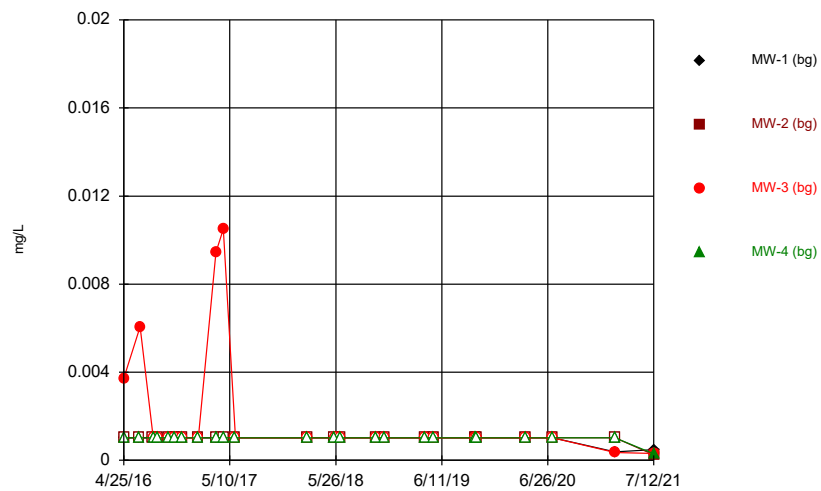
Constituent: Chloride, Total Analysis Run 11/16/2021 10:31 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



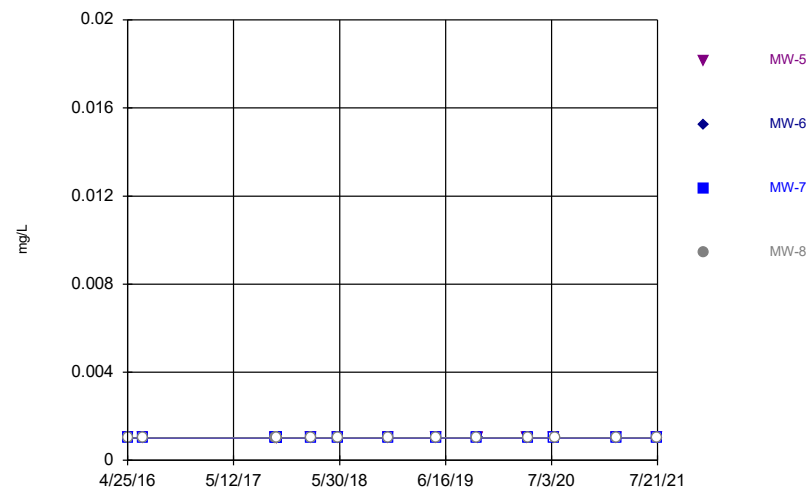
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 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



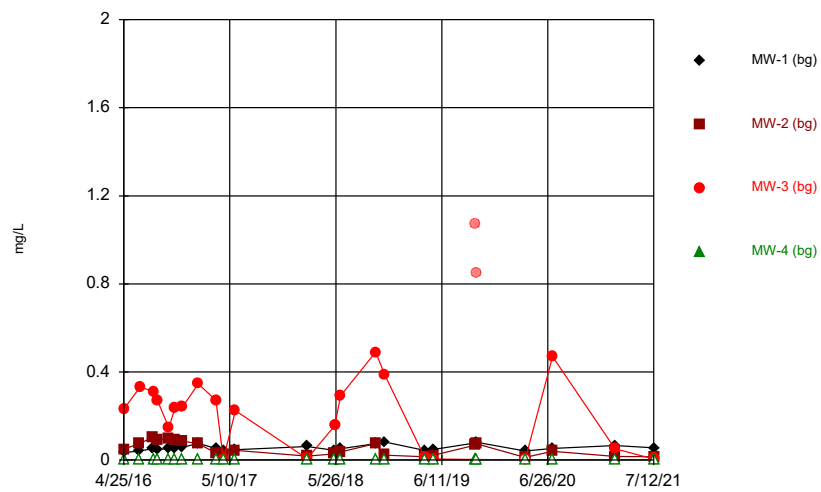
Constituent: Chromium Analysis Run 11/16/2021 10:31 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



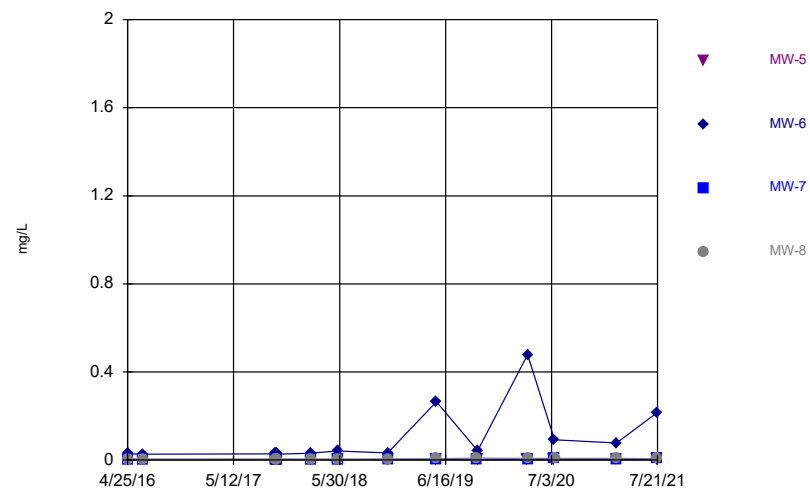
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Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



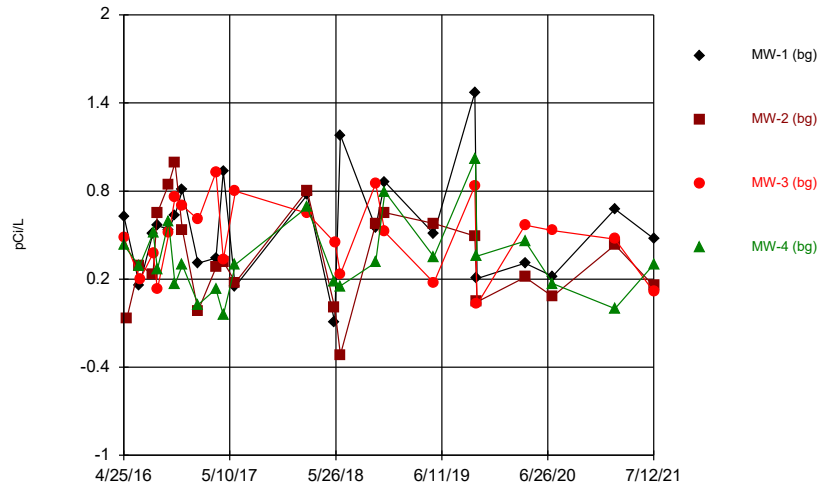
Constituent: Cobalt Analysis Run 11/16/2021 10:31 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



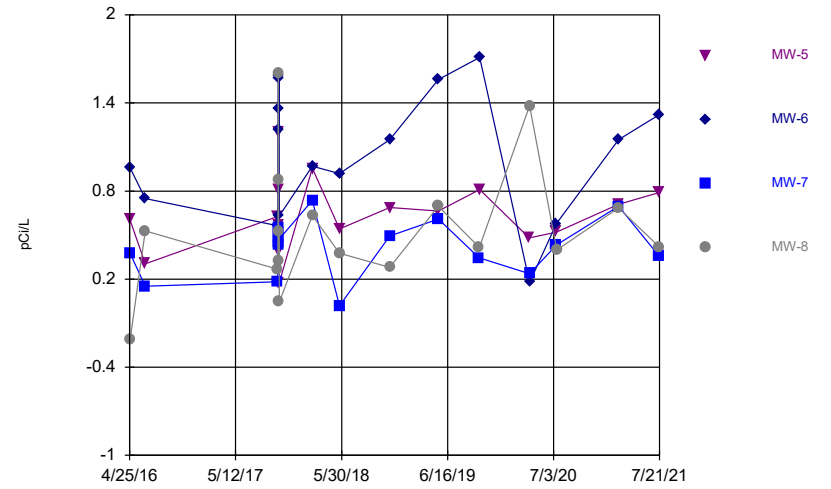
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Time Series



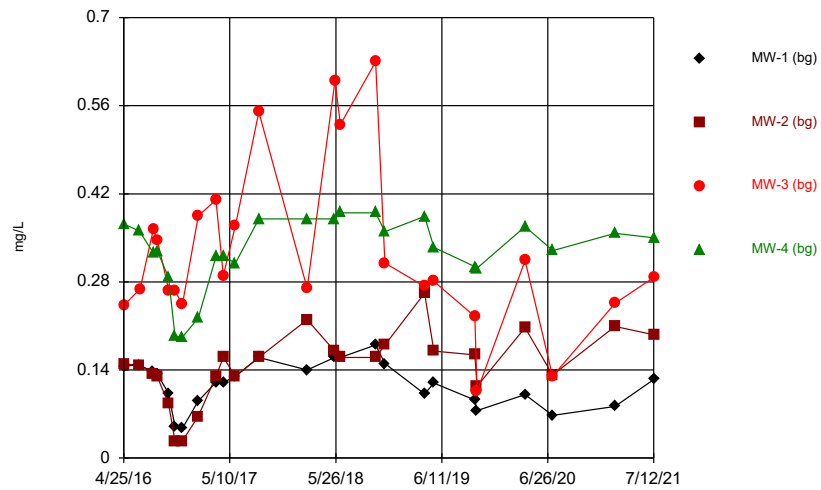
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Time Series



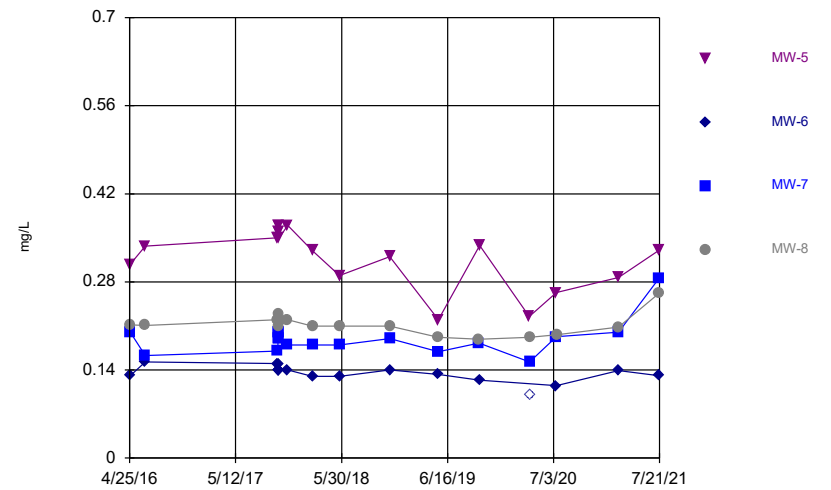
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 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



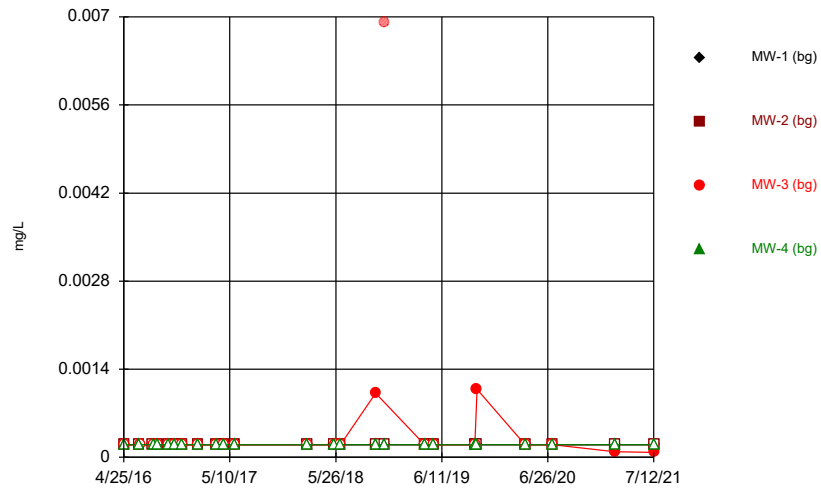
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 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



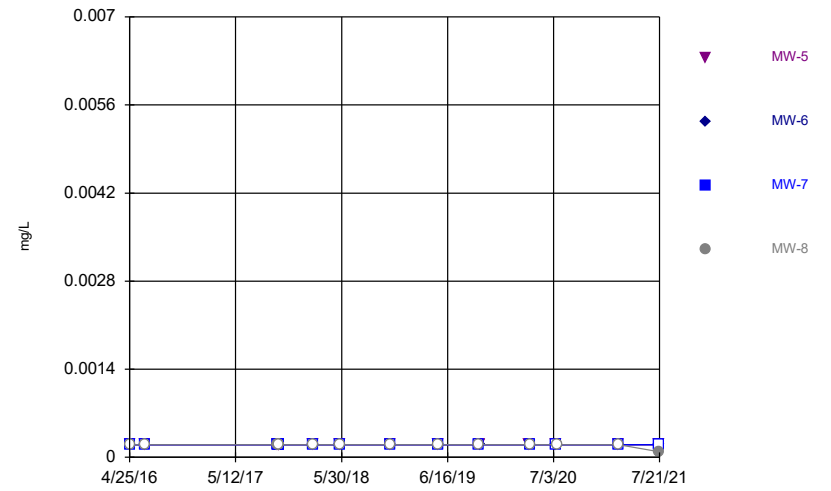
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 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



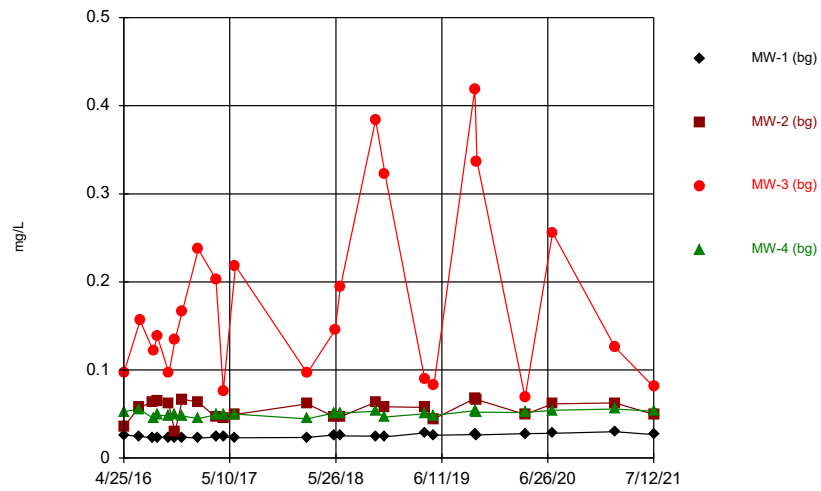
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Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



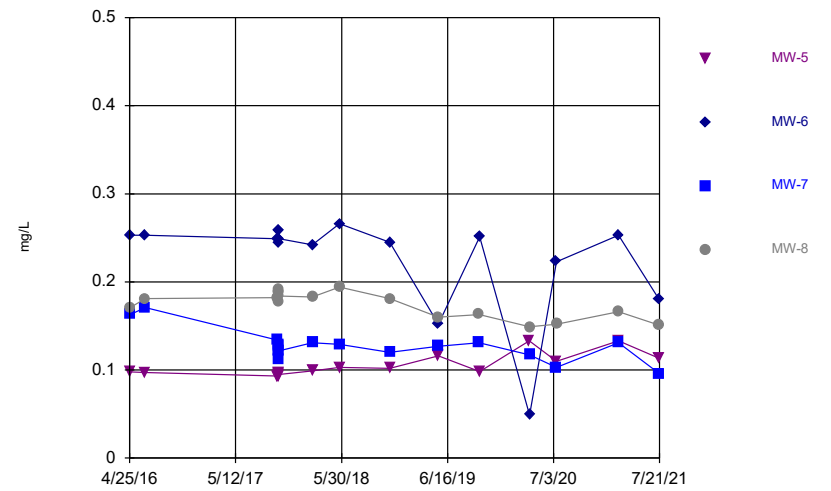
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### Time Series



Constituent: Lithium Analysis Run 11/16/2021 10:31 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

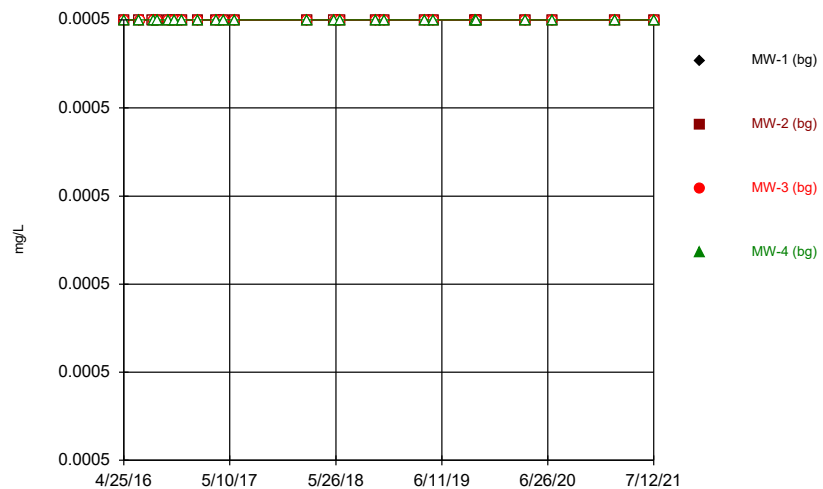
### Time Series



Constituent: Lithium Analysis Run 11/16/2021 10:31 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

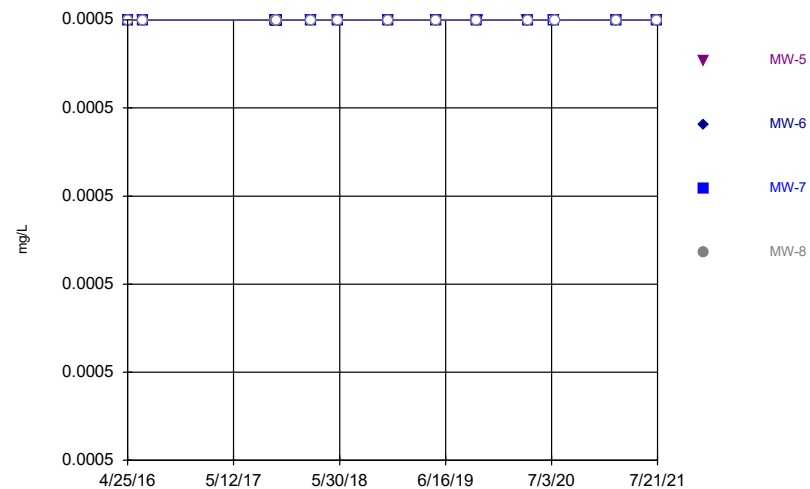


### Time Series



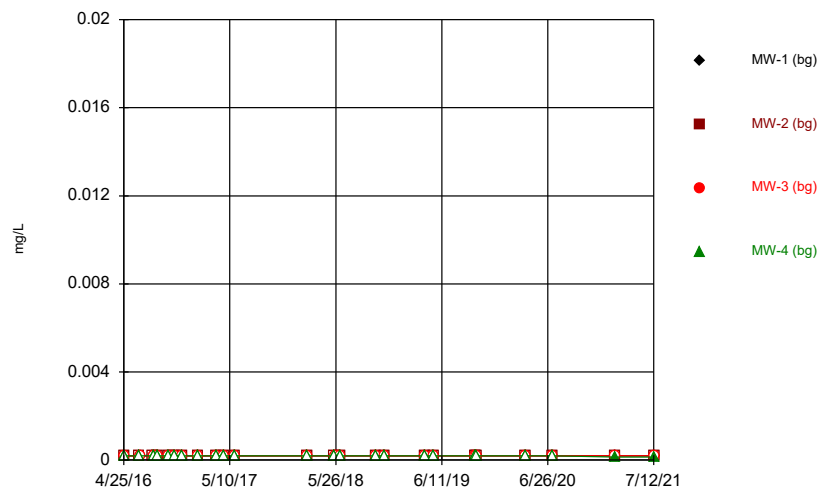
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Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



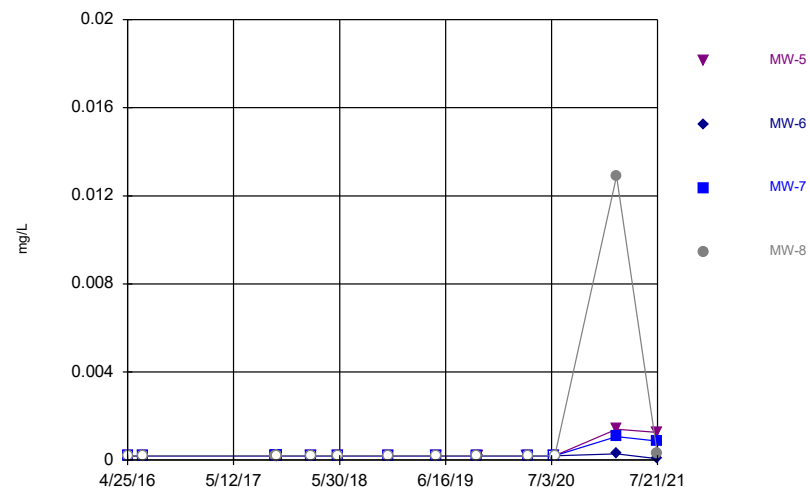
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Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



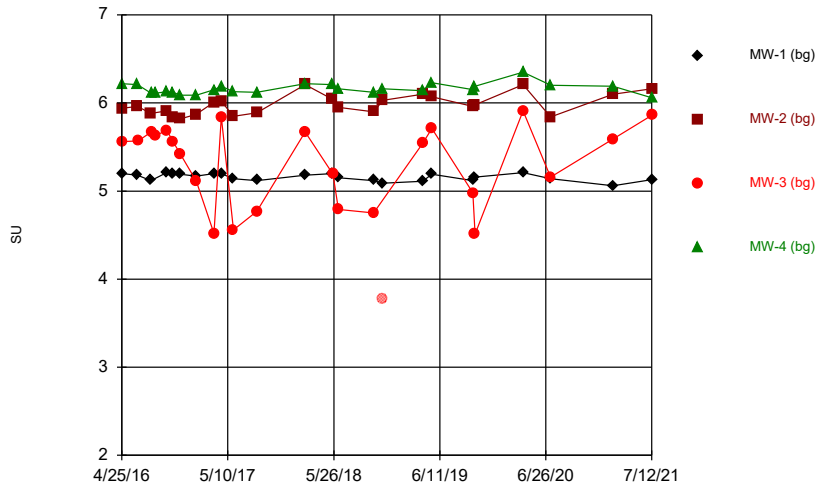
Constituent: Molybdenum Analysis Run 11/16/2021 10:31 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Time Series



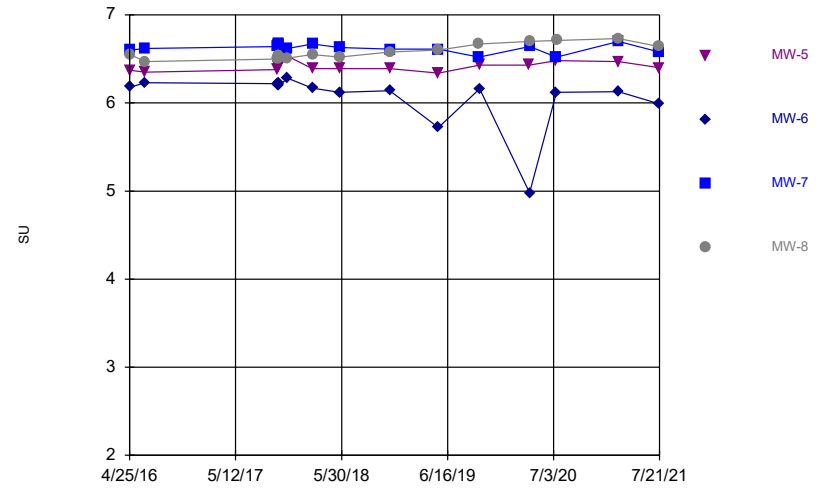
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Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



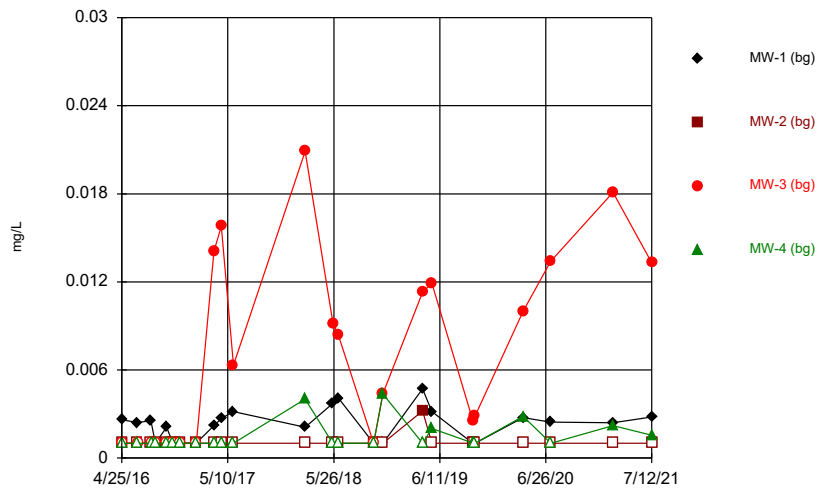
Constituent: pH, Field Analysis Run 11/16/2021 10:31 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



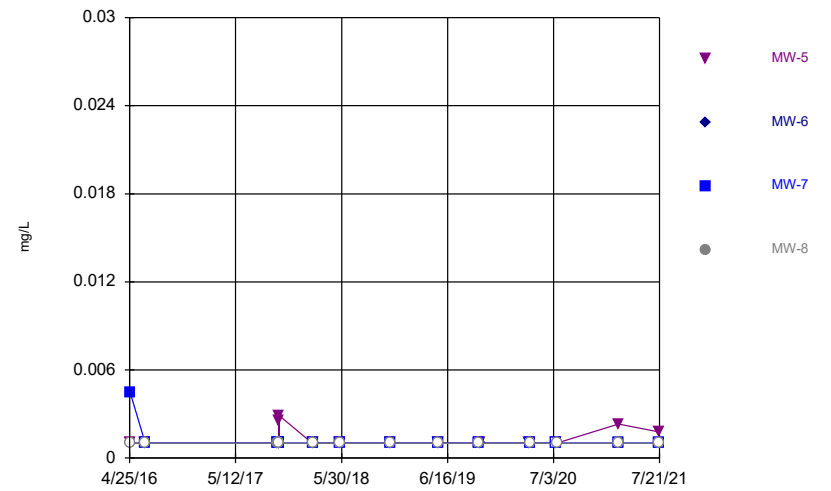
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 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



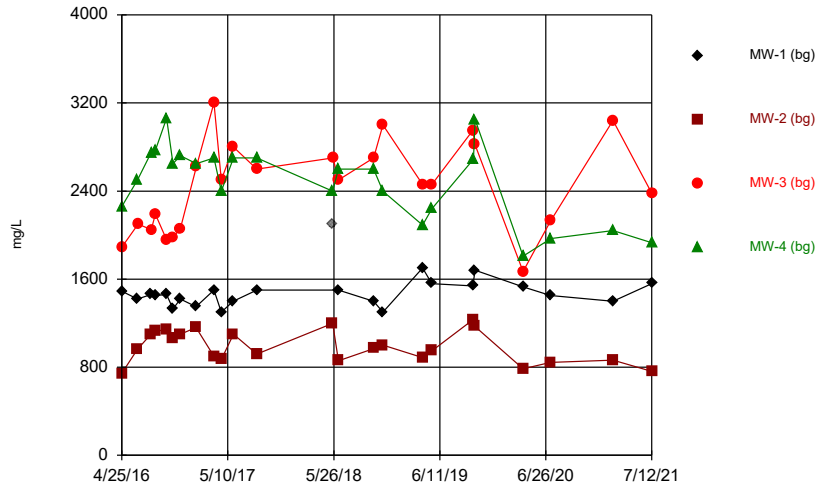
Constituent: Selenium Analysis Run 11/16/2021 10:31 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



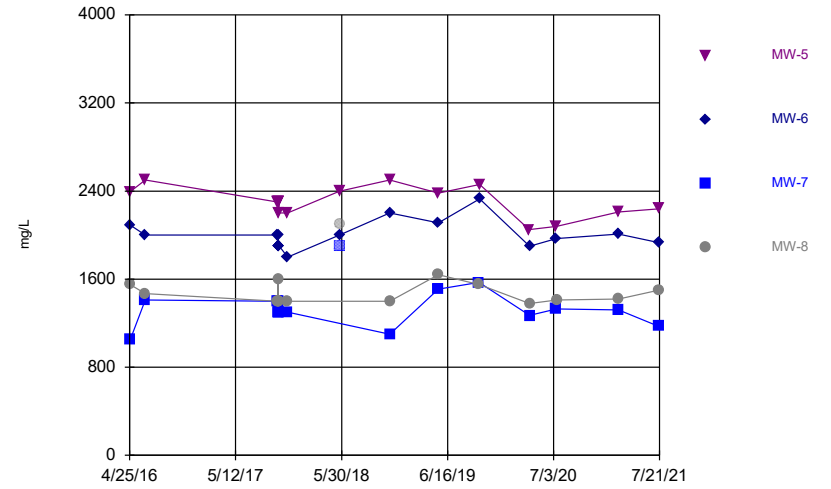
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 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



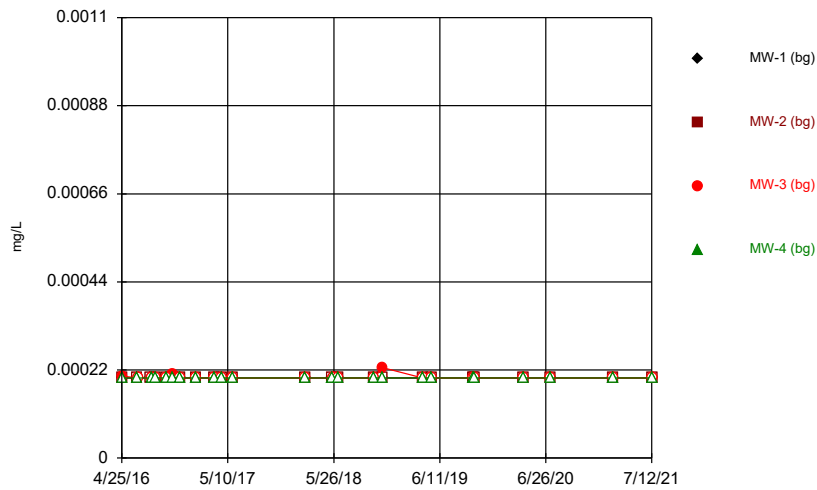
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 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



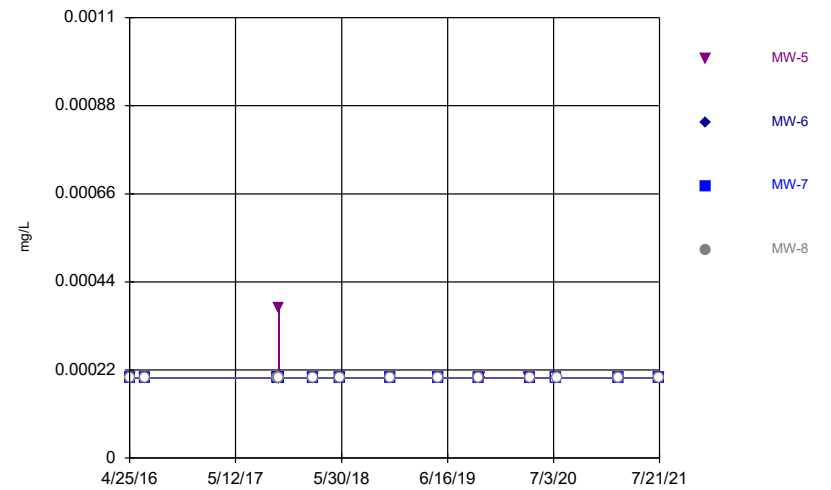
Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:31 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



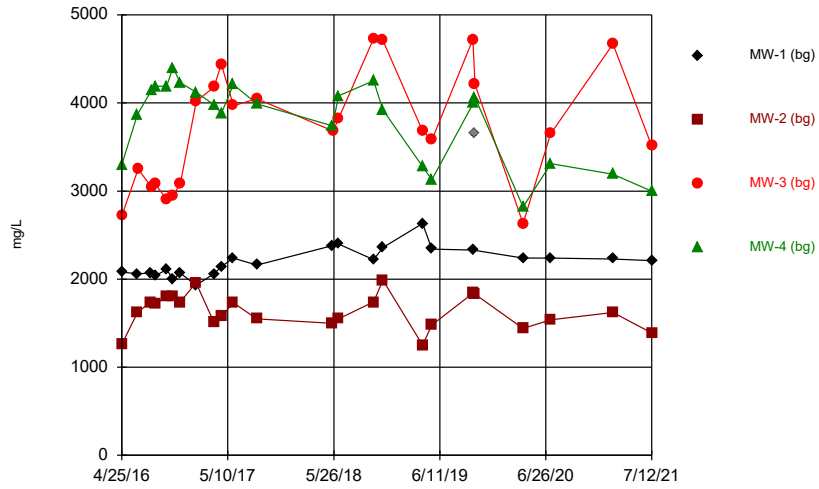
Constituent: Thallium Analysis Run 11/16/2021 10:31 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



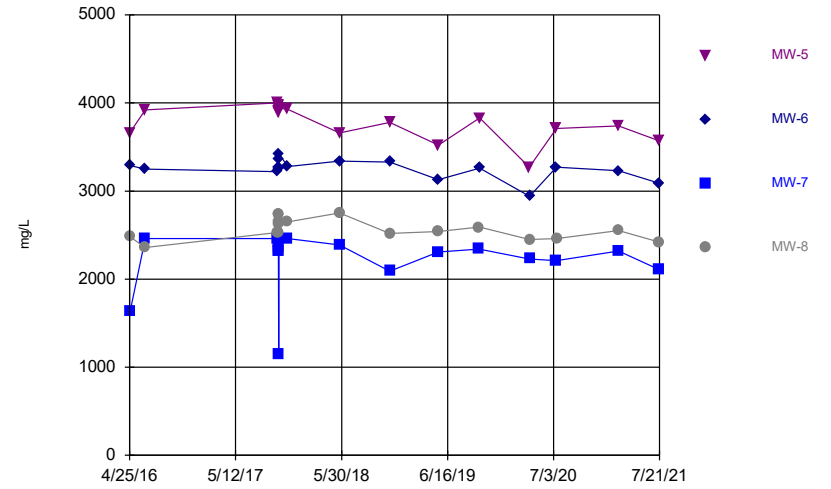
Constituent: Thallium Analysis Run 11/16/2021 10:31 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:31 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:31 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

# Time Series

Constituent: Antimony (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)   | MW-2 (bg)    | MW-3 (bg)    | MW-4 (bg)   |
|------------|-------------|--------------|--------------|-------------|
| 4/25/2016  |             | <0.00102     | <0.00102     | <0.00102    |
| 4/26/2016  | <0.00102    |              |              |             |
| 6/20/2016  | <0.00102    | <0.00102     |              | <0.00102    |
| 6/22/2016  |             |              | <0.00102     |             |
| 8/8/2016   | <0.00102    | <0.00102     |              |             |
| 8/9/2016   |             |              | <0.00102     | <0.00102    |
| 8/24/2016  | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 10/3/2016  | <0.00102    | <0.00102     |              | <0.00102    |
| 10/4/2016  |             |              | <0.00102     |             |
| 10/26/2016 | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 11/21/2016 | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 1/17/2017  | <0.00102    | <0.00102     |              |             |
| 1/18/2017  |             |              | <0.00102     | <0.00102    |
| 3/22/2017  | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 4/18/2017  | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 5/30/2017  | <0.00102    |              |              |             |
| 5/31/2017  |             | <0.00102     | <0.00102     | <0.00102    |
| 2/13/2018  | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 5/22/2018  | <0.00102    | <0.00102     |              |             |
| 5/23/2018  |             |              |              | <0.00102    |
| 5/24/2018  |             |              | <0.00102     |             |
| 6/12/2018  | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 10/17/2018 | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 11/19/2018 | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 4/10/2019  | 0.00143 (J) | 0.000993 (J) | 0.000978 (J) | 0.00097 (J) |
| 5/14/2019  | 0.00137 (J) | 0.000989 (J) | <0.00102     | <0.00102    |
| 10/8/2019  | <0.00102    | <0.00102     | <0.00102     |             |
| 10/10/2019 |             |              |              | <0.00102    |
| 10/16/2019 | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 4/6/2020   | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 7/13/2020  | <0.00102    | <0.00102     | <0.00102     |             |
| 7/14/2020  |             |              |              | <0.00102    |
| 2/22/2021  | <0.00102    | <0.00102     | <0.00102     | <0.00102    |
| 7/12/2021  | <0.00102    | <0.00102     | <0.00102     | <0.00102    |

# Time Series

Constituent: Antimony (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5     | MW-6     | MW-7     | MW-8     |
|------------|----------|----------|----------|----------|
| 4/25/2016  | <0.00102 |          |          |          |
| 4/27/2016  |          | <0.00102 | <0.00102 | <0.00102 |
| 6/21/2016  | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/12/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/13/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/14/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/15/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/16/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/17/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 2/14/2018  | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 5/23/2018  | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 11/20/2018 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 5/14/2019  | <0.00102 |          |          |          |
| 5/15/2019  |          | <0.00102 | <0.00102 | <0.00102 |
| 10/8/2019  |          |          | <0.00102 |          |
| 10/9/2019  |          |          |          | <0.00102 |
| 10/10/2019 | <0.00102 | <0.00102 |          |          |
| 4/7/2020   | <0.00102 |          |          |          |
| 4/8/2020   |          | <0.00102 | <0.00102 | <0.00102 |
| 7/14/2020  | <0.00102 | <0.00102 | <0.00102 |          |
| 7/15/2020  |          |          |          | <0.00102 |
| 2/23/2021  | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 7/20/2021  |          | <0.00102 | <0.00102 | <0.00102 |
| 7/21/2021  | <0.00102 |          |          |          |

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg)   | MW-3 (bg)   | MW-4 (bg)    |
|------------|-----------|-------------|-------------|--------------|
| 4/25/2016  |           | <0.005      | <0.005      | <0.005       |
| 4/26/2016  | <0.005    |             |             |              |
| 6/20/2016  | <0.005    | <0.005      |             | <0.005       |
| 6/22/2016  |           |             | <0.005      |              |
| 8/8/2016   | <0.005    | <0.005      |             |              |
| 8/9/2016   |           |             | <0.005      | <0.005       |
| 8/24/2016  | <0.005    | <0.005      | <0.005      | <0.005       |
| 10/3/2016  | <0.005    | <0.005      |             | <0.005       |
| 10/4/2016  |           |             | <0.005      |              |
| 10/26/2016 | <0.005    | <0.005      | <0.005      | <0.005       |
| 11/21/2016 | <0.005    | 0.00111 (J) | <0.005      | <0.005       |
| 1/17/2017  | <0.005    | <0.005      |             |              |
| 1/18/2017  |           |             | <0.005      | <0.005       |
| 3/22/2017  | <0.005    | <0.005      | 0.00122 (J) | <0.005       |
| 4/18/2017  | <0.005    | <0.005      | <0.005      | <0.005       |
| 5/30/2017  | <0.005    |             |             |              |
| 5/31/2017  |           | <0.005      | <0.005      | <0.005       |
| 2/13/2018  | <0.005    | <0.005      | <0.005      | <0.005       |
| 5/22/2018  | <0.005    | <0.005      |             |              |
| 5/23/2018  |           |             |             | <0.005       |
| 5/24/2018  |           |             | <0.005      |              |
| 6/12/2018  | <0.005    | <0.005      | 0.00103 (J) | <0.005       |
| 10/17/2018 | <0.005    | <0.005      | 0.00133 (J) | <0.005       |
| 11/19/2018 | <0.005    | <0.005      | 0.0012 (J)  | <0.005       |
| 4/10/2019  | <0.005    | <0.005      | <0.005      | <0.005       |
| 5/14/2019  | <0.005    | <0.005      | <0.005      | <0.005       |
| 10/8/2019  | <0.005    | <0.005      | 0.0048 (J)  |              |
| 10/10/2019 |           |             |             | <0.005       |
| 10/16/2019 | <0.005    | <0.005      | 0.00389 (J) | <0.005       |
| 4/6/2020   | <0.005    | <0.005      | <0.005      | <0.005       |
| 7/13/2020  | <0.005    | <0.005      | 0.00316 (J) |              |
| 7/14/2020  |           |             |             | <0.005       |
| 2/22/2021  | 0.000403  | 0.000295    | 0.000789    | 0.000125 (J) |
| 7/12/2021  | 0.00036   | 0.00036     | 0.00038     | 0.00012 (J)  |

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5        | MW-6        | MW-7        | MW-8        |
|------------|-------------|-------------|-------------|-------------|
| 4/25/2016  | 0.00138 (J) |             |             |             |
| 4/27/2016  |             | 0.005       | <0.005      | <0.005      |
| 6/21/2016  | <0.005      | 0.00473 (J) | 0.00165 (J) | 0.00101 (J) |
| 10/12/2017 | <0.005      | 0.0051      | 0.00188 (J) | 0.00197 (J) |
| 10/13/2017 | <0.005      | 0.00487 (J) | 0.00181 (J) | 0.00159 (J) |
| 10/14/2017 | <0.005      | 0.00476 (J) | 0.00127 (J) | 0.00126 (J) |
| 10/15/2017 | <0.005      | 0.00475 (J) | 0.00144 (J) | 0.00106 (J) |
| 10/16/2017 | <0.005      | 0.00482 (J) | 0.00139 (J) | 0.00106 (J) |
| 10/17/2017 | <0.005      | 0.0048 (J)  | 0.00138 (J) | 0.00103 (J) |
| 2/14/2018  | <0.005      | 0.00493 (J) | 0.00131 (J) | 0.00185 (J) |
| 5/23/2018  | <0.005      | 0.0058      | 0.00155 (J) | 0.00157 (J) |
| 11/20/2018 | <0.005      | 0.00542     | 0.00133 (J) | 0.00173 (J) |
| 5/14/2019  | 0.00153 (J) |             |             |             |
| 5/15/2019  |             | 0.00383 (J) | 0.00138 (J) | 0.00136 (J) |
| 10/8/2019  |             |             | 0.00145 (J) |             |
| 10/9/2019  |             |             |             | 0.00142 (J) |
| 10/10/2019 | <0.005      | 0.00473 (J) |             |             |
| 4/7/2020   | 0.00163 (J) |             |             |             |
| 4/8/2020   |             | 0.00232 (J) | 0.00136 (J) | 0.00102 (J) |
| 7/14/2020  | <0.005      | 0.0048 (J)  | 0.00147 (J) |             |
| 7/15/2020  |             |             |             | 0.00212 (J) |
| 2/23/2021  | 0.000309    | 0.00494     | 0.00141     | 0.00117     |
| 7/20/2021  |             | 0.00475     | 0.00164     | 0.00111     |
| 7/21/2021  | 0.00046     |             |             |             |



# Time Series

Constituent: Barium (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)   | MW-2 (bg) | MW-3 (bg)   | MW-4 (bg)   |
|------------|-------------|-----------|-------------|-------------|
| 4/25/2016  |             | 0.0134    | 0.00803 (J) | 0.0114      |
| 4/26/2016  | 0.00941 (J) |           |             |             |
| 6/20/2016  | 0.00951 (J) | 0.0165    |             | 0.0103      |
| 6/22/2016  |             |           | 0.0101      |             |
| 8/8/2016   | 0.00991 (J) | 0.0162    |             |             |
| 8/9/2016   |             |           | 0.00889 (J) | 0.0119      |
| 8/24/2016  | 0.00949 (J) | 0.0139    | 0.00962 (J) | 0.0118      |
| 10/3/2016  | 0.0105      | 0.0164    |             | 0.0119      |
| 10/4/2016  |             |           | 0.00984 (J) |             |
| 10/26/2016 | 0.00931 (J) | 0.0138    | 0.00878 (J) | 0.0104      |
| 11/21/2016 | 0.00879 (J) | 0.0144    | 0.00833 (J) | 0.0106      |
| 1/17/2017  | 0.00929 (J) | 0.0135    |             |             |
| 1/18/2017  |             |           | 0.00966 (J) | 0.0101      |
| 3/22/2017  | 0.00938 (J) | 0.0132    | 0.00991 (J) | 0.0103      |
| 4/18/2017  | 0.00964 (J) | 0.012     | 0.00976 (J) | 0.0107      |
| 5/30/2017  | 0.00982 (J) |           |             |             |
| 5/31/2017  |             | 0.0126    | 0.00866 (J) | 0.0104      |
| 2/13/2018  | 0.00937 (J) | 0.0127    | 0.00821 (J) | 0.0111      |
| 5/22/2018  | 0.0102      | 0.0131    |             |             |
| 5/23/2018  |             |           |             | 0.0107      |
| 5/24/2018  |             |           | 0.00977 (J) |             |
| 6/12/2018  | 0.0104      | 0.0138    | 0.00997 (J) | 0.0108      |
| 10/17/2018 | 0.00952 (J) | 0.0137    | 0.0126      | 0.0119      |
| 11/19/2018 | 0.00915 (J) | 0.0115    | 0.0109      | 0.0107      |
| 4/10/2019  | 0.0105      | 0.0111    | 0.0101      | 0.0107      |
| 5/14/2019  | 0.00913 (J) | 0.0109    | 0.00922 (J) | 0.00949 (J) |
| 10/8/2019  | 0.0109      | 0.0151    | 0.0154      |             |
| 10/10/2019 |             |           |             | 0.0116      |
| 10/16/2019 | 0.0106      | 0.0146    | 0.0128      | 0.0125      |
| 4/6/2020   | 0.00971 (J) | 0.0125    | 0.00931 (J) | 0.0115      |
| 7/13/2020  | 0.0101      | 0.0145    | 0.0142      |             |
| 7/14/2020  |             |           |             | 0.0122      |
| 2/22/2021  | 0.0107      | 0.0132    | 0.00981     | 0.0111      |
| 7/12/2021  | 0.00991     | 0.013     | 0.00857     | 0.0108      |

# Time Series

Constituent: Barium (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5        | MW-6   | MW-7   | MW-8   |
|------------|-------------|--------|--------|--------|
| 4/25/2016  | 0.016       |        |        |        |
| 4/27/2016  |             | 0.012  | 0.0107 | 0.0108 |
| 6/21/2016  | 0.0112      | 0.0133 | 0.0129 | 0.0116 |
| 10/12/2017 | 0.0122      | 0.0134 | 0.014  | 0.0141 |
| 10/13/2017 | 0.0115      | 0.0124 | 0.0147 | 0.0148 |
| 10/14/2017 | 0.0099 (J)  | 0.0129 | 0.0123 | 0.0134 |
| 10/15/2017 | 0.0103      | 0.0136 | 0.0132 | 0.0139 |
| 10/16/2017 | 0.0101      | 0.0131 | 0.0122 | 0.0129 |
| 10/17/2017 | 0.00968 (J) | 0.0126 | 0.0121 | 0.0126 |
| 2/14/2018  | 0.0114      | 0.0142 | 0.0119 | 0.0126 |
| 5/23/2018  | 0.0138      | 0.0145 | 0.0135 | 0.0137 |
| 11/20/2018 | 0.0105      | 0.0127 | 0.0116 | 0.0123 |
| 5/14/2019  | 0.0111      |        |        |        |
| 5/15/2019  |             | 0.0121 | 0.0114 | 0.0122 |
| 10/8/2019  |             |        | 0.0145 |        |
| 10/9/2019  |             |        |        | 0.0137 |
| 10/10/2019 | 0.0105      | 0.0152 |        |        |
| 4/7/2020   | 0.0137      |        |        |        |
| 4/8/2020   |             | 0.0128 | 0.0127 | 0.0137 |
| 7/14/2020  | 0.0124      | 0.0154 | 0.0148 |        |
| 7/15/2020  |             |        |        | 0.0143 |
| 2/23/2021  | 0.0116      | 0.0143 | 0.014  | 0.014  |
| 7/20/2021  |             | 0.0143 | 0.0142 | 0.0141 |
| 7/21/2021  | 0.0116      |        |        |        |

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg)   | MW-4 (bg) |
|------------|-----------|-----------|-------------|-----------|
| 4/25/2016  |           | <0.00102  | 0.00122 (J) | <0.00102  |
| 4/26/2016  | <0.00102  |           |             |           |
| 6/20/2016  | <0.00102  | <0.00102  |             | <0.00102  |
| 6/22/2016  |           |           | 0.00144 (J) |           |
| 8/8/2016   | <0.00102  | <0.00102  |             |           |
| 8/9/2016   |           |           | 0.00331     | <0.00102  |
| 8/24/2016  | <0.00102  | <0.00102  | 0.00308     | <0.00102  |
| 10/3/2016  | <0.00102  | <0.00102  |             | <0.00102  |
| 10/4/2016  |           |           | 0.00129 (J) |           |
| 10/26/2016 | <0.00102  | <0.00102  | 0.0071      | <0.00102  |
| 11/21/2016 | <0.00102  | <0.00102  | 0.00689     | <0.00102  |
| 1/17/2017  | <0.00102  | <0.00102  |             |           |
| 1/18/2017  |           |           | 0.0169 (O)  | <0.00102  |
| 3/22/2017  | <0.00102  | <0.00102  | 0.00686     | <0.00102  |
| 4/18/2017  | <0.00102  | <0.00102  | <0.00102    | <0.00102  |
| 5/30/2017  | <0.00102  |           |             |           |
| 5/31/2017  |           | <0.00102  | 0.00547     | <0.00102  |
| 2/13/2018  | <0.00102  | <0.00102  | <0.00102    | <0.00102  |
| 5/22/2018  | <0.00102  | <0.00102  |             |           |
| 5/23/2018  |           |           |             | <0.00102  |
| 5/24/2018  |           |           | 0.00164 (J) |           |
| 6/12/2018  | <0.00102  | <0.00102  | 0.00306     | <0.00102  |
| 10/17/2018 | <0.00102  | <0.00102  | 0.0121      | <0.00102  |
| 11/19/2018 | <0.00102  | <0.00102  | 0.0185 (O)  | <0.00102  |
| 4/10/2019  | <0.00102  | <0.00102  | <0.00102    | <0.00102  |
| 5/14/2019  | <0.00102  | <0.00102  | <0.00102    | <0.00102  |
| 10/8/2019  | <0.00102  | <0.00102  | 0.0084      |           |
| 10/10/2019 |           |           |             | <0.00102  |
| 10/16/2019 | <0.00102  | <0.00102  | 0.0103      | <0.00102  |
| 4/6/2020   | <0.00102  | <0.00102  | <0.00102    | <0.00102  |
| 7/13/2020  | <0.00102  | <0.00102  | 0.0021 (J)  |           |
| 7/14/2020  |           |           |             | <0.00102  |
| 2/22/2021  | <0.00102  | <0.00102  | <0.00102    | <0.00102  |
| 7/12/2021  | <0.00102  | <0.00102  | <0.00102    | <0.00102  |

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5     | MW-6         | MW-7     | MW-8     |
|------------|----------|--------------|----------|----------|
| 4/25/2016  | <0.00102 |              |          |          |
| 4/27/2016  |          | <0.00102     | <0.00102 | <0.00102 |
| 6/21/2016  | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 10/12/2017 | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 10/13/2017 | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 10/14/2017 | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 10/15/2017 | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 10/16/2017 | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 10/17/2017 | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 2/14/2018  | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 5/23/2018  | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 11/20/2018 | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 5/14/2019  | <0.00102 |              |          |          |
| 5/15/2019  |          | 0.000677 (J) | <0.00102 | <0.00102 |
| 10/8/2019  |          |              | <0.00102 |          |
| 10/9/2019  |          |              |          | <0.00102 |
| 10/10/2019 | <0.00102 | <0.00102     |          |          |
| 4/7/2020   | <0.00102 |              |          |          |
| 4/8/2020   |          | 0.000788 (J) | <0.00102 | <0.00102 |
| 7/14/2020  | <0.00102 | <0.00102     | <0.00102 |          |
| 7/15/2020  |          |              |          | <0.00102 |
| 2/23/2021  | <0.00102 | <0.00102     | <0.00102 | <0.00102 |
| 7/20/2021  |          | 0.00048 (J)  | <0.00102 | <0.00102 |
| 7/21/2021  | <0.00102 |              |          |          |

# Time Series

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)  | MW-2 (bg)  | MW-3 (bg)  | MW-4 (bg)  |
|------------|------------|------------|------------|------------|
| 4/25/2016  |            | 0.0241 (J) | 0.028 (J)  | 0.0414 (J) |
| 4/26/2016  | 0.0231 (J) |            |            |            |
| 6/20/2016  | 0.0227 (J) | 0.0284 (J) |            | 0.0434 (J) |
| 6/22/2016  |            |            | 0.0433 (J) |            |
| 8/8/2016   | 0.0278 (J) | 0.034 (J)  |            |            |
| 8/9/2016   |            |            | 0.0429 (J) | 0.0453 (J) |
| 8/24/2016  | 0.0247 (J) | 0.0316 (J) | 0.0431 (J) | 0.0451 (J) |
| 10/3/2016  | 0.0307 (J) | 0.0367 (J) |            | 0.0511 (J) |
| 10/4/2016  |            |            | 0.04 (J)   |            |
| 10/26/2016 | 0.0241 (J) | 0.0331 (J) | 0.0375 (J) | 0.0507 (J) |
| 11/21/2016 | 0.0202 (J) | 0.035 (J)  | 0.0406 (J) | 0.0458 (J) |
| 1/17/2017  | 0.0201 (J) | 0.0259 (J) |            |            |
| 1/18/2017  |            |            | 0.0548 (J) | 0.0445 (J) |
| 3/22/2017  | 0.0224 (J) | 0.0243 (J) | 0.0344 (J) | 0.0432 (J) |
| 4/18/2017  | <0.1015    | 0.0206 (J) | <0.1015    | 0.0409 (J) |
| 5/30/2017  | <0.1015    |            |            |            |
| 5/31/2017  |            | 0.0234 (J) | 0.0454 (J) | 0.0392 (J) |
| 8/23/2017  | 0.0253 (J) | 0.0267 (J) | 0.0425 (J) | 0.042 (J)  |
| 5/22/2018  | 0.0224 (J) | 0.0251 (J) |            |            |
| 5/23/2018  |            |            |            | 0.0433 (J) |
| 5/24/2018  |            |            | 0.0339 (J) |            |
| 6/12/2018  | 0.0214 (J) | 0.0275 (J) | 0.0371 (J) | 0.0478 (J) |
| 10/17/2018 | 0.0216 (J) | 0.0321 (J) | 0.0596 (J) | 0.0468 (J) |
| 11/19/2018 | 0.0237 (J) | 0.0324 (J) | 0.0514 (J) | 0.0526 (J) |
| 4/10/2019  | 0.0304 (J) | <0.1015    | <0.1015    | 0.0438 (J) |
| 5/14/2019  | <0.1015    | <0.1015    | <0.1015    | <0.203 (o) |
| 10/8/2019  | <0.1015    | 0.0371 (J) | 0.0537 (J) |            |
| 10/10/2019 |            |            |            | 0.0487 (J) |
| 10/16/2019 | 0.0385 (J) | 0.0419 (J) | 0.05 (J)   | 0.0505 (J) |
| 4/6/2020   | <0.1015    | <0.1015    | <0.1015    | 0.0428 (J) |
| 7/13/2020  | <0.1015    | <0.1015    | 0.0366 (J) |            |
| 7/14/2020  |            |            |            | 0.0441 (J) |
| 2/22/2021  | 0.0307 (J) | <0.1015    | <0.1015    | 0.0397 (J) |
| 7/12/2021  | <0.1015    | <0.1015    | <0.1015    | 0.0411 (J) |

# Time Series

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5       | MW-6       | MW-7       | MW-8       |
|------------|------------|------------|------------|------------|
| 4/25/2016  | 0.0301 (J) |            |            |            |
| 4/27/2016  |            | 0.075 (J)  | 0.253 (O)  | 0.0662 (J) |
| 6/21/2016  | 0.0304 (J) | 0.0729 (J) | 0.0768 (J) | 0.0681 (J) |
| 10/12/2017 | 0.0285 (J) | 0.0806 (J) | 0.0685 (J) | 0.0687 (J) |
| 10/13/2017 | 0.0287 (J) | 0.0803 (J) | 0.0674 (J) | 0.0831 (J) |
| 10/14/2017 | 0.0305 (J) | 0.0828 (J) | 0.0756 (J) | 0.0702 (J) |
| 10/15/2017 | 0.0319 (J) | 0.0852 (J) | 0.0719 (J) | 0.0702 (J) |
| 10/16/2017 | 0.0304 (J) | 0.0858 (J) | 0.0726 (J) | 0.0707 (J) |
| 10/17/2017 | 0.036 (J)  | 0.0846 (J) | 0.0716 (J) | 0.0695 (J) |
| 11/16/2017 | 0.0377 (J) | 0.0772 (J) | 0.0644 (J) | 0.0675 (J) |
| 5/23/2018  | 0.0301 (J) | 0.0757 (J) | 0.0715 (J) | 0.0693 (J) |
| 11/20/2018 | 0.0357 (J) | 0.0915 (J) | 0.0772 (J) | 0.0771 (J) |
| 5/14/2019  | <0.203 (o) |            |            |            |
| 5/15/2019  |            | 0.0616 (J) | 0.0678 (J) | 0.0689 (J) |
| 10/8/2019  |            |            | 0.073 (J)  |            |
| 10/9/2019  |            |            |            | 0.0723 (J) |
| 10/10/2019 | 0.0323 (J) | 0.0919 (J) |            |            |
| 4/7/2020   | 0.0399 (J) |            |            |            |
| 4/8/2020   |            | 0.0499 (J) | 0.077 (J)  | 0.0683 (J) |
| 7/14/2020  | 0.033 (J)  | 0.0838 (J) | 0.0865 (J) |            |
| 7/15/2020  |            |            |            | 0.0723 (J) |
| 2/23/2021  | 0.0369 (J) | 0.0866 (J) | 0.0803 (J) | 0.0731 (J) |
| 7/20/2021  |            | 0.0608 (J) | 0.0721 (J) | 0.0656 (J) |
| 7/21/2021  | 0.0319 (J) |            |            |            |

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg)    | MW-3 (bg)    | MW-4 (bg)    |
|------------|-----------|--------------|--------------|--------------|
| 4/25/2016  |           | <0.0002      | 0.0121 (O)   | <0.0002      |
| 4/26/2016  | 0.00196   |              |              |              |
| 6/20/2016  | 0.0021    | <0.0002      |              | <0.0002      |
| 6/22/2016  |           |              | 0.00163      |              |
| 8/8/2016   | 0.00206   | <0.0002      |              |              |
| 8/9/2016   |           |              | 0.00122      | <0.0002      |
| 8/24/2016  | 0.00182   | <0.0002      | <0.0002      | <0.0002      |
| 10/3/2016  | 0.00188   | <0.0002      |              | <0.0002      |
| 10/4/2016  |           |              | 0.000689 (J) |              |
| 10/26/2016 | 0.00175   | <0.0002      | 0.00136      | <0.0002      |
| 11/21/2016 | 0.00197   | <0.0002      | 0.00171      | <0.0002      |
| 1/17/2017  | 0.002     | 0.000311 (J) |              |              |
| 1/18/2017  |           |              | 0.003        | <0.0002      |
| 3/22/2017  | 0.0019    | <0.0002      | 0.00473      | <0.0002      |
| 4/18/2017  | 0.00159   | <0.0002      | 0.00117      | <0.0002      |
| 5/30/2017  | 0.00214   |              |              |              |
| 5/31/2017  |           | 0.000212 (J) | 0.00296      | <0.0002      |
| 2/13/2018  | 0.0018    | <0.0002      | 0.00232      | <0.0002      |
| 5/22/2018  | 0.00201   | <0.0002      |              |              |
| 5/23/2018  |           |              |              | <0.0002      |
| 5/24/2018  |           |              | 0.00459      |              |
| 6/12/2018  | 0.00217   | <0.0002      | 0.00351      | <0.0002      |
| 10/17/2018 | 0.00228   | <0.0002      | 0.00393      | <0.0002      |
| 11/19/2018 | 0.00156   | <0.0002      | 0.00309      | <0.0002      |
| 4/10/2019  | 0.00224   | <0.0002      | 0.00337      | <0.0002      |
| 5/14/2019  | 0.00238   | <0.0002      | 0.0013       | <0.0002      |
| 10/8/2019  | 0.00218   | <0.0002      | 0.00598      |              |
| 10/10/2019 |           |              |              | <0.0002      |
| 10/16/2019 | 0.00225   | <0.0002      | 0.00448      | <0.0002      |
| 4/6/2020   | 0.00184   | <0.0002      | 0.000645 (J) | <0.0002      |
| 7/13/2020  | 0.00194   | <0.0002      | 0.00885 (O)  |              |
| 7/14/2020  |           |              |              | <0.0002      |
| 2/22/2021  | 0.00184   | 8.96E-05 (J) | 0.00536      | 8.96E-05 (J) |
| 7/12/2021  | 0.00193   | 8E-05 (J)    | 0.00094      | 8E-05 (J)    |

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5    | MW-6         | MW-7    | MW-8    |
|------------|---------|--------------|---------|---------|
| 4/25/2016  | <0.0002 |              |         |         |
| 4/27/2016  |         | <0.0002      | <0.0002 | <0.0002 |
| 6/21/2016  | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 10/12/2017 | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 10/13/2017 | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 10/14/2017 | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 10/15/2017 | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 10/16/2017 | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 10/17/2017 | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 2/14/2018  | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 5/23/2018  | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 11/20/2018 | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 5/14/2019  | <0.0002 |              |         |         |
| 5/15/2019  |         | 0.000858 (J) | <0.0002 | <0.0002 |
| 10/8/2019  |         |              | <0.0002 |         |
| 10/9/2019  |         |              |         | <0.0002 |
| 10/10/2019 | <0.0002 | <0.0002      |         |         |
| 4/7/2020   | <0.0002 |              |         |         |
| 4/8/2020   |         | 0.00204      | <0.0002 | <0.0002 |
| 7/14/2020  | <0.0002 | <0.0002      | <0.0002 |         |
| 7/15/2020  |         |              |         | <0.0002 |
| 2/23/2021  | <0.0002 | <0.0002      | <0.0002 | <0.0002 |
| 7/20/2021  |         | 0.00058      | <0.0002 | <0.0002 |
| 7/21/2021  | <0.0002 |              |         |         |



# Time Series

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) |
|------------|-----------|-----------|-----------|-----------|
| 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       |
| 4/6/2020   | 149       | 152       | 177       | 222       |
| 7/13/2020  | 147       | 163       | 264       |           |
| 7/14/2020  |           |           |           | 259       |
| 2/22/2021  | 151       | 178       | 312       | 271       |
| 7/12/2021  | 149       | 159       | 252       | 242       |

# Time Series

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5 | MW-6 | MW-7 | MW-8 |
|------------|------|------|------|------|
| 4/25/2016  | 399  |      |      |      |
| 4/27/2016  |      | 411  | 198  | 282  |
| 6/21/2016  | 295  | 318  | 327  | 291  |
| 10/12/2017 | 394  | 421  | 317  | 300  |
| 10/13/2017 | 389  | 396  | 302  | 298  |
| 10/14/2017 | 391  | 400  | 283  | 299  |
| 10/15/2017 | 332  | 378  | 294  | 307  |
| 10/16/2017 | 380  | 402  | 284  | 299  |
| 10/17/2017 | 377  | 373  | 294  | 294  |
| 11/16/2017 | 368  | 367  | 299  | 308  |
| 5/23/2018  | 405  | 425  | 321  | 344  |
| 11/20/2018 | 414  | 449  | 306  | 327  |
| 5/14/2019  | 441  |      |      |      |
| 5/15/2019  |      | 345  | 302  | 305  |
| 10/8/2019  |      |      | 294  |      |
| 10/9/2019  |      |      |      | 329  |
| 10/10/2019 | 386  | 461  |      |      |
| 4/7/2020   | 432  |      |      |      |
| 4/8/2020   |      | 242  | 280  | 281  |
| 7/14/2020  | 395  | 406  | 261  |      |
| 7/15/2020  |      |      |      | 280  |
| 2/23/2021  | 394  | 428  | 292  | 306  |
| 7/20/2021  |      | 348  | 254  | 281  |
| 7/21/2021  | 384  |      |      |      |

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) |
|------------|-----------|-----------|-----------|-----------|
| 4/25/2016  |           | 1.9       | 1.32      | 1.53      |
| 4/26/2016  | 1.94      |           |           |           |
| 6/20/2016  | 2.09      | 3.43      |           | 1.85      |
| 6/22/2016  |           |           | 1.46      |           |
| 8/8/2016   | 2.18      | 3.31      |           |           |
| 8/9/2016   |           |           | 1.35      | 1.95      |
| 8/24/2016  | 2.22      | 3.23      | 1.47      | 2.07      |
| 10/3/2016  | 2.34      | 3.21      |           | 2.02      |
| 10/4/2016  |           |           | 1.59      |           |
| 10/26/2016 | 2.34      | 3.35      | 1.27      | 2.07      |
| 11/21/2016 | 2.5       | 3.34      | 1.38      | 2.39      |
| 1/17/2017  | 2.68      | 3.58      |           |           |
| 1/18/2017  |           |           | 1.34      | 1.9       |
| 3/22/2017  | 3.7       | 3.4       | 2         | 1.5 (J)   |
| 4/18/2017  | 2.4       | 2.6       | 2.2       | 1.6 (J)   |
| 5/30/2017  | 2.6       |           |           |           |
| 5/31/2017  |           | 4.4       | 1.5 (J)   | 2.1       |
| 8/23/2017  | 2.7       | 4.4       | 1.8 (J)   | 2.3       |
| 5/22/2018  | 2.3       | 3.2       |           |           |
| 5/23/2018  |           |           |           | 2         |
| 5/24/2018  |           |           | 1.6 (J)   |           |
| 6/12/2018  | 2.3       | 3.7       | 1.4 (J)   | 1.7 (J)   |
| 10/17/2018 | 1.7 (J)   | 4.6       | <2        | 1.5 (J)   |
| 11/19/2018 | 1.7 (J)   | 3         | <2        | <2        |
| 4/10/2019  | 2.36      | 1.76      | 2.25      | 1.88      |
| 5/14/2019  | 2.28      | 2.98      | 2.28      | 1.82      |
| 10/8/2019  | 2.31      | 4.26      | 1.36      |           |
| 10/10/2019 |           |           |           | 1.93      |
| 10/16/2019 | 2.42      | 4.04      | 1.4       | 1.92      |
| 4/6/2020   | 2.01      | 2.43      | 1.72      | 1.5       |
| 7/13/2020  | 2.1       | 4.05      | 1.34      |           |
| 7/14/2020  |           |           |           | 1.61      |
| 2/22/2021  | 2.16      | 1.72      | 2.22      | 1.52      |
| 7/12/2021  | 2.19      | 2.36      | 2.13      | 1.56      |

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5  | MW-6    | MW-7   | MW-8    |
|------------|-------|---------|--------|---------|
| 4/25/2016  | 5.44  |         |        |         |
| 4/27/2016  |       | 2.19    | 1.71   | 2.34    |
| 6/21/2016  | 6.32  | 2.56    | 2.04   | 2.29    |
| 10/12/2017 | 7.9   | 3.4     | 31     | 150     |
| 10/13/2017 | 8 (B) | 3 (B)   | 32 (B) | 130 (B) |
| 10/14/2017 | 7.4   | 2.8     | 33     | 140     |
| 10/15/2017 | 7.2   | 1.9 (J) | 34     | 130     |
| 10/16/2017 | 8.1   | 1.8 (J) | 34     | 140     |
| 10/17/2017 | 7.9   | 3.1     | 34     | 140     |
| 11/16/2017 | 8.1   | 3.5     | 35     | 130     |
| 5/23/2018  | 7     | 2.6     | 28     | 75      |
| 11/20/2018 | 7.4   | 2.7     | 20     | 45      |
| 5/14/2019  | 6.24  |         |        |         |
| 5/15/2019  |       | 4.45    | 15.9   | 52      |
| 10/8/2019  |       |         | 16.8   |         |
| 10/9/2019  |       |         |        | 39.2    |
| 10/10/2019 | 7.88  | 3.61    |        |         |
| 4/7/2020   | 4.83  |         |        |         |
| 4/8/2020   |       | 4.63    | 10.6   | 24.9    |
| 7/14/2020  | 6.84  | 3.25    | 9.68   |         |
| 7/15/2020  |       |         |        | 23.8    |
| 2/23/2021  | 6.19  | 3.47    | 7.85   | 17.9    |
| 7/20/2021  |       | 4.04    | 6.35   | 14.3    |
| 7/21/2021  | 6.73  |         |        |         |

# Time Series

Constituent: Chromium (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)    | MW-2 (bg)   | MW-3 (bg)   | MW-4 (bg)  |
|------------|--------------|-------------|-------------|------------|
| 4/25/2016  |              | <0.00102    | 0.00373 (J) | <0.00102   |
| 4/26/2016  | <0.00102     |             |             |            |
| 6/20/2016  | <0.00102     | <0.00102    |             | <0.00102   |
| 6/22/2016  |              |             | 0.00606 (J) |            |
| 8/8/2016   | <0.00102     | <0.00102    |             |            |
| 8/9/2016   |              |             | <0.00102    | <0.00102   |
| 8/24/2016  | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 10/3/2016  | <0.00102     | <0.00102    |             | <0.00102   |
| 10/4/2016  |              |             | <0.00102    |            |
| 10/26/2016 | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 11/21/2016 | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 1/17/2017  | <0.00102     | <0.00102    |             |            |
| 1/18/2017  |              |             | <0.00102    | <0.00102   |
| 3/22/2017  | <0.00102     | <0.00102    | 0.00945 (J) | <0.00102   |
| 4/18/2017  | <0.00102     | <0.00102    | 0.0105      | <0.00102   |
| 5/30/2017  | <0.00102     |             |             |            |
| 5/31/2017  |              | <0.00102    | <0.00102    | <0.00102   |
| 2/13/2018  | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 5/22/2018  | <0.00102     | <0.00102    |             |            |
| 5/23/2018  |              |             |             | <0.00102   |
| 5/24/2018  |              |             | <0.00102    |            |
| 6/12/2018  | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 10/17/2018 | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 11/19/2018 | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 4/10/2019  | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 5/14/2019  | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 10/8/2019  | <0.00102     | <0.00102    | <0.00102    |            |
| 10/10/2019 |              |             |             | <0.00102   |
| 10/16/2019 | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 4/6/2020   | <0.00102     | <0.00102    | <0.00102    | <0.00102   |
| 7/13/2020  | <0.00102     | <0.00102    | <0.00102    |            |
| 7/14/2020  |              |             |             | <0.00102   |
| 2/22/2021  | 0.000382 (J) | <0.00102    | 0.00035 (J) | <0.00102   |
| 7/12/2021  | 0.00049 (J)  | 0.00025 (J) | 0.00031 (J) | 0.0003 (J) |

# Time Series

Constituent: Chromium (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5     | MW-6     | MW-7     | MW-8     |
|------------|----------|----------|----------|----------|
| 4/25/2016  | <0.00102 |          |          |          |
| 4/27/2016  |          | <0.00102 | <0.00102 | <0.00102 |
| 6/21/2016  | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/12/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/13/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/14/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/15/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/16/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 10/17/2017 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 2/14/2018  | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 5/23/2018  | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 11/20/2018 | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 5/14/2019  | <0.00102 |          |          |          |
| 5/15/2019  |          | <0.00102 | <0.00102 | <0.00102 |
| 10/8/2019  |          |          | <0.00102 |          |
| 10/9/2019  |          |          |          | <0.00102 |
| 10/10/2019 | <0.00102 | <0.00102 |          |          |
| 4/7/2020   | <0.00102 |          |          |          |
| 4/8/2020   |          | <0.00102 | <0.00102 | <0.00102 |
| 7/14/2020  | <0.00102 | <0.00102 | <0.00102 |          |
| 7/15/2020  |          |          |          | <0.00102 |
| 2/23/2021  | <0.00102 | <0.00102 | <0.00102 | <0.00102 |
| 7/20/2021  |          | <0.00102 | <0.00102 | <0.00102 |
| 7/21/2021  | <0.00102 |          |          |          |

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg)   | MW-4 (bg) |
|------------|-----------|-----------|-------------|-----------|
| 4/25/2016  |           | 0.0487    | 0.232       | <0.0002   |
| 4/26/2016  | 0.0343    |           |             |           |
| 6/20/2016  | 0.0413    | 0.0767    |             | <0.0002   |
| 6/22/2016  |           |           | 0.332       |           |
| 8/8/2016   | 0.0513    | 0.103     |             |           |
| 8/9/2016   |           |           | 0.311       | <0.0002   |
| 8/24/2016  | 0.0471    | 0.093     | 0.271       | <0.0002   |
| 10/3/2016  | 0.0525    | 0.0964    |             | <0.0002   |
| 10/4/2016  |           |           | 0.148       |           |
| 10/26/2016 | 0.0527    | 0.0904    | 0.236       | <0.0002   |
| 11/21/2016 | 0.0569    | 0.0857    | 0.241       | <0.0002   |
| 1/17/2017  | 0.0768    | 0.0745    |             |           |
| 1/18/2017  |           |           | 0.347       | <0.0002   |
| 3/22/2017  | 0.0535    | 0.0328    | 0.271       | <0.0002   |
| 4/18/2017  | 0.0442    | 0.0242    | 0.00324 (J) | <0.0002   |
| 5/30/2017  | 0.0465    |           |             |           |
| 5/31/2017  |           | 0.0441    | 0.225       | <0.0002   |
| 2/13/2018  | 0.062     | 0.0179    | 0.00661 (J) | <0.0002   |
| 5/22/2018  | 0.0443    | 0.028     |             |           |
| 5/23/2018  |           |           |             | <0.0002   |
| 5/24/2018  |           |           | 0.158       |           |
| 6/12/2018  | 0.0512    | 0.0366    | 0.291       | <0.0002   |
| 10/17/2018 | 0.0751    | 0.0745    | 0.49        | <0.0002   |
| 11/19/2018 | 0.0825    | 0.0225    | 0.386       | <0.0002   |
| 4/10/2019  | 0.0445    | 0.0152    | 0.0144      | <0.0002   |
| 5/14/2019  | 0.0485    | 0.0222    | 0.00536     | <0.0002   |
| 10/8/2019  | 0.0778    | 0.0674    | 1.07 (o)    |           |
| 10/10/2019 |           |           |             | <0.0002   |
| 10/16/2019 | 0.08      | 0.073     | 0.848 (o)   | <0.0002   |
| 4/6/2020   | 0.0417    | 0.0116    | <0.0002     | <0.0002   |
| 7/13/2020  | 0.0532    | 0.0405    | 0.47        |           |
| 7/14/2020  |           |           |             | <0.0002   |
| 2/22/2021  | 0.0657    | 0.0161    | 0.0515      | <0.0002   |
| 7/12/2021  | 0.0556    | 0.0155    | 0.00567     | <0.0002   |

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5        | MW-6   | MW-7        | MW-8        |
|------------|-------------|--------|-------------|-------------|
| 4/25/2016  | 0.00287 (J) |        |             |             |
| 4/27/2016  |             | 0.0287 | <0.0002     | 0.00436 (J) |
| 6/21/2016  | 0.00228 (J) | 0.0269 | <0.0002     | 0.00484 (J) |
| 10/12/2017 | <0.0002     | 0.0279 | 0.00269 (J) | 0.005 (J)   |
| 10/13/2017 | <0.0002     | 0.0271 | 0.00341 (J) | 0.0052 (J)  |
| 10/14/2017 | <0.0002     | 0.0296 | 0.00451 (J) | 0.00513 (J) |
| 10/15/2017 | 0.00203 (J) | 0.0303 | 0.00371 (J) | 0.00518 (J) |
| 10/16/2017 | <0.0002     | 0.0274 | 0.00371 (J) | 0.00453 (J) |
| 10/17/2017 | <0.0002     | 0.0274 | 0.0035 (J)  | 0.00463 (J) |
| 2/14/2018  | <0.0002     | 0.0305 | <0.0002     | 0.00441 (J) |
| 5/23/2018  | <0.0002     | 0.0409 | <0.0002     | 0.00466 (J) |
| 11/20/2018 | <0.0002     | 0.0327 | 0.00306 (J) | 0.00551     |
| 5/14/2019  | <0.0002     |        |             |             |
| 5/15/2019  |             | 0.265  | 0.00234 (J) | 0.00643     |
| 10/8/2019  |             |        | 0.00408 (J) |             |
| 10/9/2019  |             |        |             | 0.00864     |
| 10/10/2019 | <0.0002     | 0.0425 |             |             |
| 4/7/2020   | <0.0002     |        |             |             |
| 4/8/2020   |             | 0.479  | 0.00394 (J) | 0.00762     |
| 7/14/2020  | <0.0002     | 0.0916 | 0.00653     |             |
| 7/15/2020  |             |        |             | 0.00821     |
| 2/23/2021  | 0.00102     | 0.0771 | 0.00294     | 0.00796     |
| 7/20/2021  |             | 0.216  | 0.00561     | 0.00714     |
| 7/21/2021  | 0.00127     |        |             |             |



# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)  | MW-2 (bg)   | MW-3 (bg)  | MW-4 (bg)   |
|------------|------------|-------------|------------|-------------|
| 4/25/2016  |            |             | 0.484 (U)  | 0.434 (U)   |
| 4/26/2016  | 0.622      |             |            |             |
| 5/5/2016   |            | -0.0718 (U) |            |             |
| 6/20/2016  | 0.159 (U)  | 0.295 (U)   |            | 0.287 (U)   |
| 6/22/2016  |            |             | 0.2 (U)    |             |
| 8/8/2016   | 0.511 (U)  | 0.231 (U)   |            |             |
| 8/9/2016   |            |             | 0.378 (U)  | 0.516 (U)   |
| 8/24/2016  | 0.566 (U)  | 0.65        | 0.131 (U)  | 0.266 (U)   |
| 10/3/2016  | 0.537 (U)  | 0.845       |            | 0.59 (U)    |
| 10/4/2016  |            |             | 0.514 (U)  |             |
| 10/26/2016 | 0.636      | 0.994       | 0.755      | 0.164 (U)   |
| 11/21/2016 | 0.807      | 0.537 (U)   | 0.7        | 0.296 (U)   |
| 1/17/2017  | 0.308 (U)  | -0.0159 (U) |            |             |
| 1/18/2017  |            |             | 0.606      | 0.0267 (U)  |
| 3/22/2017  | 0.344 (U)  | 0.279 (U)   | 0.927      | 0.132 (U)   |
| 4/18/2017  | 0.934      | 0.32 (U)    | 0.334 (U)  | -0.0439 (U) |
| 5/30/2017  | 0.149 (U)  |             |            |             |
| 5/31/2017  |            | 0.178 (U)   | 0.8        | 0.3 (U)     |
| 2/13/2018  | 0.774      | 0.804       | 0.649      | 0.69        |
| 5/22/2018  | -0.091 (U) | 0.0077 (U)  |            |             |
| 5/23/2018  |            |             |            | 0.186 (U)   |
| 5/24/2018  |            |             | 0.448 (U)  |             |
| 6/12/2018  | 1.18       | -0.315 (U)  | 0.234 (U)  | 0.153 (U)   |
| 10/17/2018 | 0.553 (U)  | 0.574 (U)   | 0.852      | 0.313 (U)   |
| 11/19/2018 | 0.862      | 0.654       | 0.521      | 0.794       |
| 5/14/2019  | 0.509      | 0.579       | 0.176 (U)  | 0.352 (U)   |
| 10/8/2019  | 1.47       | 0.493 (U)   | 0.833 (U)  |             |
| 10/10/2019 |            |             |            | 1.02 (U)    |
| 10/16/2019 | 0.204 (U)  | 0.046 (U)   | 0.0279 (U) | 0.356 (U)   |
| 4/6/2020   | 0.309 (U)  | 0.212 (U)   | 0.569 (U)  | 0.459 (U)   |
| 7/13/2020  | 0.219 (U)  | 0.0814 (U)  | 0.53       |             |
| 7/14/2020  |            |             |            | 0.169 (U)   |
| 2/22/2021  | 0.677 (U)  | 0.434 (U)   | 0.472 (U)  | 0 (U)       |
| 7/12/2021  | 0.476 (U)  | 0.155 (U)   | 0.114 (U)  | 0.301 (U)   |

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5      | MW-6      | MW-7       | MW-8       |
|------------|-----------|-----------|------------|------------|
| 4/25/2016  | 0.611     |           |            |            |
| 4/27/2016  |           | 0.956     | 0.374 (U)  | -0.207 (U) |
| 6/21/2016  | 0.304 (U) | 0.748     | 0.151 (U)  | 0.529      |
| 10/12/2017 | 0.627 (U) | 0.564 (U) | 0.182 (U)  | 0.267 (U)  |
| 10/13/2017 | 0.391 (U) | 1.36 (U)  | 0.517 (U)  | 0.873 (U)  |
| 10/14/2017 | 1.2 (U)   | 1.59 (U)  | 0.43 (U)   | 1.6 (U)    |
| 10/15/2017 | 0.806 (U) | 1.22 (U)  | 0.45 (U)   | 0.327 (U)  |
| 10/16/2017 | 0.564 (U) | 1.57 (U)  | 0.55 (U)   | 0.524 (U)  |
| 10/17/2017 | 0.178 (U) | 0.631 (U) | 0.474 (U)  | 0.0455 (U) |
| 2/14/2018  | 0.955     | 0.969     | 0.736      | 0.633      |
| 5/23/2018  | 0.543     | 0.918     | 0.0192 (U) | 0.377 (U)  |
| 11/20/2018 | 0.687     | 1.15      | 0.494      | 0.28 (U)   |
| 5/14/2019  | 0.663     |           |            |            |
| 5/15/2019  |           | 1.56      | 0.61       | 0.697      |
| 10/8/2019  |           |           | 0.345 (U)  |            |
| 10/9/2019  |           |           |            | 0.416 (U)  |
| 10/10/2019 | 0.811 (U) | 1.71      |            |            |
| 4/7/2020   | 0.48 (U)  |           |            |            |
| 4/8/2020   |           | 0.179 (U) | 0.237 (U)  | 1.38 (U)   |
| 7/14/2020  | 0.521     | 0.578     | 0.434      |            |
| 7/15/2020  |           |           |            | 0.398 (U)  |
| 2/23/2021  | 0.71 (U)  | 1.15 (U)  | 0.696 (U)  | 0.685 (U)  |
| 7/20/2021  |           | 1.32      | 0.356 (U)  | 0.42 (U)   |
| 7/21/2021  | 0.79 (U)  |           |            |            |

# Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)  | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) |
|------------|------------|-----------|-----------|-----------|
| 4/25/2016  |            | 0.149 (J) | 0.243 (J) | 0.372     |
| 4/26/2016  | 0.146 (J)  |           |           |           |
| 6/20/2016  | 0.148 (J)  | 0.148 (J) |           | 0.361     |
| 6/22/2016  |            |           | 0.269 (J) |           |
| 8/8/2016   | 0.137 (J)  | 0.134 (J) |           |           |
| 8/9/2016   |            |           | 0.363     | 0.326     |
| 8/24/2016  | 0.133 (J)  | 0.129 (J) | 0.346     | 0.329     |
| 10/3/2016  | 0.103 (J)  | 0.086 (J) |           | 0.287 (J) |
| 10/4/2016  |            |           | 0.266 (J) |           |
| 10/26/2016 | 0.05 (J)   | 0.027 (J) | 0.266 (J) | 0.194 (J) |
| 11/21/2016 | 0.047 (J)  | 0.027 (J) | 0.244 (J) | 0.192 (J) |
| 1/17/2017  | 0.09 (J)   | 0.066 (J) |           |           |
| 1/18/2017  |            |           | 0.385     | 0.223 (J) |
| 3/22/2017  | 0.12       | 0.13      | 0.41      | 0.32      |
| 4/18/2017  | 0.12       | 0.16      | 0.29      | 0.32      |
| 5/30/2017  | 0.13       |           |           |           |
| 5/31/2017  |            | 0.13      | 0.37      | 0.31      |
| 8/23/2017  | 0.16       | 0.16      | 0.55      | 0.38      |
| 2/13/2018  | 0.14       | 0.22      | 0.27      | 0.38      |
| 5/22/2018  | 0.16       | 0.17      |           |           |
| 5/23/2018  |            |           |           | 0.38      |
| 5/24/2018  |            |           | 0.6       |           |
| 6/12/2018  | 0.16       | 0.16      | 0.53      | 0.39      |
| 10/17/2018 | 0.18       | 0.16      | 0.63      | 0.39      |
| 11/19/2018 | 0.15       | 0.18      | 0.31      | 0.36      |
| 4/10/2019  | 0.102      | 0.262     | 0.273     | 0.384     |
| 5/14/2019  | 0.119      | 0.17      | 0.281     | 0.335     |
| 10/8/2019  | 0.0924 (J) | 0.164     | 0.225     |           |
| 10/10/2019 |            |           |           | 0.304     |
| 10/16/2019 | 0.0756 (J) | 0.114     | 0.106     | 0.302     |
| 4/6/2020   | 0.101      | 0.207     | 0.314     | 0.368     |
| 7/13/2020  | 0.0678 (J) | 0.132     | 0.13      |           |
| 7/14/2020  |            |           |           | 0.33      |
| 2/22/2021  | 0.082 (J)  | 0.209     | 0.246     | 0.357     |
| 7/12/2021  | 0.125      | 0.196     | 0.287     | 0.35      |

# Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5  | MW-6      | MW-7      | MW-8      |
|------------|-------|-----------|-----------|-----------|
| 4/25/2016  | 0.307 |           |           |           |
| 4/27/2016  |       | 0.131 (J) | 0.2 (J)   | 0.212 (J) |
| 6/21/2016  | 0.337 | 0.153 (J) | 0.163 (J) | 0.211 (J) |
| 10/12/2017 | 0.35  | 0.15      | 0.17      | 0.22      |
| 10/13/2017 | 0.36  | 0.15      | 0.19      | 0.23      |
| 10/14/2017 | 0.37  | 0.14      | 0.2       | 0.22      |
| 10/15/2017 | 0.37  | 0.14      | 0.2       | 0.22      |
| 10/16/2017 | 0.36  | 0.14      | 0.2       | 0.22      |
| 10/17/2017 | 0.35  | 0.14      | 0.19      | 0.21      |
| 11/16/2017 | 0.37  | 0.14      | 0.18      | 0.22      |
| 2/14/2018  | 0.33  | 0.13      | 0.18      | 0.21      |
| 5/23/2018  | 0.29  | 0.13      | 0.18      | 0.21      |
| 11/20/2018 | 0.32  | 0.14      | 0.19      | 0.21      |
| 5/14/2019  | 0.22  |           |           |           |
| 5/15/2019  |       | 0.133     | 0.169     | 0.192     |
| 10/8/2019  |       |           | 0.183     |           |
| 10/9/2019  |       |           |           | 0.189     |
| 10/10/2019 | 0.338 | 0.124     |           |           |
| 4/7/2020   | 0.225 |           |           |           |
| 4/8/2020   |       | <0.1 (o)  | 0.153     | 0.192     |
| 7/14/2020  | 0.263 | 0.115     | 0.193     |           |
| 7/15/2020  |       |           |           | 0.196     |
| 2/23/2021  | 0.287 | 0.139     | 0.2       | 0.208     |
| 7/20/2021  |       | 0.131     | 0.286     | 0.262     |
| 7/21/2021  | 0.331 |           |           |           |

# Time Series

Constituent: Lead (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg)   | MW-4 (bg) |
|------------|-----------|-----------|-------------|-----------|
| 4/25/2016  |           | <0.0002   | <0.0002     | <0.0002   |
| 4/26/2016  | <0.0002   |           |             |           |
| 6/20/2016  | <0.0002   | <0.0002   |             | <0.0002   |
| 6/22/2016  |           |           | <0.0002     |           |
| 8/8/2016   | <0.0002   | <0.0002   |             |           |
| 8/9/2016   |           |           | <0.0002     | <0.0002   |
| 8/24/2016  | <0.0002   | <0.0002   | <0.0002     | <0.0002   |
| 10/3/2016  | <0.0002   | <0.0002   |             | <0.0002   |
| 10/4/2016  |           |           | <0.0002     |           |
| 10/26/2016 | <0.0002   | <0.0002   | <0.0002     | <0.0002   |
| 11/21/2016 | <0.0002   | <0.0002   | <0.0002     | <0.0002   |
| 1/17/2017  | <0.0002   | <0.0002   |             |           |
| 1/18/2017  |           |           | <0.0002     | <0.0002   |
| 3/22/2017  | <0.0002   | <0.0002   | <0.0002     | <0.0002   |
| 4/18/2017  | <0.0002   | <0.0002   | <0.0002     | <0.0002   |
| 5/30/2017  | <0.0002   |           |             |           |
| 5/31/2017  |           | <0.0002   | <0.0002     | <0.0002   |
| 2/13/2018  | <0.0002   | <0.0002   | <0.0002     | <0.0002   |
| 5/22/2018  | <0.0002   | <0.0002   |             |           |
| 5/23/2018  |           |           |             | <0.0002   |
| 5/24/2018  |           |           | <0.0002     |           |
| 6/12/2018  | <0.0002   | <0.0002   | <0.0002     | <0.0002   |
| 10/17/2018 | <0.0002   | <0.0002   | 0.00102 (J) | <0.0002   |
| 11/19/2018 | <0.0002   | <0.0002   | 0.00692 (o) | <0.0002   |
| 4/10/2019  | <0.0002   | <0.0002   | <0.0002     | <0.0002   |
| 5/14/2019  | <0.0002   | <0.0002   | <0.0002     | <0.0002   |
| 10/8/2019  | <0.0002   | <0.0002   | <0.0002     |           |
| 10/10/2019 |           |           |             | <0.0002   |
| 10/16/2019 | <0.0002   | <0.0002   | 0.00108 (J) | <0.0002   |
| 4/6/2020   | <0.0002   | <0.0002   | <0.0002     | <0.0002   |
| 7/13/2020  | <0.0002   | <0.0002   | <0.0002     |           |
| 7/14/2020  |           |           |             | <0.0002   |
| 2/22/2021  | <0.0002   | <0.0002   | 8.8E-05 (J) | <0.0002   |
| 7/12/2021  | <0.0002   | <0.0002   | 8E-05 (J)   | <0.0002   |

# Time Series

Constituent: Lead (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5    | MW-6    | MW-7    | MW-8      |
|------------|---------|---------|---------|-----------|
| 4/25/2016  | <0.0002 |         |         |           |
| 4/27/2016  |         | <0.0002 | <0.0002 | <0.0002   |
| 6/21/2016  | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 10/12/2017 | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 10/13/2017 | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 10/14/2017 | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 10/15/2017 | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 10/16/2017 | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 10/17/2017 | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 2/14/2018  | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 5/23/2018  | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 11/20/2018 | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 5/14/2019  | <0.0002 |         |         |           |
| 5/15/2019  |         | <0.0002 | <0.0002 | <0.0002   |
| 10/8/2019  |         |         | <0.0002 |           |
| 10/9/2019  |         |         |         | <0.0002   |
| 10/10/2019 | <0.0002 | <0.0002 |         |           |
| 4/7/2020   | <0.0002 |         |         |           |
| 4/8/2020   |         | <0.0002 | <0.0002 | <0.0002   |
| 7/14/2020  | <0.0002 | <0.0002 | <0.0002 |           |
| 7/15/2020  |         |         |         | <0.0002   |
| 2/23/2021  | <0.0002 | <0.0002 | <0.0002 | <0.0002   |
| 7/20/2021  |         | <0.0002 | <0.0002 | 9E-05 (J) |
| 7/21/2021  | <0.0002 |         |         |           |

# Time Series

Constituent: Lithium (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)  | MW-2 (bg)  | MW-3 (bg) | MW-4 (bg)  |
|------------|------------|------------|-----------|------------|
| 4/25/2016  |            | 0.0353 (J) | 0.0964    | 0.0528     |
| 4/26/2016  | 0.0264 (J) |            |           |            |
| 6/20/2016  | 0.0246 (J) | 0.0583     |           | 0.0554     |
| 6/22/2016  |            |            | 0.156     |            |
| 8/8/2016   | 0.0229 (J) | 0.0627     |           |            |
| 8/9/2016   |            |            | 0.122     | 0.0452 (J) |
| 8/24/2016  | 0.0236 (J) | 0.0651     | 0.138     | 0.0488 (J) |
| 10/3/2016  | 0.0229 (J) | 0.0622     |           | 0.0476 (J) |
| 10/4/2016  |            |            | 0.0966    |            |
| 10/26/2016 | 0.0227 (J) | 0.0293 (J) | 0.134     | 0.049 (J)  |
| 11/21/2016 | 0.0236 (J) | 0.0667     | 0.167     | 0.0477 (J) |
| 1/17/2017  | 0.0228 (J) | 0.0636     |           |            |
| 1/18/2017  |            |            | 0.237     | 0.045 (J)  |
| 3/22/2017  | 0.0238 (J) | 0.0464 (J) | 0.203     | 0.0493 (J) |
| 4/18/2017  | 0.0242 (J) | 0.0446 (J) | 0.0764    | 0.0494 (J) |
| 5/30/2017  | 0.0229 (J) |            |           |            |
| 5/31/2017  |            | 0.0496 (J) | 0.218     | 0.0501     |
| 2/13/2018  | 0.0233 (J) | 0.0615     | 0.0964    | 0.0446 (J) |
| 5/22/2018  | 0.0263 (J) | 0.0465 (J) |           |            |
| 5/23/2018  |            |            |           | 0.0513     |
| 5/24/2018  |            |            | 0.145     |            |
| 6/12/2018  | 0.0251 (J) | 0.0472 (J) | 0.194     | 0.0511     |
| 10/17/2018 | 0.025 (J)  | 0.0633     | 0.384     | 0.0532     |
| 11/19/2018 | 0.0241     | 0.0584     | 0.323     | 0.0467     |
| 4/10/2019  | 0.0285     | 0.0574     | 0.0905    | 0.0504     |
| 5/14/2019  | 0.026 (J)  | 0.0445     | 0.0828    | 0.0485     |
| 10/8/2019  | 0.0268     | 0.0677     | 0.419     |            |
| 10/10/2019 |            |            |           | 0.054      |
| 10/16/2019 | 0.0263     | 0.0661     | 0.337     | 0.052      |
| 4/6/2020   | 0.0278     | 0.0496     | 0.0689    | 0.0519     |
| 7/13/2020  | 0.028      | 0.0615     | 0.256     |            |
| 7/14/2020  |            |            |           | 0.0543     |
| 2/22/2021  | 0.0301     | 0.0625     | 0.126     | 0.0558     |
| 7/12/2021  | 0.0266     | 0.0495     | 0.0808    | 0.0533     |

# Time Series

Constituent: Lithium (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-5   | MW-6   | MW-7  | MW-8  |
|------------|--------|--------|-------|-------|
| 4/25/2016  | 0.0977 |        |       |       |
| 4/27/2016  |        | 0.253  | 0.163 | 0.171 |
| 6/21/2016  | 0.0972 | 0.253  | 0.171 | 0.181 |
| 10/12/2017 | 0.093  | 0.249  | 0.134 | 0.182 |
| 10/13/2017 | 0.0935 | 0.249  | 0.127 | 0.189 |
| 10/14/2017 | 0.0931 | 0.244  | 0.112 | 0.177 |
| 10/15/2017 | 0.0968 | 0.259  | 0.129 | 0.191 |
| 10/16/2017 | 0.0963 | 0.259  | 0.122 | 0.189 |
| 10/17/2017 | 0.0949 | 0.249  | 0.122 | 0.184 |
| 2/14/2018  | 0.0989 | 0.242  | 0.131 | 0.183 |
| 5/23/2018  | 0.103  | 0.266  | 0.129 | 0.194 |
| 11/20/2018 | 0.102  | 0.245  | 0.12  | 0.181 |
| 5/14/2019  | 0.116  |        |       |       |
| 5/15/2019  |        | 0.152  | 0.127 | 0.16  |
| 10/8/2019  |        |        | 0.131 |       |
| 10/9/2019  |        |        |       | 0.163 |
| 10/10/2019 | 0.0981 | 0.251  |       |       |
| 4/7/2020   | 0.133  |        |       |       |
| 4/8/2020   |        | 0.0489 | 0.117 | 0.149 |
| 7/14/2020  | 0.11   | 0.223  | 0.103 |       |
| 7/15/2020  |        |        |       | 0.152 |
| 2/23/2021  | 0.133  | 0.253  | 0.131 | 0.166 |
| 7/20/2021  |        | 0.18   | 0.096 | 0.151 |
| 7/21/2021  | 0.113  |        |       |       |



# Time Series

Constituent: Mercury (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) |
|------------|-----------|-----------|-----------|-----------|
| 4/25/2016  |           | <0.0005   | <0.0005   | <0.0005   |
| 4/26/2016  | <0.0005   |           |           |           |
| 6/20/2016  | <0.0005   | <0.0005   |           | <0.0005   |
| 6/22/2016  |           |           | <0.0005   |           |
| 8/8/2016   | <0.0005   | <0.0005   |           |           |
| 8/9/2016   |           |           | <0.0005   | <0.0005   |
| 8/24/2016  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 10/3/2016  | <0.0005   | <0.0005   |           | <0.0005   |
| 10/4/2016  |           |           | <0.0005   |           |
| 10/26/2016 | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 11/21/2016 | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 1/17/2017  | <0.0005   | <0.0005   |           |           |
| 1/18/2017  |           |           | <0.0005   | <0.0005   |
| 3/22/2017  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 4/18/2017  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 5/30/2017  | <0.0005   |           |           |           |
| 5/31/2017  |           | <0.0005   | <0.0005   | <0.0005   |
| 2/13/2018  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 5/22/2018  | <0.0005   | <0.0005   |           |           |
| 5/23/2018  |           |           |           | <0.0005   |
| 5/24/2018  |           |           | <0.0005   |           |
| 6/12/2018  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 10/17/2018 | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 11/19/2018 | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 4/10/2019  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 5/14/2019  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 10/8/2019  | <0.0005   | <0.0005   | <0.0005   |           |
| 10/10/2019 |           |           |           | <0.0005   |
| 10/16/2019 | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 4/6/2020   | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 7/13/2020  | <0.0005   | <0.0005   | <0.0005   |           |
| 7/14/2020  |           |           |           | <0.0005   |
| 2/22/2021  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |
| 7/12/2021  | <0.0005   | <0.0005   | <0.0005   | <0.0005   |

# Time Series

Constituent: Mercury (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5    | MW-6    | MW-7    | MW-8    |
|------------|---------|---------|---------|---------|
| 4/25/2016  | <0.0005 |         |         |         |
| 4/27/2016  |         | <0.0005 | <0.0005 | <0.0005 |
| 6/21/2016  | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/12/2017 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/13/2017 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/14/2017 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/15/2017 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/16/2017 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 10/17/2017 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 2/14/2018  | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 5/23/2018  | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 11/20/2018 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 5/14/2019  | <0.0005 |         |         |         |
| 5/15/2019  |         | <0.0005 | <0.0005 | <0.0005 |
| 10/8/2019  |         |         | <0.0005 |         |
| 10/9/2019  |         |         |         | <0.0005 |
| 10/10/2019 | <0.0005 | <0.0005 |         |         |
| 4/7/2020   | <0.0005 |         |         |         |
| 4/8/2020   |         | <0.0005 | <0.0005 | <0.0005 |
| 7/14/2020  | <0.0005 | <0.0005 | <0.0005 |         |
| 7/15/2020  |         |         |         | <0.0005 |
| 2/23/2021  | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 7/20/2021  |         | <0.0005 | <0.0005 | <0.0005 |
| 7/21/2021  | <0.0005 |         |         |         |

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg)    |
|------------|-----------|-----------|-----------|--------------|
| 4/25/2016  |           | <0.0002   | <0.0002   | <0.0002      |
| 4/26/2016  | <0.0002   |           |           |              |
| 6/20/2016  | <0.0002   | <0.0002   |           | <0.0002      |
| 6/22/2016  |           |           | <0.0002   |              |
| 8/8/2016   | <0.0002   | <0.0002   |           |              |
| 8/9/2016   |           |           | <0.0002   | <0.0002      |
| 8/24/2016  | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 10/3/2016  | <0.0002   | <0.0002   |           | <0.0002      |
| 10/4/2016  |           |           | <0.0002   |              |
| 10/26/2016 | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 11/21/2016 | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 1/17/2017  | <0.0002   | <0.0002   |           |              |
| 1/18/2017  |           |           | <0.0002   | <0.0002      |
| 3/22/2017  | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 4/18/2017  | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 5/30/2017  | <0.0002   |           |           |              |
| 5/31/2017  |           | <0.0002   | <0.0002   | <0.0002      |
| 2/13/2018  | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 5/22/2018  | <0.0002   | <0.0002   |           |              |
| 5/23/2018  |           |           |           | <0.0002      |
| 5/24/2018  |           |           | <0.0002   |              |
| 6/12/2018  | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 10/17/2018 | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 11/19/2018 | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 4/10/2019  | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 5/14/2019  | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 10/8/2019  | <0.0002   | <0.0002   | <0.0002   |              |
| 10/10/2019 |           |           |           | <0.0002      |
| 10/16/2019 | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 4/6/2020   | <0.0002   | <0.0002   | <0.0002   | <0.0002      |
| 7/13/2020  | <0.0002   | <0.0002   | <0.0002   |              |
| 7/14/2020  |           |           |           | <0.0002      |
| 2/22/2021  | <0.0002   | <0.0002   | <0.0002   | 0.000131 (J) |
| 7/12/2021  | <0.0002   | <0.0002   | <0.0002   | 0.00014 (J)  |

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5    | MW-6      | MW-7    | MW-8    |
|------------|---------|-----------|---------|---------|
| 4/25/2016  | <0.0002 |           |         |         |
| 4/27/2016  |         | <0.0002   | <0.0002 | <0.0002 |
| 6/21/2016  | <0.0002 | <0.0002   | <0.0002 | <0.0002 |
| 10/12/2017 | <0.0002 | <0.0002   | <0.0002 | <0.0002 |
| 10/13/2017 | <0.0002 | <0.0002   | <0.0002 | <0.0002 |
| 10/14/2017 | <0.0002 | <0.0002   | <0.0002 | <0.0002 |
| 10/15/2017 | <0.0002 | <0.0002   | <0.0002 | <0.0002 |
| 10/16/2017 | <0.0002 | <0.0002   | <0.0002 | <0.0002 |
| 10/17/2017 | <0.0002 | <0.0002   | <0.0002 | <0.0002 |
| 2/14/2018  | <0.0002 | <0.0002   | <0.0002 | <0.0002 |
| 5/23/2018  | <0.0002 | <0.0002   | <0.0002 | <0.0002 |
| 11/20/2018 | <0.0002 | <0.0002   | <0.0002 | <0.0002 |
| 5/14/2019  | <0.0002 |           |         |         |
| 5/15/2019  |         | <0.0002   | <0.0002 | <0.0002 |
| 10/8/2019  |         |           | <0.0002 |         |
| 10/9/2019  |         |           |         | <0.0002 |
| 10/10/2019 | <0.0002 | <0.0002   |         |         |
| 4/7/2020   | <0.0002 |           |         |         |
| 4/8/2020   |         | <0.0002   | <0.0002 | <0.0002 |
| 7/14/2020  | <0.0002 | <0.0002   | <0.0002 |         |
| 7/15/2020  |         |           |         | <0.0002 |
| 2/23/2021  | 0.0014  | 0.000285  | 0.00107 | 0.0129  |
| 7/20/2021  |         | 7E-05 (J) | 0.00086 | 0.00033 |
| 7/21/2021  | 0.00126 |           |         |         |

# Time Series

Constituent: pH, Field (SU) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) |
|------------|-----------|-----------|-----------|-----------|
| 4/25/2016  |           | 5.94      | 5.56      | 6.22      |
| 4/26/2016  | 5.2       |           |           |           |
| 6/20/2016  | 5.18      | 5.96      |           | 6.21      |
| 6/22/2016  |           |           | 5.57      |           |
| 8/8/2016   | 5.12      | 5.88      |           |           |
| 8/9/2016   |           |           | 5.67      | 6.11      |
| 8/24/2016  |           |           | 5.63      | 6.11      |
| 10/3/2016  | 5.21      | 5.91      |           | 6.13      |
| 10/4/2016  |           |           | 5.69      |           |
| 10/26/2016 | 5.2       | 5.84      | 5.56      | 6.12      |
| 11/21/2016 | 5.19      | 5.82      | 5.42      | 6.09      |
| 1/17/2017  | 5.17      | 5.87      |           |           |
| 1/18/2017  |           |           | 5.11      | 6.09      |
| 3/22/2017  | 5.2       | 6.01      | 4.52      | 6.15      |
| 4/18/2017  | 5.2       | 6.02      | 5.84      | 6.19      |
| 5/30/2017  | 5.14      |           |           |           |
| 5/31/2017  |           | 5.85      | 4.56      | 6.13      |
| 8/23/2017  | 5.12      | 5.89      | 4.77      | 6.12      |
| 2/13/2018  | 5.18      | 6.21      | 5.67      | 6.22      |
| 5/22/2018  | 5.2       | 6.04      |           |           |
| 5/23/2018  |           |           |           | 6.21      |
| 5/24/2018  |           |           | 5.19      |           |
| 6/12/2018  | 5.15      | 5.95      | 4.79      | 6.16      |
| 10/17/2018 | 5.12      | 5.9       | 4.75      | 6.12      |
| 11/19/2018 | 5.09      | 6.03      | 3.77 (o)  | 6.16      |
| 4/10/2019  | 5.11      | 6.1       | 5.54      | 6.14      |
| 5/14/2019  | 5.19      | 6.07      | 5.71      | 6.23      |
| 10/8/2019  | 5.12      | 5.96      | 4.98      |           |
| 10/10/2019 |           |           |           | 6.15      |
| 10/16/2019 | 5.16      | 5.98      | 4.51      | 6.19      |
| 4/6/2020   | 5.21      | 6.21      | 5.91      | 6.35      |
| 7/13/2020  | 5.14      | 5.84      | 5.16      |           |
| 7/14/2020  |           |           |           | 6.2       |
| 2/22/2021  | 5.06      | 6.1       | 5.59      | 6.19      |
| 7/12/2021  | 5.13      | 6.16      | 5.86      | 6.06      |

# Time Series

Constituent: pH, Field (SU) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5 | MW-6 | MW-7 | MW-8 |
|------------|------|------|------|------|
| 4/25/2016  | 6.37 |      |      |      |
| 4/27/2016  |      | 6.18 | 6.6  | 6.55 |
| 6/21/2016  | 6.35 | 6.23 | 6.62 | 6.47 |
| 10/12/2017 | 6.38 | 6.22 | 6.64 | 6.5  |
| 10/13/2017 | 6.43 | 6.23 | 6.64 | 6.51 |
| 10/14/2017 | 6.41 | 6.22 | 6.66 | 6.53 |
| 10/15/2017 | 6.42 | 6.22 | 6.67 | 6.53 |
| 10/16/2017 | 6.42 | 6.21 | 6.67 | 6.54 |
| 10/17/2017 | 6.41 | 6.2  | 6.66 | 6.54 |
| 11/16/2017 | 6.53 | 6.28 | 6.62 | 6.51 |
| 2/14/2018  | 6.39 | 6.17 | 6.67 | 6.55 |
| 5/23/2018  | 6.39 | 6.12 | 6.63 | 6.52 |
| 11/20/2018 | 6.39 | 6.14 | 6.61 | 6.58 |
| 5/14/2019  | 6.34 |      |      |      |
| 5/15/2019  |      | 5.72 | 6.61 | 6.6  |
| 10/8/2019  |      |      | 6.52 |      |
| 10/9/2019  |      |      |      | 6.67 |
| 10/10/2019 | 6.43 | 6.16 |      |      |
| 4/7/2020   | 6.43 |      |      |      |
| 4/8/2020   |      | 4.98 | 6.64 | 6.7  |
| 7/14/2020  | 6.48 | 6.12 | 6.52 |      |
| 7/15/2020  |      |      |      | 6.71 |
| 2/23/2021  | 6.47 | 6.13 | 6.7  | 6.73 |
| 7/20/2021  |      | 5.99 | 6.58 | 6.64 |
| 7/21/2021  | 6.4  |      |      |      |

# Time Series

Constituent: Selenium (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg)   | MW-2 (bg)   | MW-3 (bg)   | MW-4 (bg)   |
|------------|-------------|-------------|-------------|-------------|
| 4/25/2016  |             | <0.00102    | <0.00102    | <0.00102    |
| 4/26/2016  | 0.00261 (J) |             |             |             |
| 6/20/2016  | 0.00242 (J) | <0.00102    |             | <0.00102    |
| 6/22/2016  |             |             | <0.00102    |             |
| 8/8/2016   | 0.00253 (J) | <0.00102    |             |             |
| 8/9/2016   |             |             | <0.00102    | <0.00102    |
| 8/24/2016  | <0.00102    | <0.00102    | <0.00102    | <0.00102    |
| 10/3/2016  | 0.00211 (J) | <0.00102    |             | <0.00102    |
| 10/4/2016  |             |             | <0.00102    |             |
| 10/26/2016 | <0.00102    | <0.00102    | <0.00102    | <0.00102    |
| 11/21/2016 | <0.00102    | <0.00102    | <0.00102    | <0.00102    |
| 1/17/2017  | <0.00102    | <0.00102    |             |             |
| 1/18/2017  |             |             | <0.00102    | <0.00102    |
| 3/22/2017  | 0.0022 (J)  | <0.00102    | 0.0141      | <0.00102    |
| 4/18/2017  | 0.0027 (J)  | <0.00102    | 0.0158      | <0.00102    |
| 5/30/2017  | 0.00316 (J) |             |             |             |
| 5/31/2017  |             | <0.00102    | 0.00632 (J) | <0.00102    |
| 2/13/2018  | 0.00211 (J) | <0.00102    | 0.0209      | 0.00403 (J) |
| 5/22/2018  | 0.00372 (J) | <0.00102    |             |             |
| 5/23/2018  |             |             |             | <0.00102    |
| 5/24/2018  |             |             | 0.00918 (J) |             |
| 6/12/2018  | 0.00409 (J) | <0.00102    | 0.00836 (J) | <0.00102    |
| 10/17/2018 | <0.00102    | <0.00102    | <0.00102    | <0.00102    |
| 11/19/2018 | <0.00102    | <0.00102    | 0.00439 (J) | 0.00436 (J) |
| 4/10/2019  | 0.00471 (J) | 0.00322 (J) | 0.0113      | <0.00102    |
| 5/14/2019  | 0.00316 (J) | <0.00102    | 0.0119      | 0.00201 (J) |
| 10/8/2019  | <0.00102    | <0.00102    | 0.00256 (J) |             |
| 10/10/2019 |             |             |             | <0.00102    |
| 10/16/2019 | <0.00102    | <0.00102    | 0.00286 (J) | <0.00102    |
| 4/6/2020   | 0.00275 (J) | <0.00102    | 0.01        | 0.00284 (J) |
| 7/13/2020  | 0.00245 (J) | <0.00102    | 0.0134      |             |
| 7/14/2020  |             |             |             | <0.00102    |
| 2/22/2021  | 0.00241     | <0.00102    | 0.0181      | 0.00222     |
| 7/12/2021  | 0.0028      | <0.00102    | 0.0133      | 0.00155     |

# Time Series

Constituent: Selenium (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5        | MW-6     | MW-7        | MW-8     |
|------------|-------------|----------|-------------|----------|
| 4/25/2016  | <0.00102    |          |             |          |
| 4/27/2016  |             | <0.00102 | 0.00445 (J) | <0.00102 |
| 6/21/2016  | <0.00102    | <0.00102 | <0.00102    | <0.00102 |
| 10/12/2017 | <0.00102    | <0.00102 | <0.00102    | <0.00102 |
| 10/13/2017 | <0.00102    | <0.00102 | <0.00102    | <0.00102 |
| 10/14/2017 | <0.00102    | <0.00102 | <0.00102    | <0.00102 |
| 10/15/2017 | 0.00254 (J) | <0.00102 | <0.00102    | <0.00102 |
| 10/16/2017 | <0.00102    | <0.00102 | <0.00102    | <0.00102 |
| 10/17/2017 | 0.00288 (J) | <0.00102 | <0.00102    | <0.00102 |
| 2/14/2018  | <0.00102    | <0.00102 | <0.00102    | <0.00102 |
| 5/23/2018  | <0.00102    | <0.00102 | <0.00102    | <0.00102 |
| 11/20/2018 | <0.00102    | <0.00102 | <0.00102    | <0.00102 |
| 5/14/2019  | <0.00102    |          |             |          |
| 5/15/2019  |             | <0.00102 | <0.00102    | <0.00102 |
| 10/8/2019  |             |          | <0.00102    |          |
| 10/9/2019  |             |          |             | <0.00102 |
| 10/10/2019 | <0.00102    | <0.00102 |             |          |
| 4/7/2020   | <0.00102    |          |             |          |
| 4/8/2020   |             | <0.00102 | <0.00102    | <0.00102 |
| 7/14/2020  | <0.00102    | <0.00102 | <0.00102    |          |
| 7/15/2020  |             |          |             | <0.00102 |
| 2/23/2021  | 0.00233     | <0.00102 | <0.00102    | <0.00102 |
| 7/20/2021  |             | <0.00102 | <0.00102    | <0.00102 |
| 7/21/2021  | 0.00178     |          |             |          |



# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) |
|------------|-----------|-----------|-----------|-----------|
| 4/25/2016  |           | 745       | 1890      | 2260      |
| 4/26/2016  | 1490      |           |           |           |
| 6/20/2016  | 1420      | 964       |           | 2500      |
| 6/22/2016  |           |           | 2100      |           |
| 8/8/2016   | 1460      | 1100      |           |           |
| 8/9/2016   |           |           | 2050      | 2750      |
| 8/24/2016  | 1450      | 1130      | 2190      | 2770      |
| 10/3/2016  | 1460      | 1140      |           | 3060      |
| 10/4/2016  |           |           | 1950      |           |
| 10/26/2016 | 1330      | 1060      | 1980      | 2650      |
| 11/21/2016 | 1420      | 1100      | 2060      | 2720      |
| 1/17/2017  | 1350      | 1160      |           |           |
| 1/18/2017  |           |           | 2620      | 2650      |
| 3/22/2017  | 1500      | 900       | 3200      | 2700      |
| 4/18/2017  | 1300      | 870       | 2500      | 2400      |
| 5/30/2017  | 1400      |           |           |           |
| 5/31/2017  |           | 1100      | 2800      | 2700      |
| 8/23/2017  | 1500      | 920       | 2600      | 2700      |
| 5/22/2018  | 2100 (o)  | 1200      |           |           |
| 5/23/2018  |           |           |           | 2400      |
| 5/24/2018  |           |           | 2700      |           |
| 6/12/2018  | 1500      | 860       | 2500      | 2600      |
| 10/17/2018 | 1400      | 970       | 2700      | 2600      |
| 11/19/2018 | 1300      | 1000      | 3000      | 2400      |
| 4/10/2019  | 1700      | 889       | 2460      | 2090      |
| 5/14/2019  | 1560      | 948       | 2460      | 2240      |
| 10/8/2019  | 1540      | 1230      | 2950      |           |
| 10/10/2019 |           |           |           | 2690      |
| 10/16/2019 | 1680      | 1170      | 2820      | 3050      |
| 4/6/2020   | 1530      | 786       | 1670      | 1810      |
| 7/13/2020  | 1450      | 843       | 2130      |           |
| 7/14/2020  |           |           |           | 1970      |
| 2/22/2021  | 1400      | 864       | 3040      | 2040      |
| 7/12/2021  | 1560      | 763       | 2380      | 1930      |

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5 | MW-6 | MW-7     | MW-8     |
|------------|------|------|----------|----------|
| 4/25/2016  | 2390 |      |          |          |
| 4/27/2016  |      | 2090 | 1050     | 1550     |
| 6/21/2016  | 2500 | 2000 | 1410     | 1470     |
| 10/12/2017 | 2300 | 2000 | 1400     | 1400     |
| 10/13/2017 | 2300 | 2000 | 1400     | 1600     |
| 10/14/2017 | 2300 | 1900 | 1300     | 1400     |
| 10/15/2017 | 2300 | 1900 | 1300     | 1400     |
| 10/16/2017 | 2300 | 1900 | 1300     | 1400     |
| 10/17/2017 | 2200 | 1900 | 1300     | 1400     |
| 11/16/2017 | 2200 | 1800 | 1300     | 1400     |
| 5/23/2018  | 2400 | 2000 | 1900 (O) | 2100 (o) |
| 11/20/2018 | 2500 | 2200 | 1100     | 1400     |
| 5/14/2019  | 2380 |      |          |          |
| 5/15/2019  |      | 2110 | 1510     | 1640     |
| 10/8/2019  |      |      | 1570     |          |
| 10/9/2019  |      |      |          | 1550     |
| 10/10/2019 | 2460 | 2330 |          |          |
| 4/7/2020   | 2050 |      |          |          |
| 4/8/2020   |      | 1900 | 1270     | 1380     |
| 7/14/2020  | 2080 | 1970 | 1330     |          |
| 7/15/2020  |      |      |          | 1410     |
| 2/23/2021  | 2210 | 2010 | 1320     | 1420     |
| 7/20/2021  |      | 1930 | 1170     | 1500     |
| 7/21/2021  | 2240 |      |          |          |

# Time Series

Constituent: Thallium (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg)    | MW-4 (bg) |
|------------|-----------|-----------|--------------|-----------|
| 4/25/2016  |           | <0.0002   | 0.000205 (J) | <0.0002   |
| 4/26/2016  | <0.0002   |           |              |           |
| 6/20/2016  | <0.0002   | <0.0002   |              | <0.0002   |
| 6/22/2016  |           |           | <0.0002      |           |
| 8/8/2016   | <0.0002   | <0.0002   |              |           |
| 8/9/2016   |           |           | <0.0002      | <0.0002   |
| 8/24/2016  | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 10/3/2016  | <0.0002   | <0.0002   |              | <0.0002   |
| 10/4/2016  |           |           | <0.0002      |           |
| 10/26/2016 | <0.0002   | <0.0002   | 0.000209 (J) | <0.0002   |
| 11/21/2016 | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 1/17/2017  | <0.0002   | <0.0002   |              |           |
| 1/18/2017  |           |           | <0.0002      | <0.0002   |
| 3/22/2017  | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 4/18/2017  | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 5/30/2017  | <0.0002   |           |              |           |
| 5/31/2017  |           | <0.0002   | <0.0002      | <0.0002   |
| 2/13/2018  | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 5/22/2018  | <0.0002   | <0.0002   |              |           |
| 5/23/2018  |           |           |              | <0.0002   |
| 5/24/2018  |           |           | <0.0002      |           |
| 6/12/2018  | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 10/17/2018 | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 11/19/2018 | <0.0002   | <0.0002   | 0.000226 (J) | <0.0002   |
| 4/10/2019  | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 5/14/2019  | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 10/8/2019  | <0.0002   | <0.0002   | <0.0002      |           |
| 10/10/2019 |           |           |              | <0.0002   |
| 10/16/2019 | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 4/6/2020   | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 7/13/2020  | <0.0002   | <0.0002   | <0.0002      |           |
| 7/14/2020  |           |           |              | <0.0002   |
| 2/22/2021  | <0.0002   | <0.0002   | <0.0002      | <0.0002   |
| 7/12/2021  | <0.0002   | <0.0002   | <0.0002      | <0.0002   |

# Time Series

Constituent: Thallium (mg/L) Analysis Run 11/16/2021 10:34 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5         | MW-6    | MW-7    | MW-8    |
|------------|--------------|---------|---------|---------|
| 4/25/2016  | <0.0002      |         |         |         |
| 4/27/2016  |              | <0.0002 | <0.0002 | <0.0002 |
| 6/21/2016  | <0.0002      | <0.0002 | <0.0002 | <0.0002 |
| 10/12/2017 | <0.0002      | <0.0002 | <0.0002 | <0.0002 |
| 10/13/2017 | <0.0002      | <0.0002 | <0.0002 | <0.0002 |
| 10/14/2017 | <0.0002      | <0.0002 | <0.0002 | <0.0002 |
| 10/15/2017 | <0.0002      | <0.0002 | <0.0002 | <0.0002 |
| 10/16/2017 | 0.000375 (J) | <0.0002 | <0.0002 | <0.0002 |
| 10/17/2017 | <0.0002      | <0.0002 | <0.0002 | <0.0002 |
| 2/14/2018  | <0.0002      | <0.0002 | <0.0002 | <0.0002 |
| 5/23/2018  | <0.0002      | <0.0002 | <0.0002 | <0.0002 |
| 11/20/2018 | <0.0002      | <0.0002 | <0.0002 | <0.0002 |
| 5/14/2019  | <0.0002      |         |         |         |
| 5/15/2019  |              | <0.0002 | <0.0002 | <0.0002 |
| 10/8/2019  |              |         | <0.0002 |         |
| 10/9/2019  |              |         |         | <0.0002 |
| 10/10/2019 | <0.0002      | <0.0002 |         |         |
| 4/7/2020   | <0.0002      |         |         |         |
| 4/8/2020   |              | <0.0002 | <0.0002 | <0.0002 |
| 7/14/2020  | <0.0002      | <0.0002 | <0.0002 |         |
| 7/15/2020  |              |         |         | <0.0002 |
| 2/23/2021  | <0.0002      | <0.0002 | <0.0002 | <0.0002 |
| 7/20/2021  |              | <0.0002 | <0.0002 | <0.0002 |
| 7/21/2021  | <0.0002      |         |         |         |

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:34 AM

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-1 (bg) | MW-2 (bg) | MW-3 (bg) | MW-4 (bg) |
|------------|-----------|-----------|-----------|-----------|
| 4/25/2016  |           | 1260      | 2720      | 3300      |
| 4/26/2016  | 2080      |           |           |           |
| 6/20/2016  | 2060      | 1620      |           | 3870      |
| 6/22/2016  |           |           | 3250      |           |
| 8/8/2016   | 2070      | 1740      |           |           |
| 8/9/2016   |           |           | 3050      | 4140      |
| 8/24/2016  | 2040      | 1720      | 3080      | 4190      |
| 10/3/2016  | 2110      | 1800      |           | 4190      |
| 10/4/2016  |           |           | 2900      |           |
| 10/26/2016 | 2000      | 1800      | 2940      | 4400      |
| 11/21/2016 | 2070      | 1740      | 3090      | 4230      |
| 1/17/2017  | 1930      | 1960      |           |           |
| 1/18/2017  |           |           | 4020      | 4120      |
| 3/22/2017  | 2060      | 1510      | 4180      | 3980      |
| 4/18/2017  | 2140      | 1580      | 4440      | 3880      |
| 5/30/2017  | 2240      |           |           |           |
| 5/31/2017  |           | 1730      | 3970      | 4210      |
| 8/23/2017  | 2160      | 1550      | 4050      | 3990      |
| 5/22/2018  | 2380      | 1500      |           |           |
| 5/23/2018  |           |           |           | 3740      |
| 5/24/2018  |           |           | 3680      |           |
| 6/12/2018  | 2400      | 1550      | 3820      | 4080      |
| 10/17/2018 | 2220      | 1740      | 4730      | 4250      |
| 11/19/2018 | 2360      | 1990      | 4710      | 3920      |
| 4/10/2019  | 2630      | 1250      | 3680      | 3280      |
| 5/14/2019  | 2340      | 1480      | 3580      | 3130 (D)  |
| 10/8/2019  | 2330      | 1840      | 4720      |           |
| 10/10/2019 |           |           |           | 4000      |
| 10/16/2019 | 3650 (o)  | 1830      | 4210      | 4060      |
| 4/6/2020   | 2240      | 1440      | 2630      | 2820      |
| 7/13/2020  | 2240      | 1540      | 3650      |           |
| 7/14/2020  |           |           |           | 3310      |
| 2/22/2021  | 2230      | 1620      | 4670      | 3190      |
| 7/12/2021  | 2210      | 1390      | 3510      | 3000      |

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:34 AM

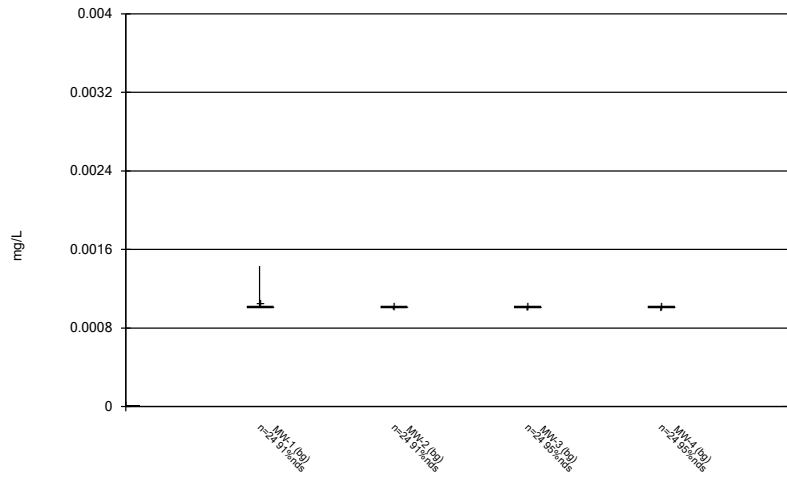
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5 | MW-6 | MW-7 | MW-8 |
|------------|------|------|------|------|
| 4/25/2016  | 3660 |      |      |      |
| 4/27/2016  |      | 3290 | 1640 | 2480 |
| 6/21/2016  | 3920 | 3250 | 2460 | 2360 |
| 10/12/2017 | 4000 | 3220 | 2460 | 2530 |
| 10/13/2017 | 3960 | 3250 | 2420 | 2740 |
| 10/14/2017 | 3910 | 3260 | 2320 | 2630 |
| 10/15/2017 | 3890 | 3260 | 1150 | 2530 |
| 10/16/2017 | 3980 | 3360 | 2320 | 2740 |
| 10/17/2017 | 3940 | 3420 | 2360 | 2650 |
| 11/16/2017 | 3930 | 3280 | 2460 | 2650 |
| 5/23/2018  | 3660 | 3340 | 2390 | 2750 |
| 11/20/2018 | 3780 | 3330 | 2090 | 2520 |
| 5/14/2019  | 3520 |      |      |      |
| 5/15/2019  |      | 3130 | 2310 | 2540 |
| 10/8/2019  |      |      | 2340 |      |
| 10/9/2019  |      |      |      | 2590 |
| 10/10/2019 | 3830 | 3260 |      |      |
| 4/7/2020   | 3270 |      |      |      |
| 4/8/2020   |      | 2940 | 2230 | 2450 |
| 7/14/2020  | 3710 | 3270 | 2210 |      |
| 7/15/2020  |      |      |      | 2460 |
| 2/23/2021  | 3740 | 3230 | 2320 | 2550 |
| 7/20/2021  |      | 3090 | 2110 | 2420 |
| 7/21/2021  | 3570 |      |      |      |

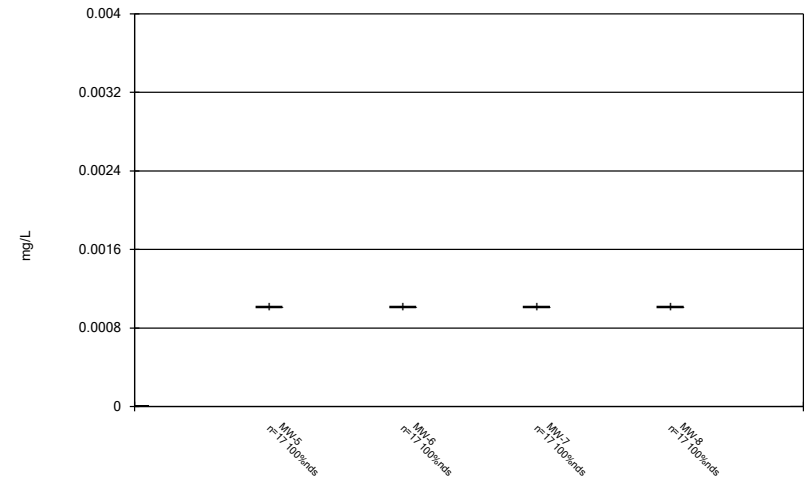
FIGURE B.

### Box & Whiskers Plot



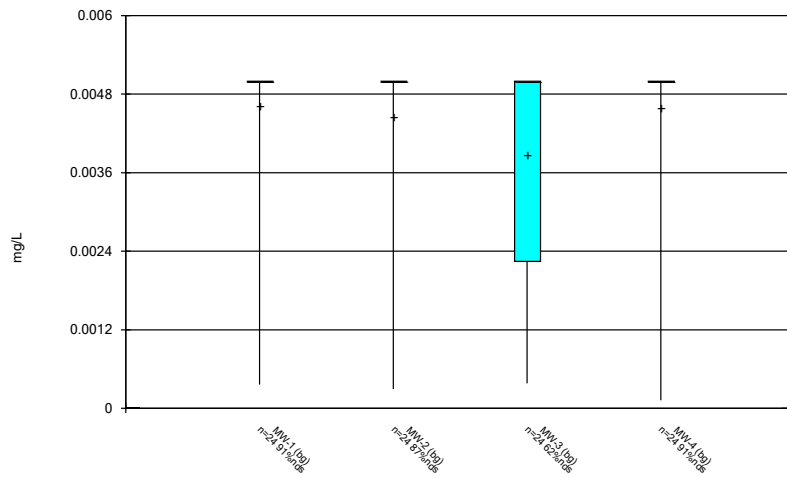
Constituent: Antimony Analysis Run 11/16/2021 10:35 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



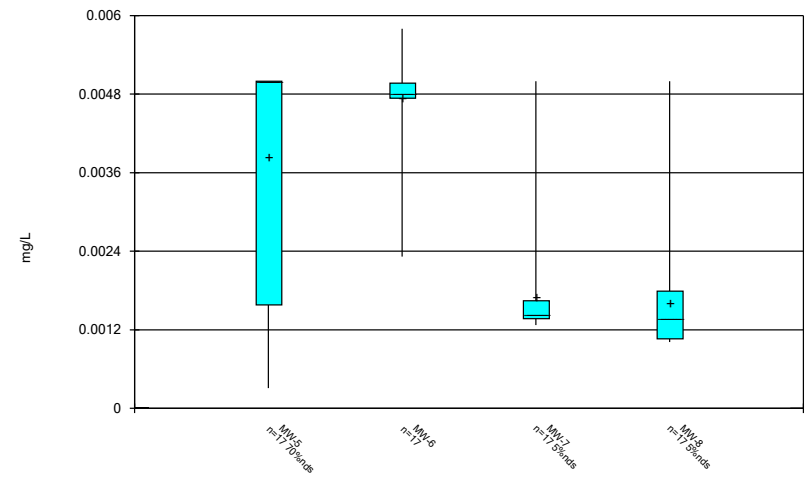
Constituent: Antimony Analysis Run 11/16/2021 10:35 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



Constituent: Arsenic Analysis Run 11/16/2021 10:35 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

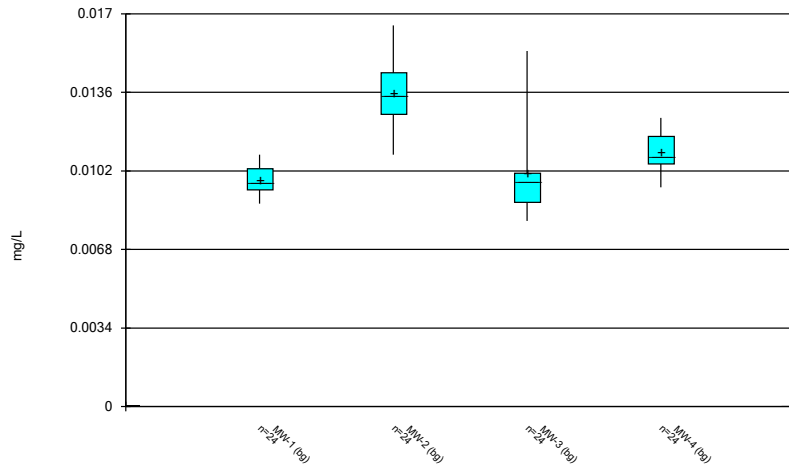
### Box & Whiskers Plot



Constituent: Arsenic Analysis Run 11/16/2021 10:35 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

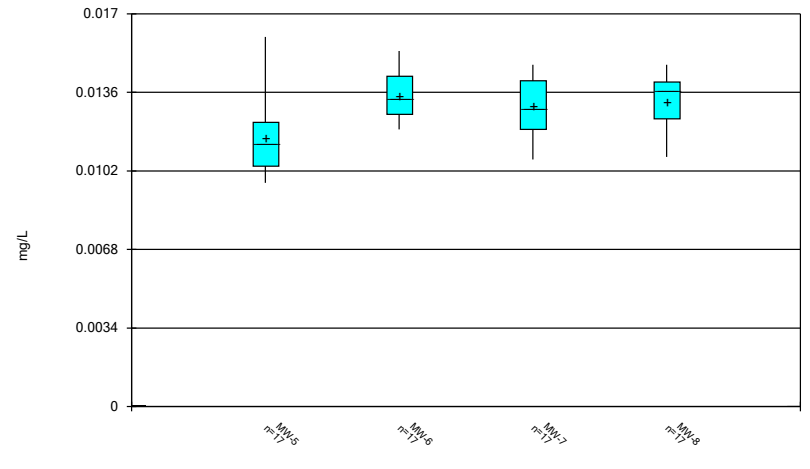


Box & Whiskers Plot



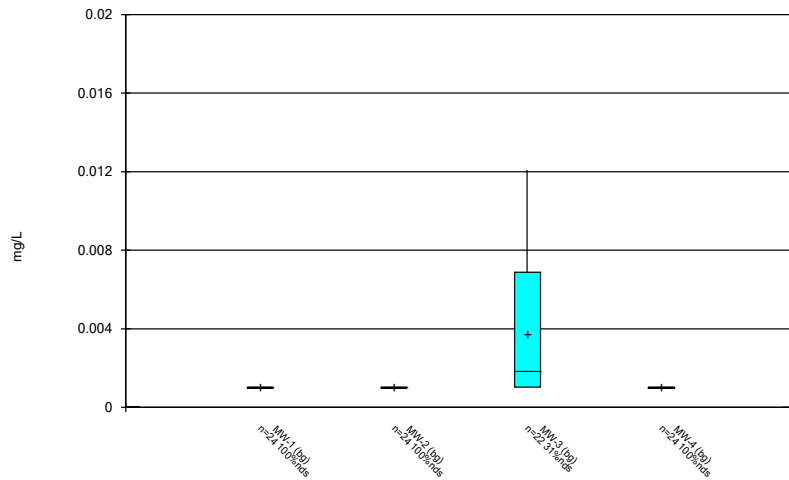
Constituent: Barium Analysis Run 11/16/2021 10:35 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



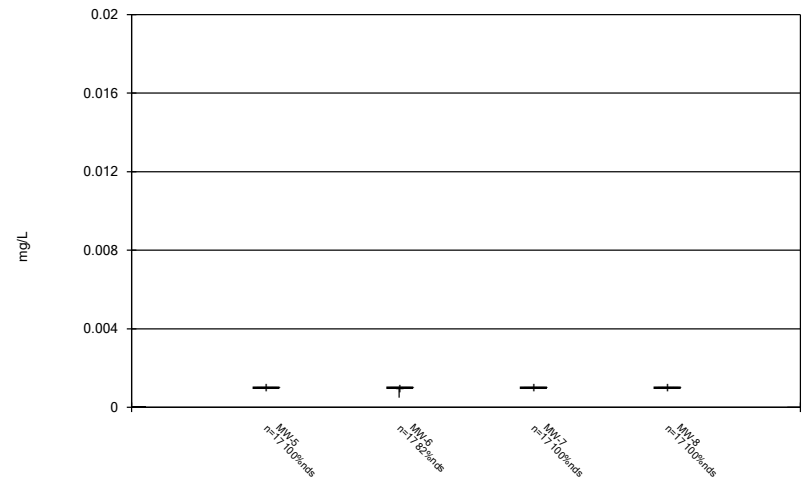
Constituent: Barium Analysis Run 11/16/2021 10:35 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



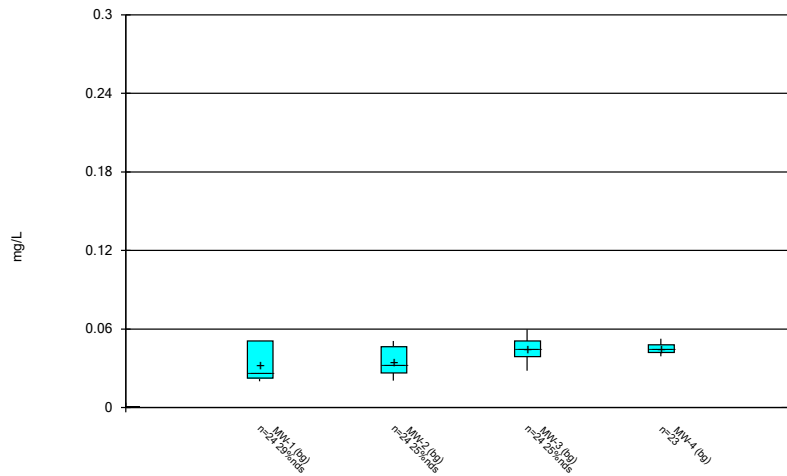
Constituent: Beryllium Analysis Run 11/16/2021 10:35 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



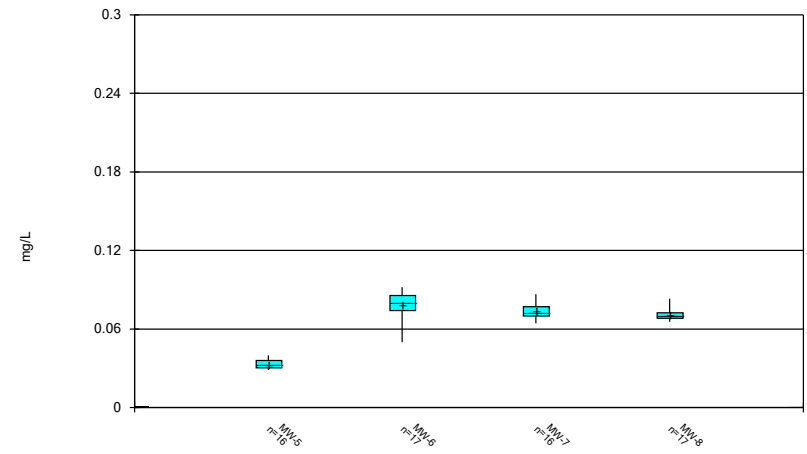
Constituent: Beryllium Analysis Run 11/16/2021 10:35 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



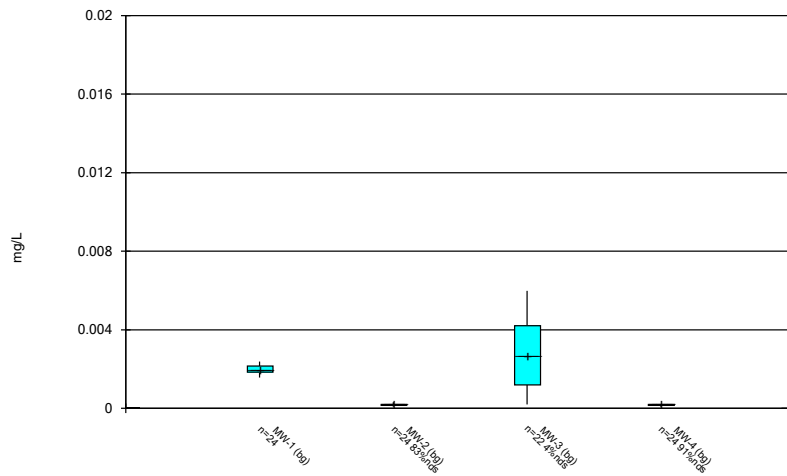
Constituent: Boron, total Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



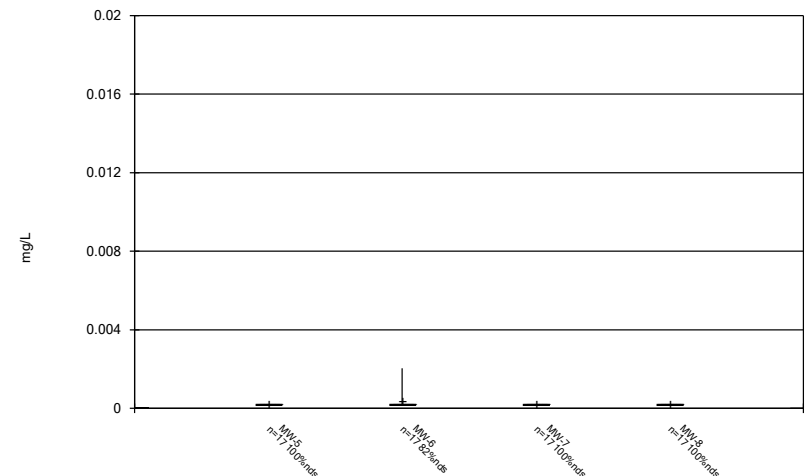
Constituent: Boron, total Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



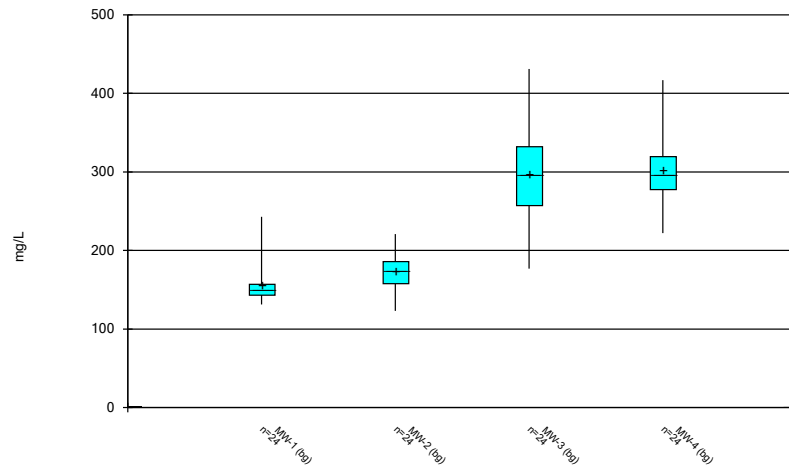
Constituent: Cadmium Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



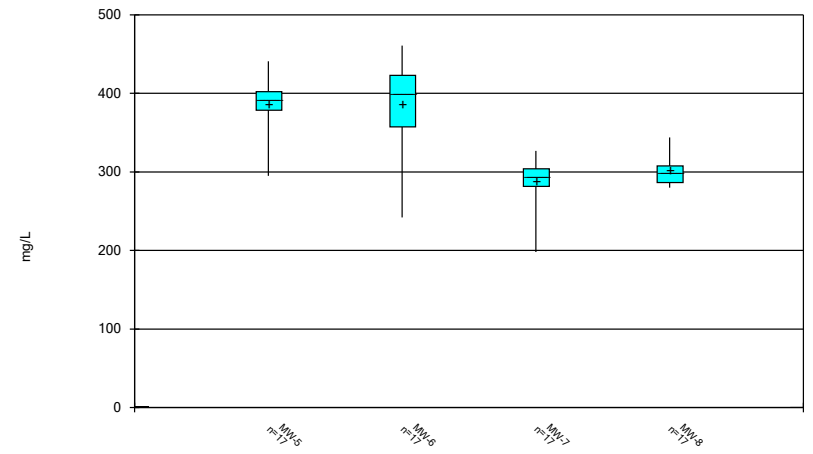
Constituent: Cadmium Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



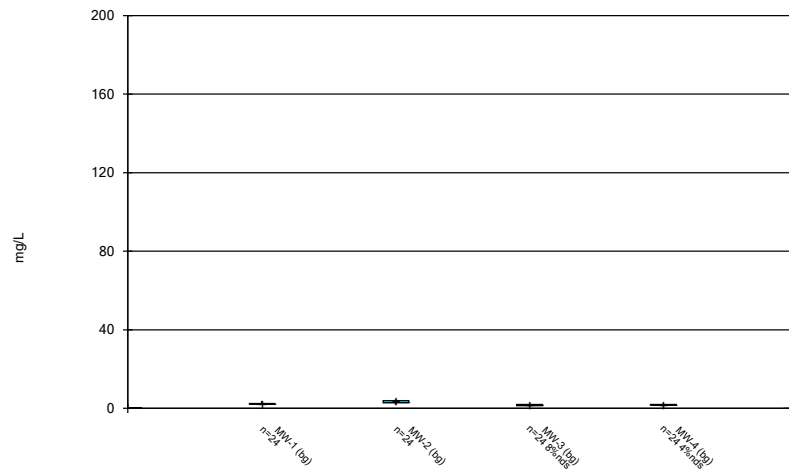
Constituent: Calcium, total Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



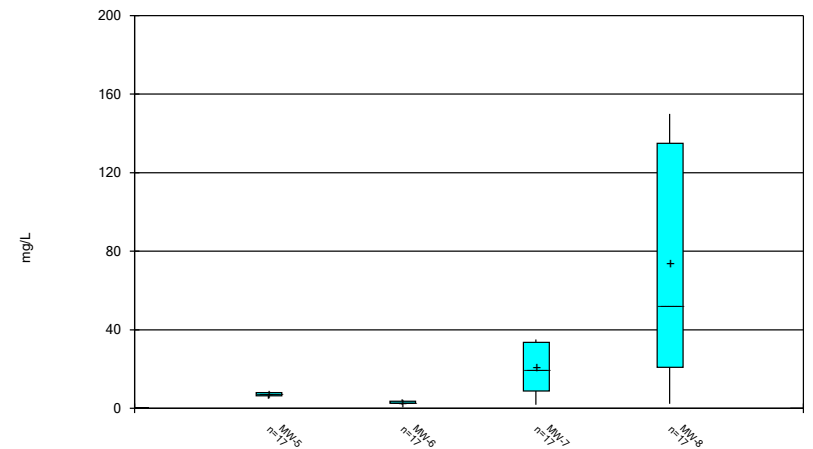
Constituent: Calcium, total Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



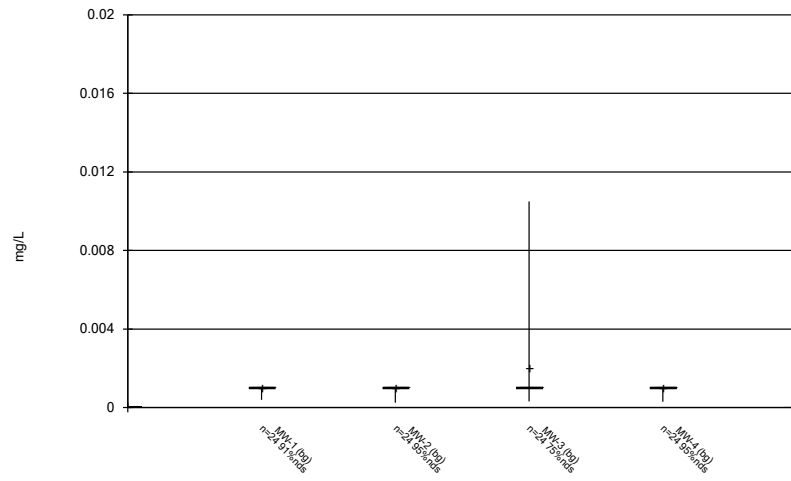
Constituent: Chloride, Total Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



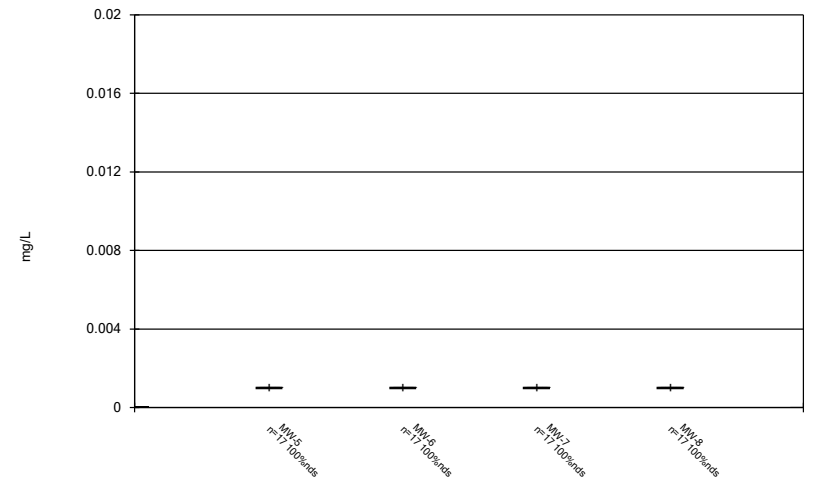
Constituent: Chloride, Total Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



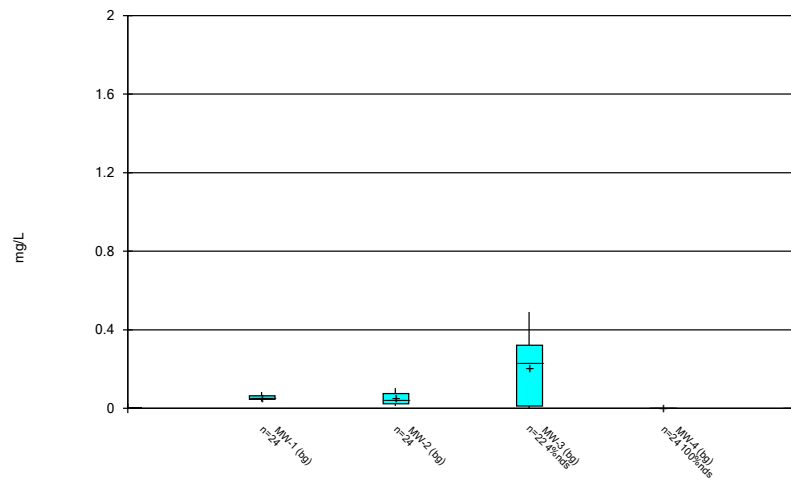
Constituent: Chromium Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



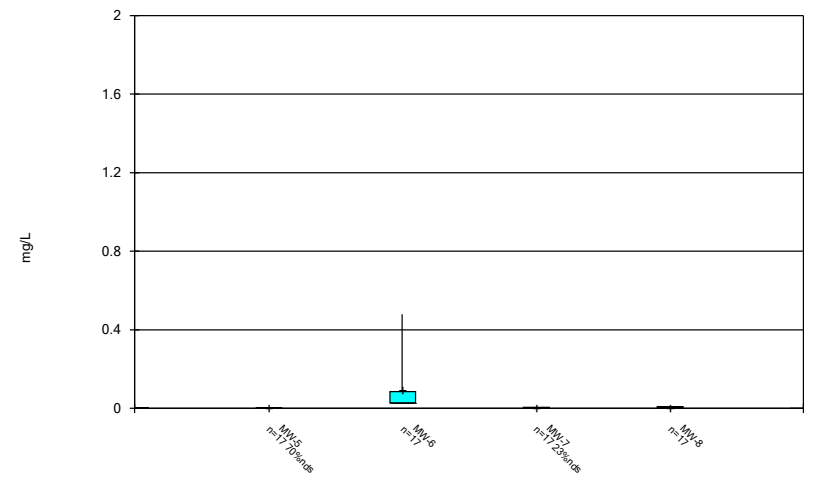
Constituent: Chromium Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



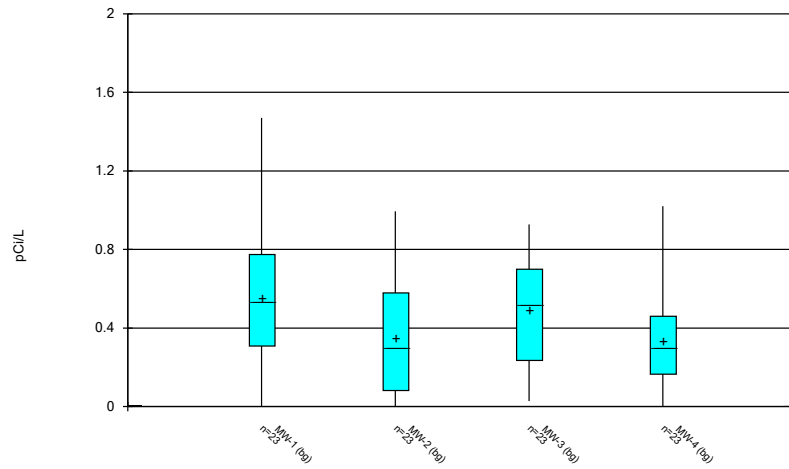
Constituent: Cobalt Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



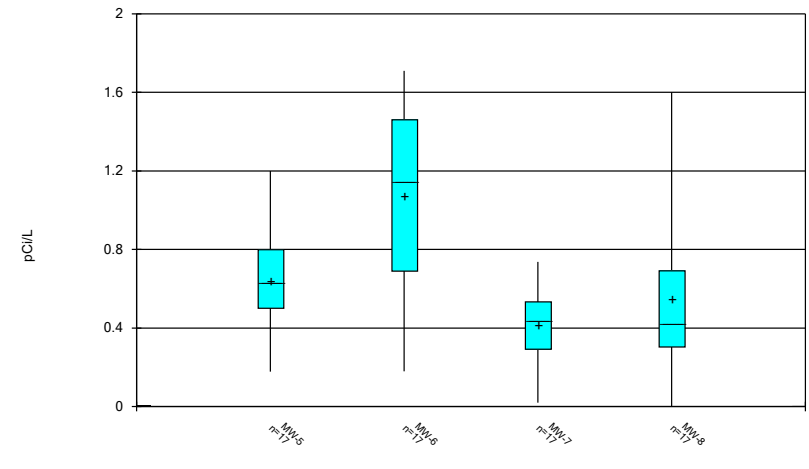
Constituent: Cobalt Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



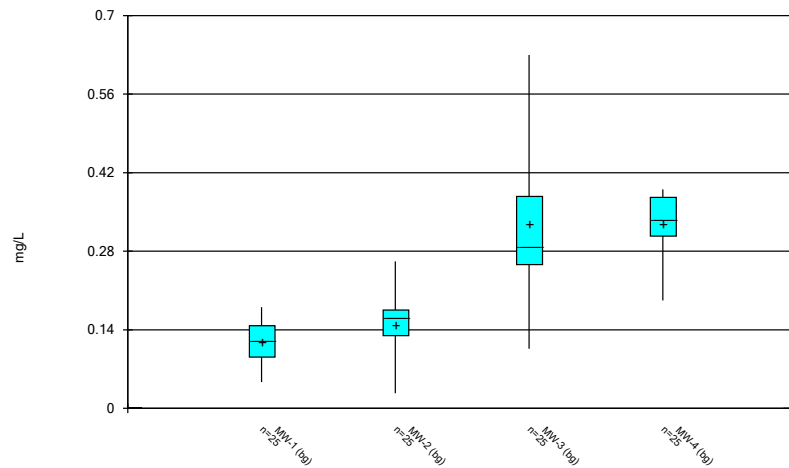
Constituent: Combined Radium 226 + 228 Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



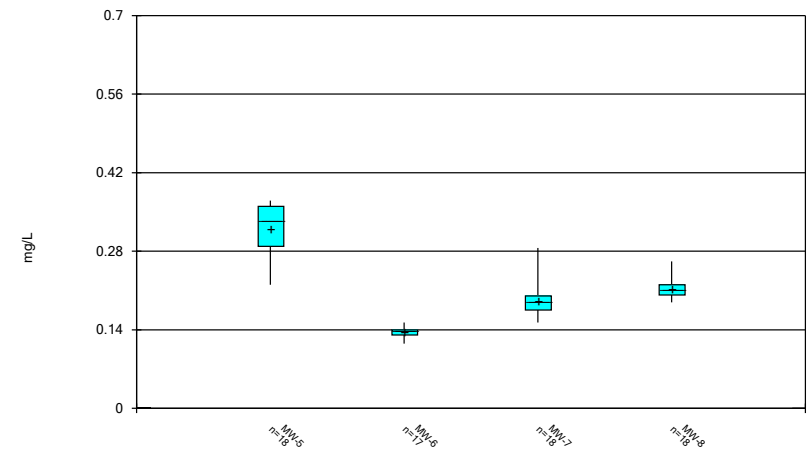
Constituent: Combined Radium 226 + 228 Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



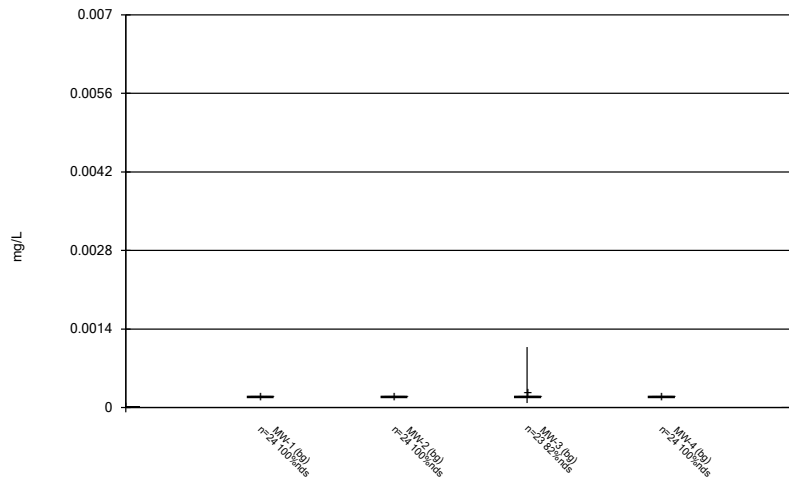
Constituent: Fluoride, total Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



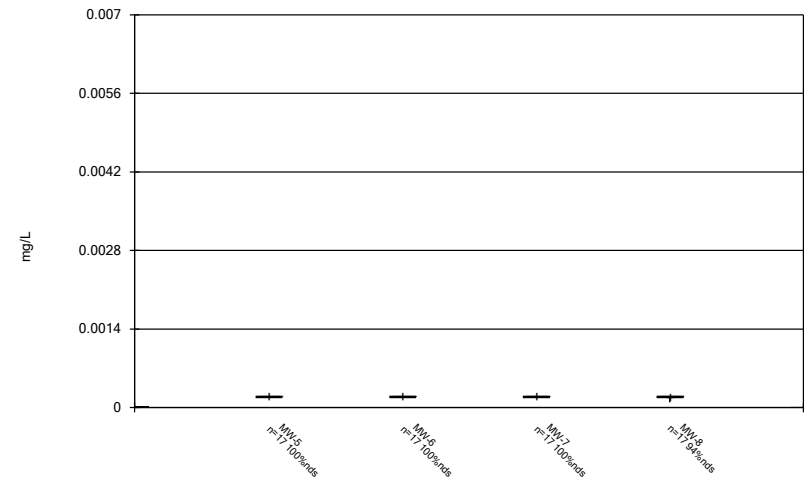
Constituent: Fluoride, total Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



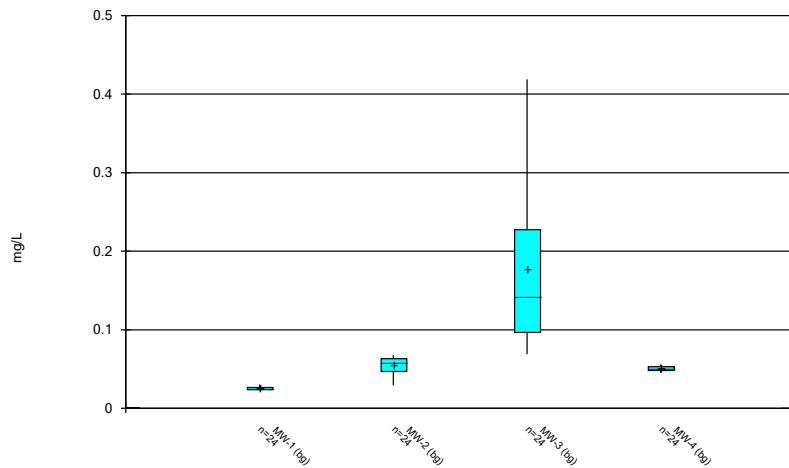
Constituent: Lead Analysis Run 11/16/2021 10:35 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



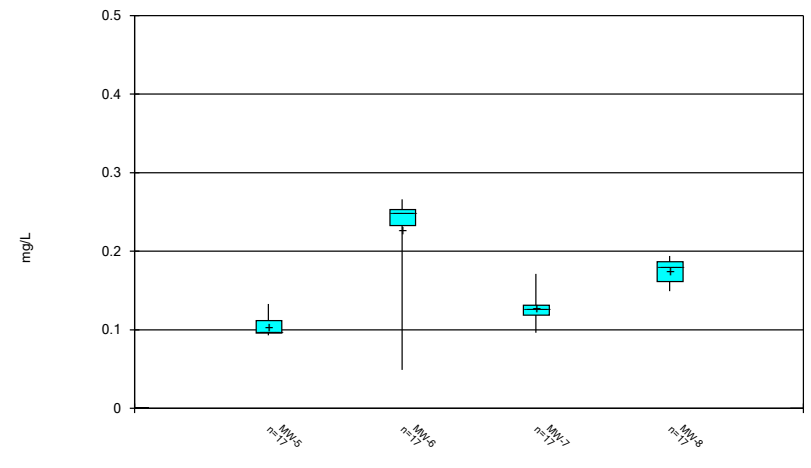
Constituent: Lead Analysis Run 11/16/2021 10:36 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



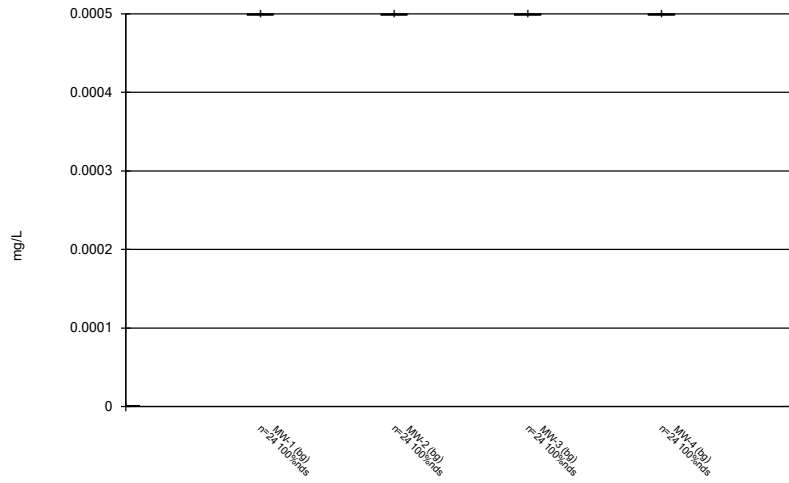
Constituent: Lithium Analysis Run 11/16/2021 10:36 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



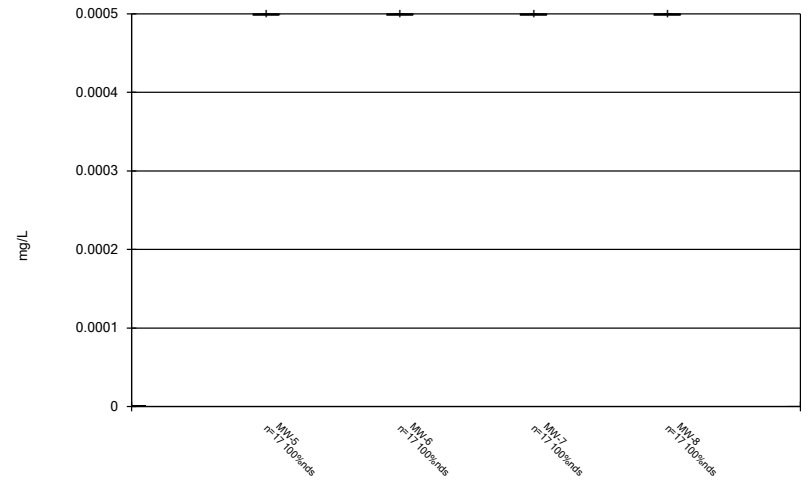
Constituent: Lithium Analysis Run 11/16/2021 10:36 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



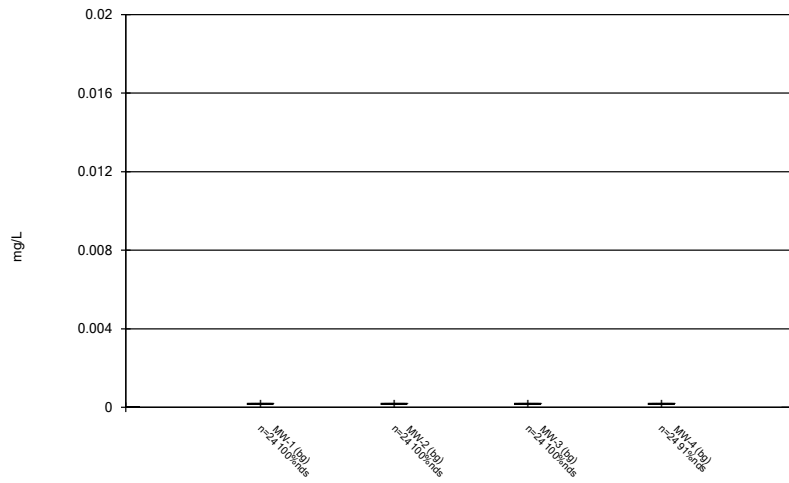
Constituent: Mercury Analysis Run 11/16/2021 10:36 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



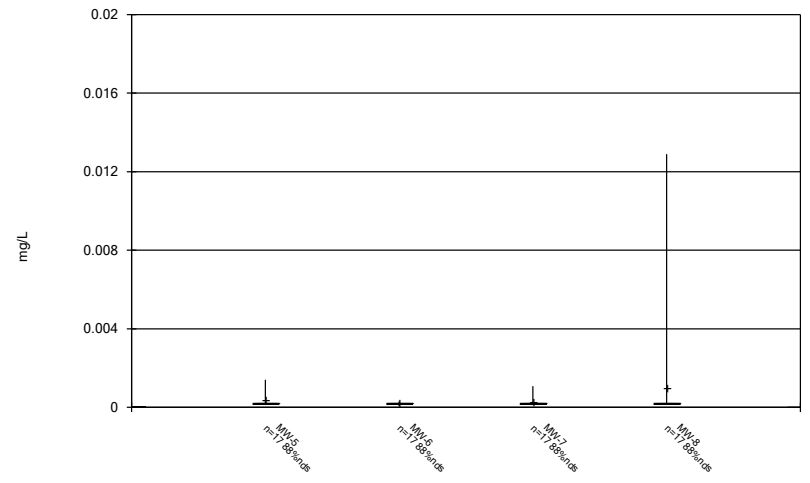
Constituent: Mercury Analysis Run 11/16/2021 10:36 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



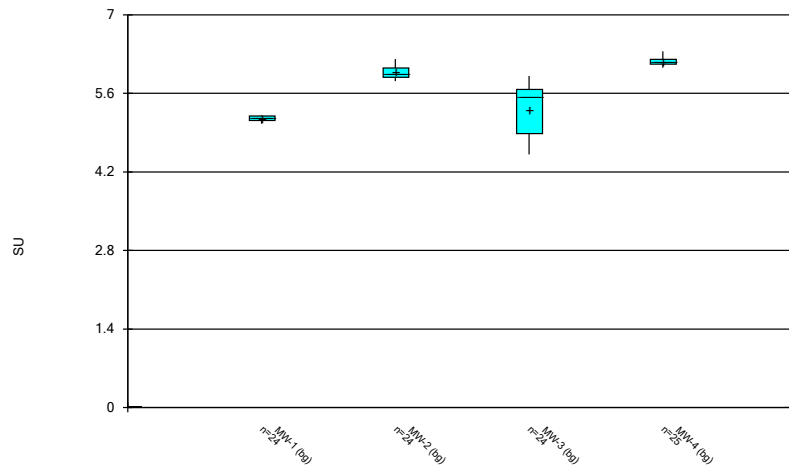
Constituent: Molybdenum Analysis Run 11/16/2021 10:36 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Box & Whiskers Plot



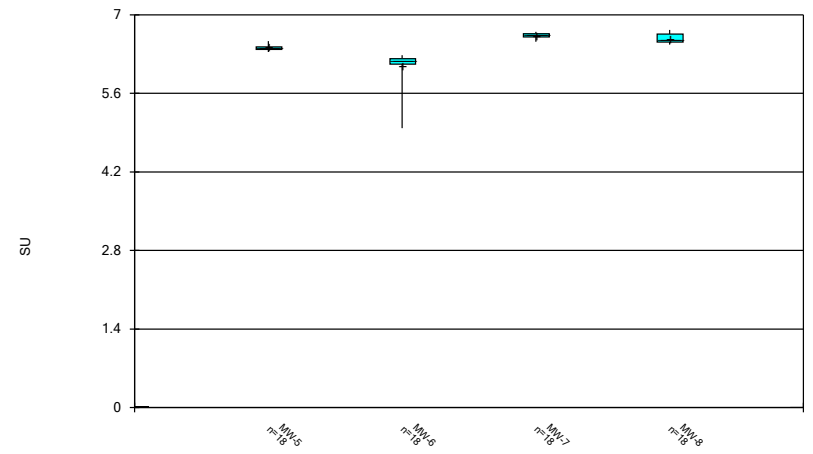
Constituent: Molybdenum Analysis Run 11/16/2021 10:36 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



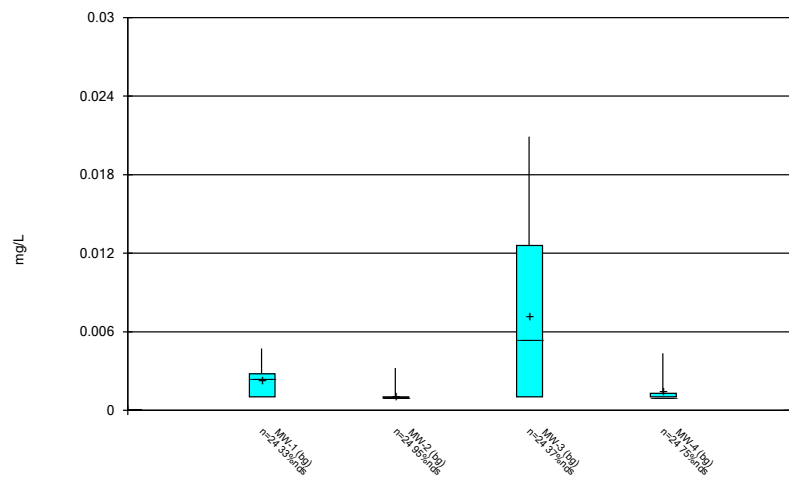
Constituent: pH, Field Analysis Run 11/16/2021 10:36 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



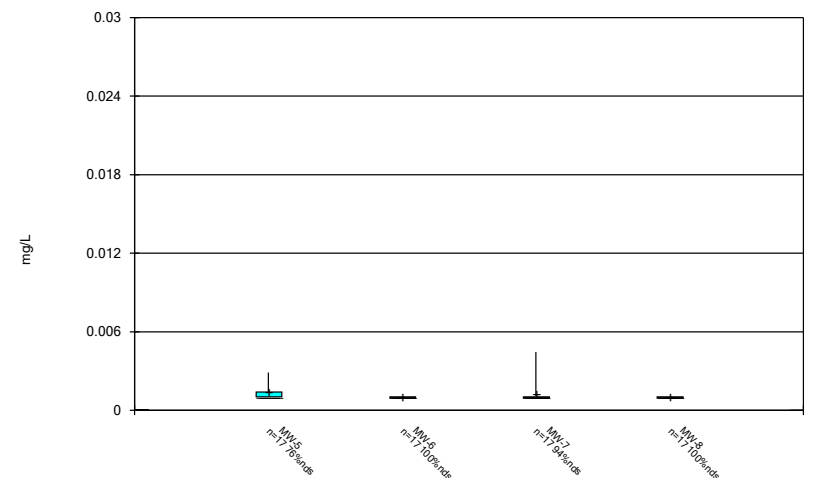
Constituent: pH, Field Analysis Run 11/16/2021 10:36 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



Constituent: Selenium Analysis Run 11/16/2021 10:36 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

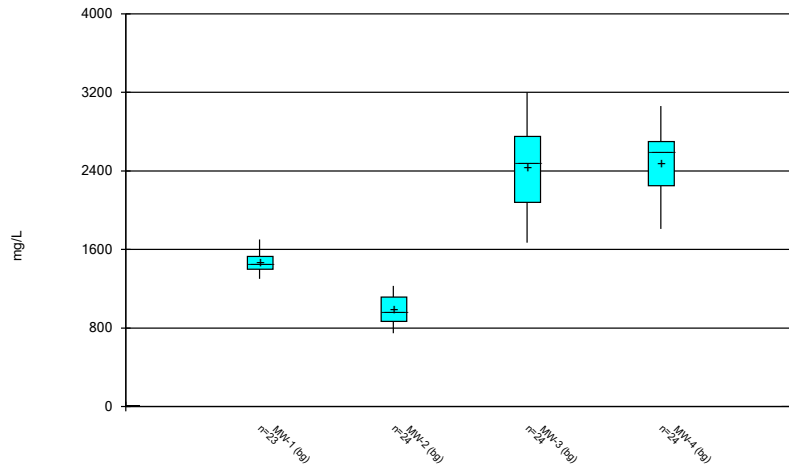
Box & Whiskers Plot



Constituent: Selenium Analysis Run 11/16/2021 10:36 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

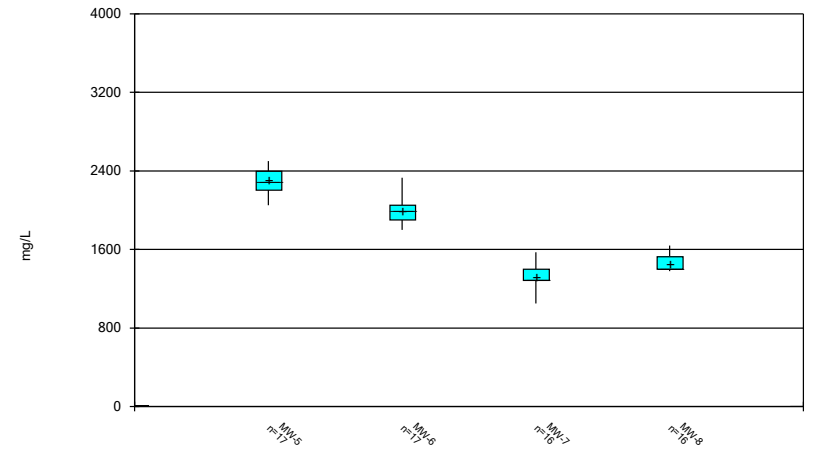


Box & Whiskers Plot



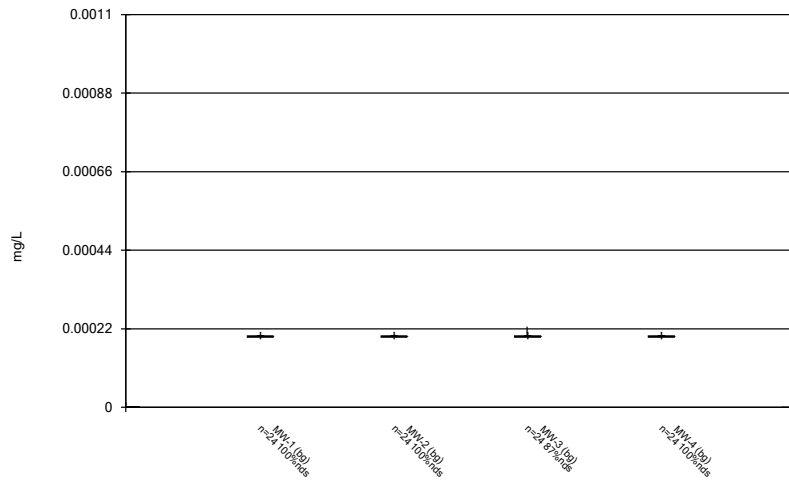
Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:36 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



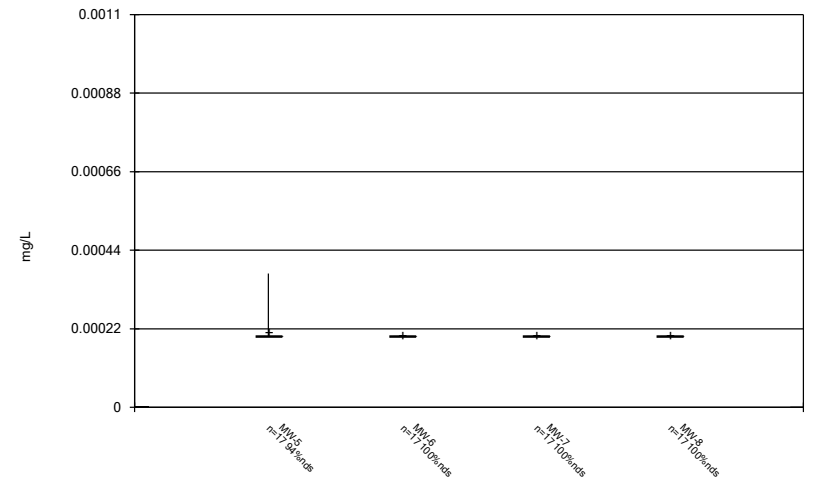
Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:36 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



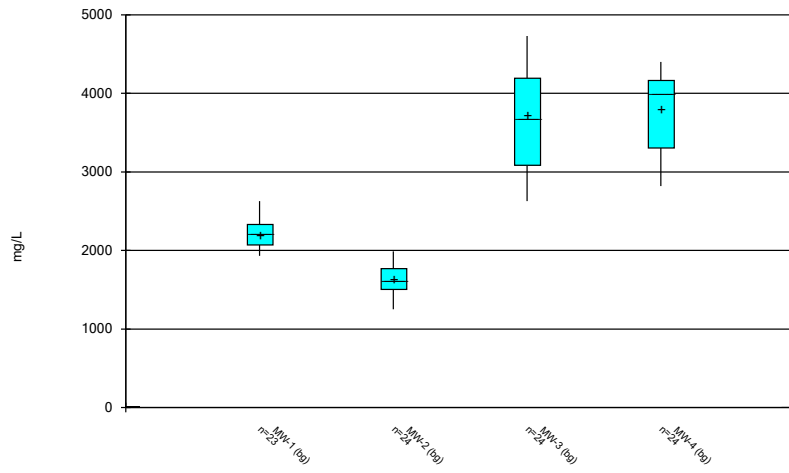
Constituent: Thallium Analysis Run 11/16/2021 10:36 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



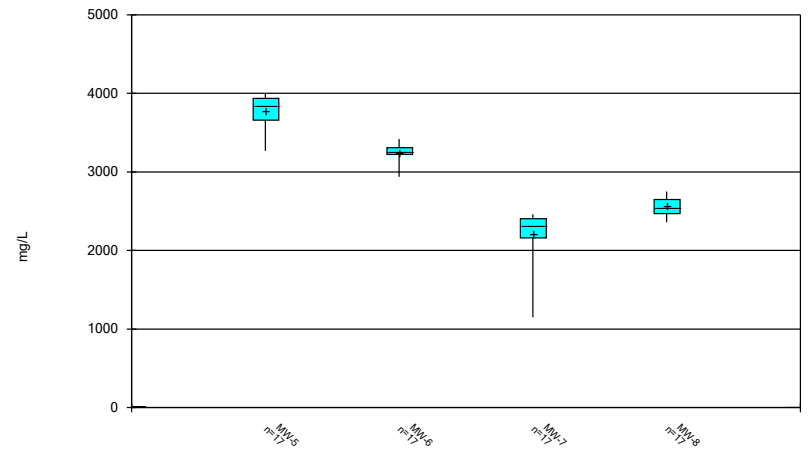
Constituent: Thallium Analysis Run 11/16/2021 10:36 AM  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:36 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:36 AM  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

FIGURE C.

# Outlier Summary

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:39 AM

| Date       | MW-3 Beryllium (mg/L) | MW-4 Boron, total (mg/L) | MW-5 Boron, total (mg/L) | MW-7 Boron, total (mg/L) | MW-3 Cadmium (mg/L) | MW-3 Cobalt (mg/L) | MW-6 Fluoride, total (mg/L) | MW-3 Lead (mg/L) | MW-3 pH, Field (SU) | MW-1 Sulfate as SO4 (mg/L) |
|------------|-----------------------|--------------------------|--------------------------|--------------------------|---------------------|--------------------|-----------------------------|------------------|---------------------|----------------------------|
| 4/25/2016  |                       |                          |                          | 0.0121 (O)               |                     |                    |                             |                  |                     |                            |
| 4/27/2016  |                       |                          | 0.253 (O)                |                          |                     |                    |                             |                  |                     |                            |
| 1/18/2017  | 0.0169 (O)            |                          |                          |                          |                     |                    |                             |                  |                     |                            |
| 5/22/2018  |                       |                          |                          |                          |                     |                    |                             |                  | 2100 (o)            |                            |
| 5/23/2018  |                       |                          |                          |                          |                     |                    |                             |                  |                     |                            |
| 11/19/2018 | 0.0185 (O)            |                          |                          |                          |                     |                    | 0.00692 (o)                 | 3.77 (o)         |                     |                            |
| 5/14/2019  |                       | <0.203 (o)               | <0.203 (o)               |                          |                     |                    |                             |                  |                     |                            |
| 10/8/2019  |                       |                          |                          |                          | 1.07 (o)            |                    |                             |                  |                     |                            |
| 10/16/2019 |                       |                          |                          |                          | 0.848 (o)           |                    |                             |                  |                     |                            |
| 4/8/2020   |                       |                          |                          |                          |                     |                    |                             | <0.1 (o)         |                     |                            |
| 7/13/2020  |                       |                          |                          | 0.00885 (O)              |                     |                    |                             |                  |                     |                            |

| Date       | MW-7 Sulfate as SO4 (mg/L) | MW-8 Sulfate as SO4 (mg/L) | MW-1 Total Dissolved Solids [TDS] (mg/L) |
|------------|----------------------------|----------------------------|--|
| 4/25/2016  |                            |                            |  |
| 4/27/2016  |                            |                            |  |
| 1/18/2017  |                            |                            |  |
| 5/22/2018  |                            |                            |  |
| 5/23/2018  | 1900 (O)                   | 2100 (o)                   |  |
| 11/19/2018 |                            |                            |  |
| 5/14/2019  |                            |                            |  |
| 10/8/2019  |                            |                            |  |
| 10/16/2019 |                            |                            | 3650 (o)                                 |
| 4/8/2020   |                            |                            |  |
| 7/13/2020  |                            |                            |  |

FIGURE D.

# Welch's t-test/Mann-Whitney - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:43 AM

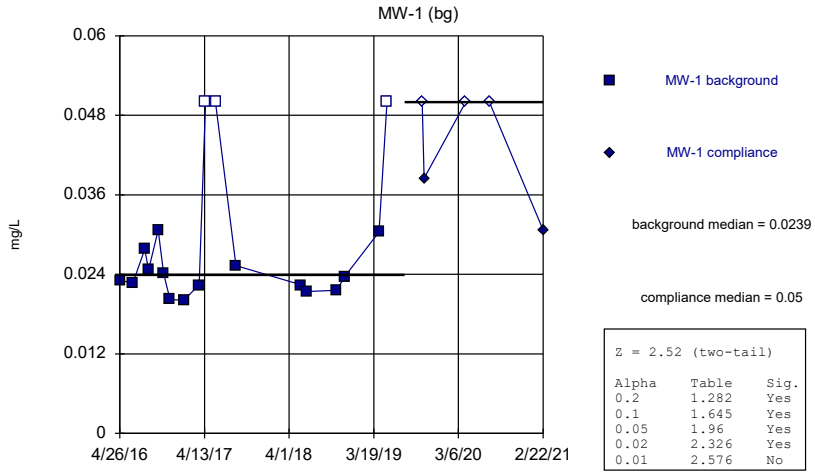
| <u>Constituent</u>            | <u>Well</u>      | <u>Calc.</u>  | <u>0.01</u> | <u>Method</u> |
|-------------------------------|------------------|---------------|-------------|---------------|
| <b>Boron, total (mg/L)</b>    | <b>MW-2 (bg)</b> | <b>2.809</b>  | <b>Yes</b>  | <b>Mann-W</b> |
| <b>Fluoride, total (mg/L)</b> | <b>MW-8</b>      | <b>-2.771</b> | <b>Yes</b>  | <b>Mann-W</b> |

# Welch's t-test/Mann-Whitney - All Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:43 AM

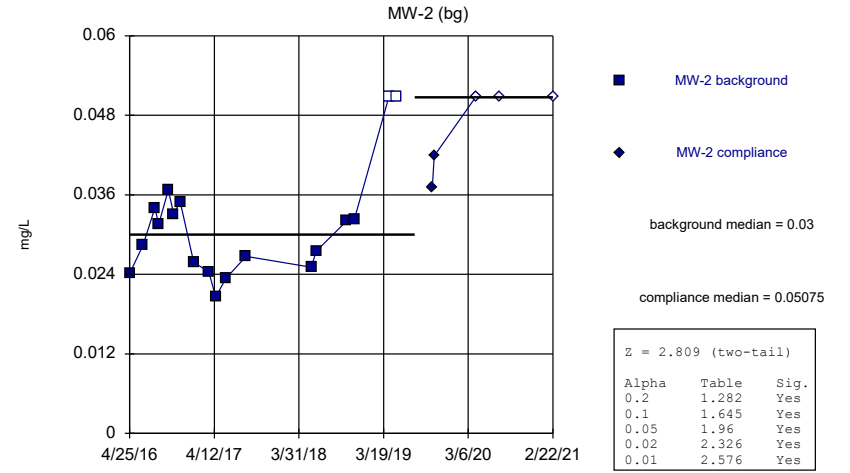
| <u>Constituent</u>                  | <u>Well</u>      | <u>Calc.</u>  | <u>0.01</u> | <u>Method</u> |
|-------------------------------------|------------------|---------------|-------------|---------------|
| Boron, total (mg/L)                 | MW-1 (bg)        | 2.52          | No          | Mann-W        |
| <b>Boron, total (mg/L)</b>          | <b>MW-2 (bg)</b> | <b>2.809</b>  | <b>Yes</b>  | <b>Mann-W</b> |
| Boron, total (mg/L)                 | MW-3 (bg)        | 0.9363        | No          | Mann-W        |
| Boron, total (mg/L)                 | MW-4 (bg)        | -0.1567       | No          | Mann-W        |
| Boron, total (mg/L)                 | MW-5             | 1.896         | No          | Mann-W        |
| Boron, total (mg/L)                 | MW-6             | 0.7882        | No          | Mann-W        |
| Boron, total (mg/L)                 | MW-7             | 2.285         | No          | Mann-W        |
| Boron, total (mg/L)                 | MW-8             | 1.032         | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-1 (bg)        | 0.485         | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-2 (bg)        | 0.03731       | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-3 (bg)        | 0.1119        | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-4 (bg)        | -1.23         | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-5             | 0.8495        | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-6             | 0.7882        | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-7             | -1.887        | No          | Mann-W        |
| Calcium, total (mg/L)               | MW-8             | -0.6675       | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-1 (bg)        | -2.562        | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-2 (bg)        | 0.7841        | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-3 (bg)        | -2.56         | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-4 (bg)        | -0.6406       | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-5             | -1.989        | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-6             | -2.214        | No          | Mann-W        |
| Fluoride, total (mg/L)              | MW-7             | -0.05761      | No          | Mann-W        |
| <b>Fluoride, total (mg/L)</b>       | <b>MW-8</b>      | <b>-2.771</b> | <b>Yes</b>  | <b>Mann-W</b> |
| Sulfate as SO4 (mg/L)               | MW-1 (bg)        | 1.297         | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-2 (bg)        | -0.485        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-3 (bg)        | 0.7086        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-4 (bg)        | -1.308        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-5             | -1.541        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-6             | 0.5582        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-7             | 0.5988        | No          | Mann-W        |
| Sulfate as SO4 (mg/L)               | MW-8             | 0             | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-1 (bg)        | 1.151         | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-2 (bg)        | 0.1493        | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-3 (bg)        | 0.7828        | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-4 (bg)        | -1.752        | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-5             | -1.76         | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-6             | -1.4          | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-7             | -0.9149       | No          | Mann-W        |
| Total Dissolved Solids [TDS] (mg/L) | MW-8             | -1.276        | No          | Mann-W        |

### Mann-Whitney (Wilcoxon Rank Sum)



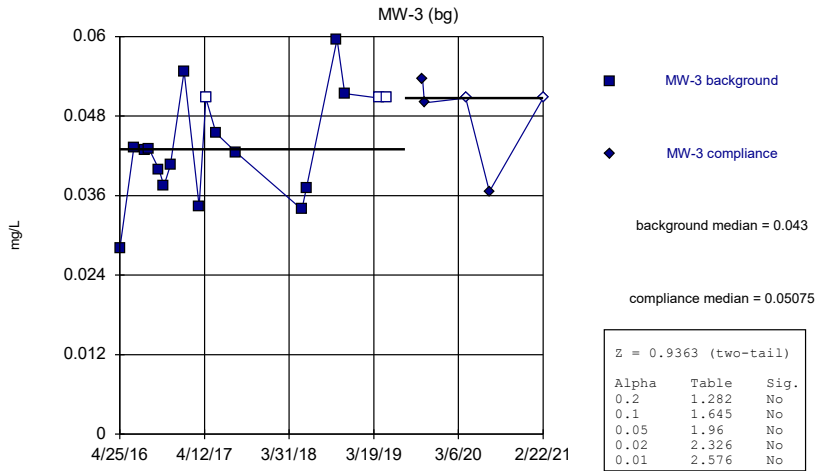
Constituent: Boron, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Mann-Whitney (Wilcoxon Rank Sum)



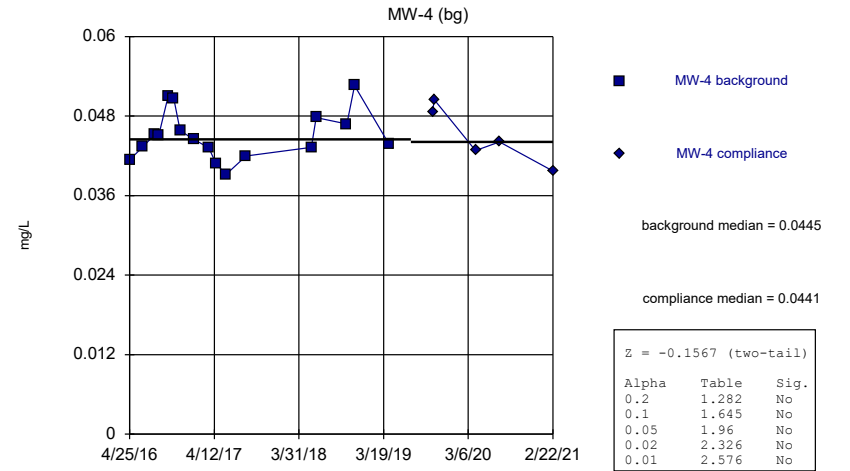
Constituent: Boron, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Boron, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

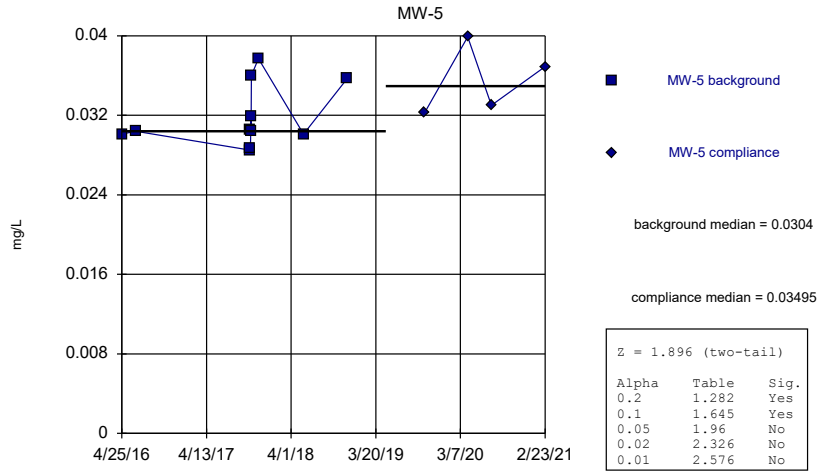
### Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Boron, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

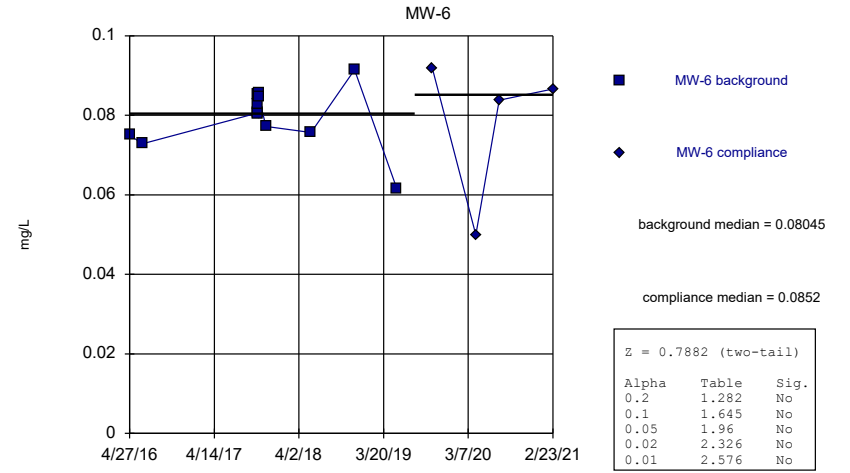


Mann-Whitney (Wilcoxon Rank Sum)



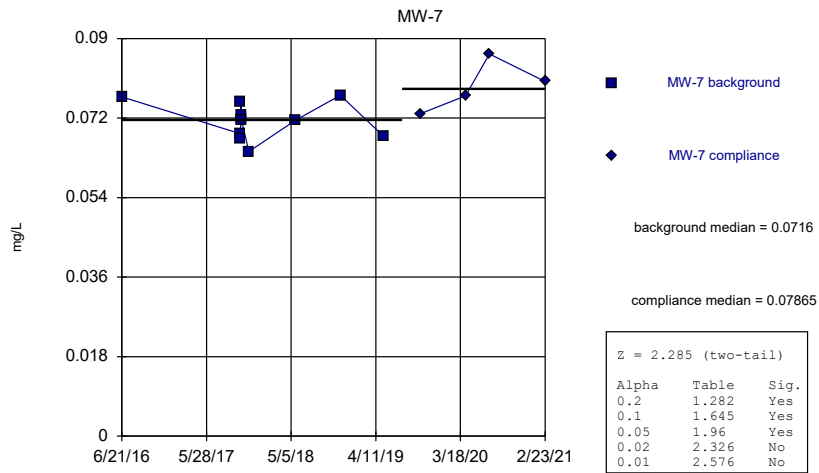
Constituent: Boron, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



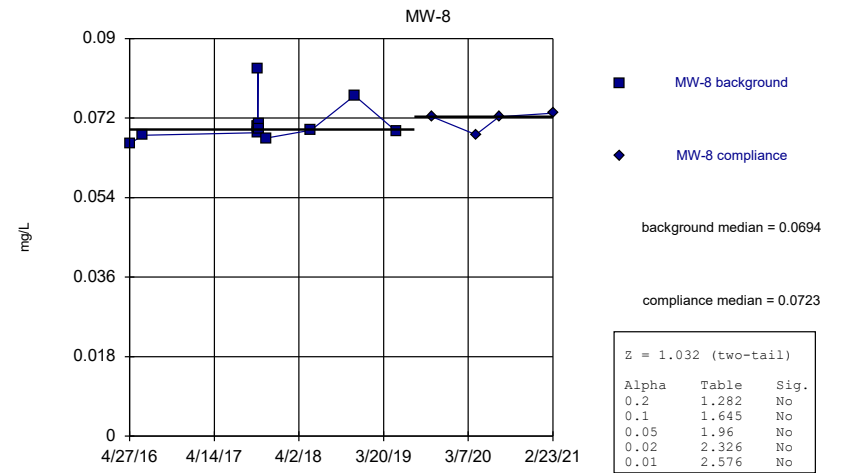
Constituent: Boron, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



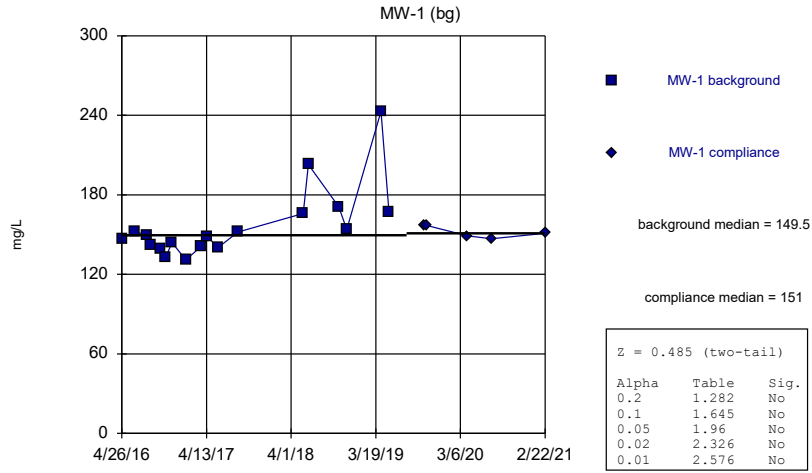
Constituent: Boron, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



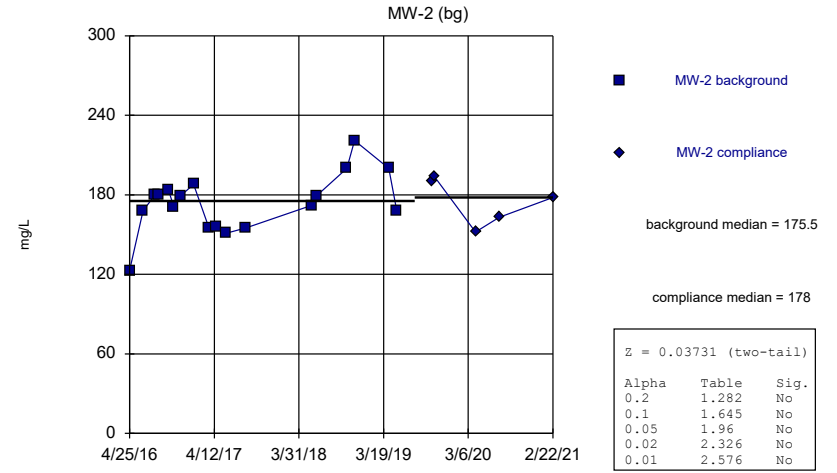
Constituent: Boron, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



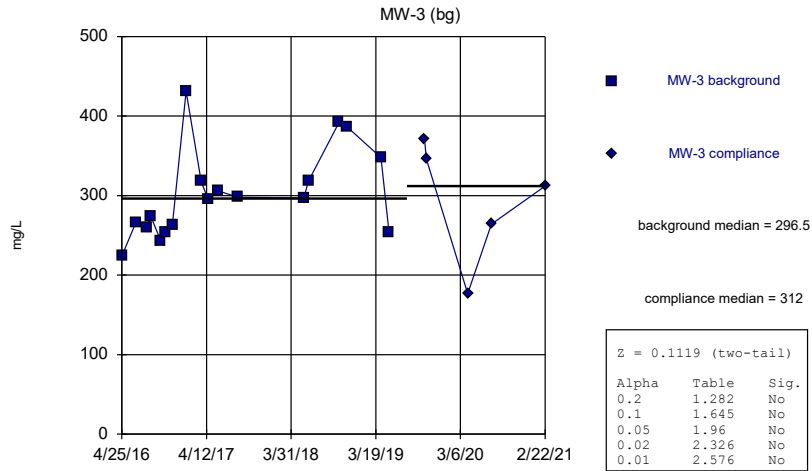
Constituent: Calcium, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



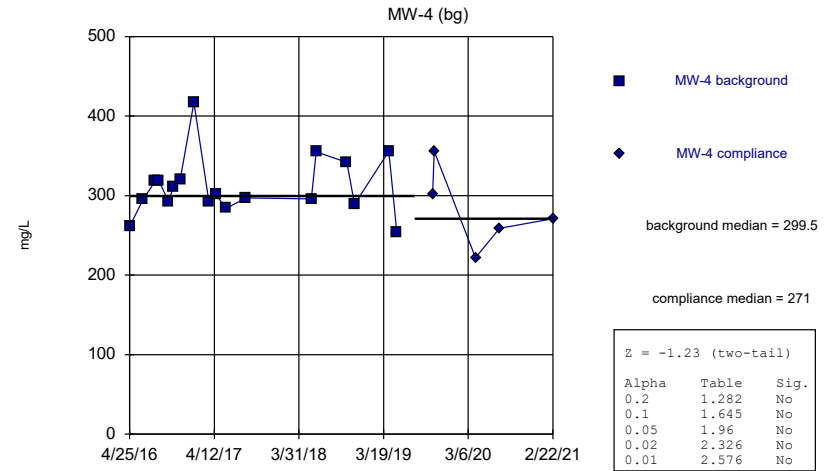
Constituent: Calcium, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Calcium, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

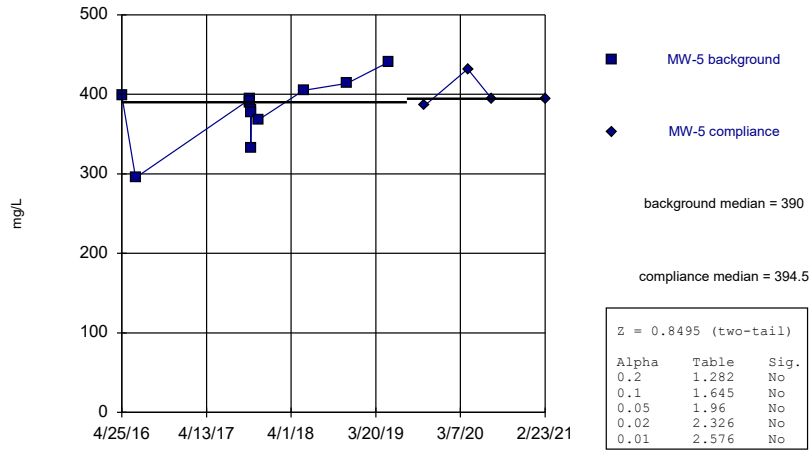
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Calcium, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)

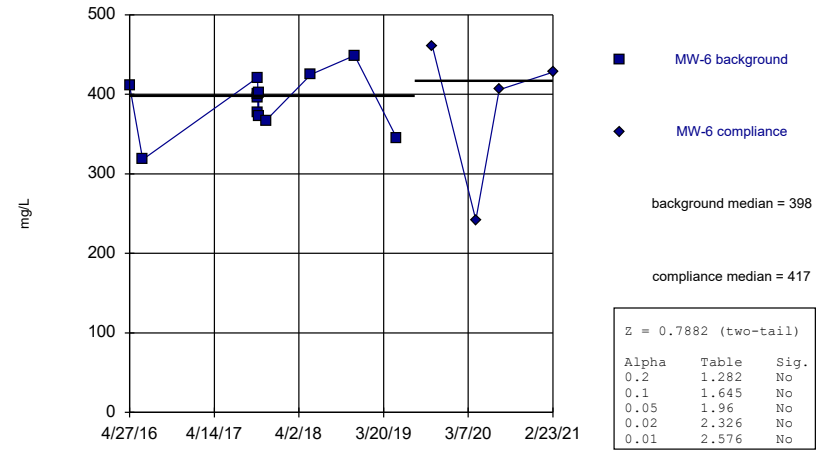
MW-5



Constituent: Calcium, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)

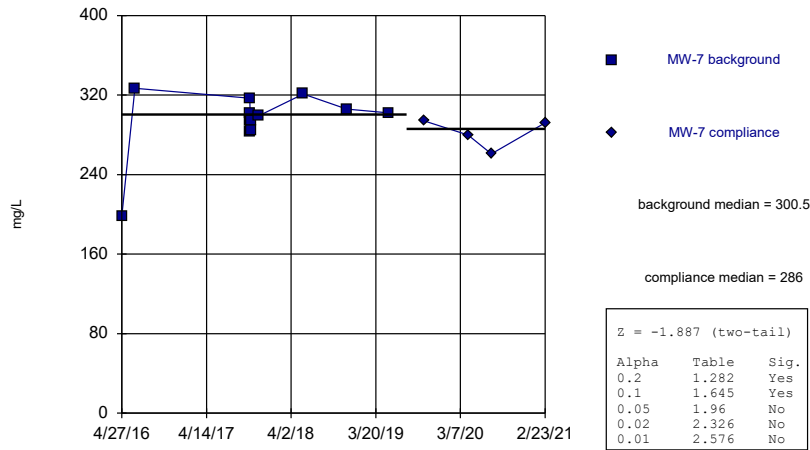
MW-6



Constituent: Calcium, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)

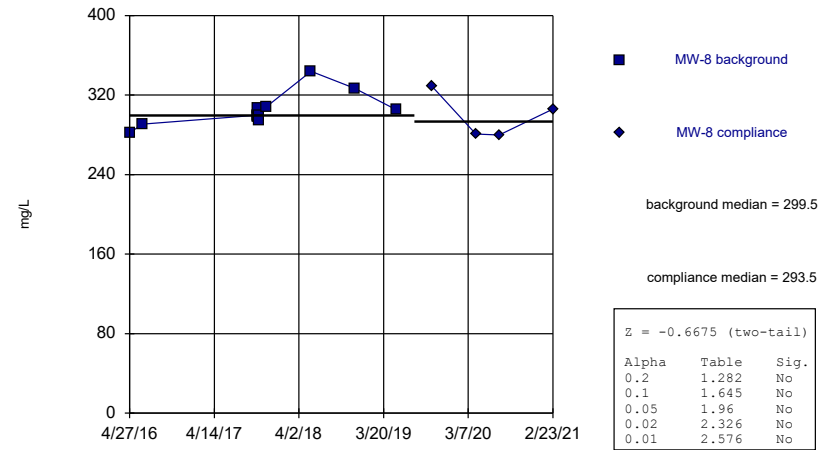
MW-7



Constituent: Calcium, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

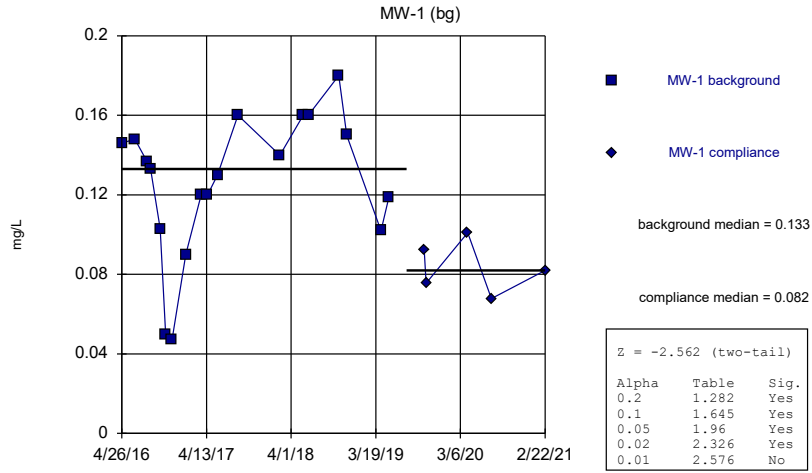
Mann-Whitney (Wilcoxon Rank Sum)

MW-8



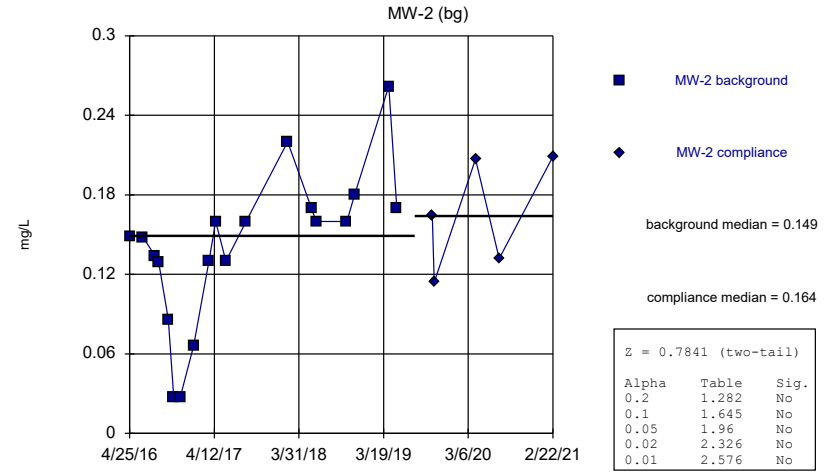
Constituent: Calcium, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



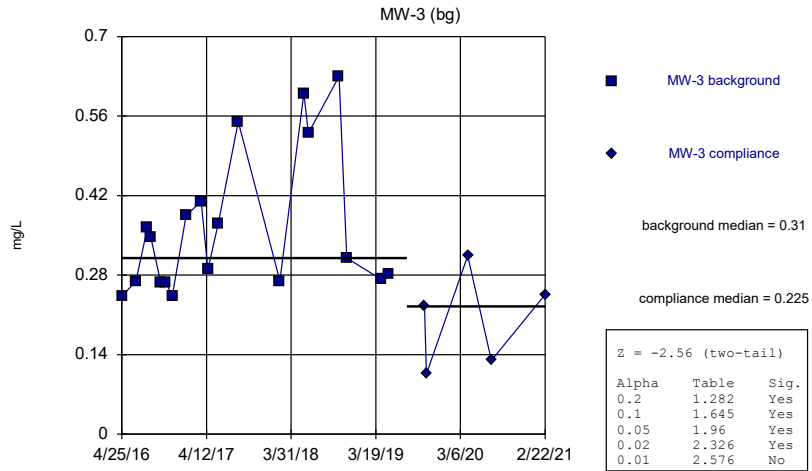
Constituent: Fluoride, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



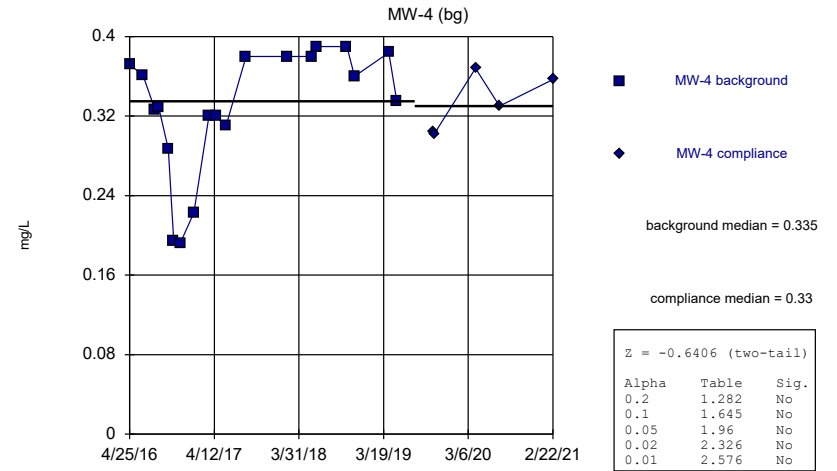
Constituent: Fluoride, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



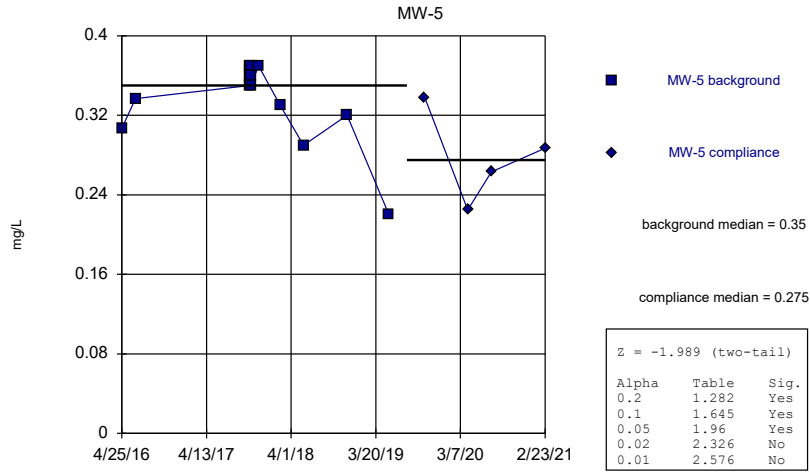
Constituent: Fluoride, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



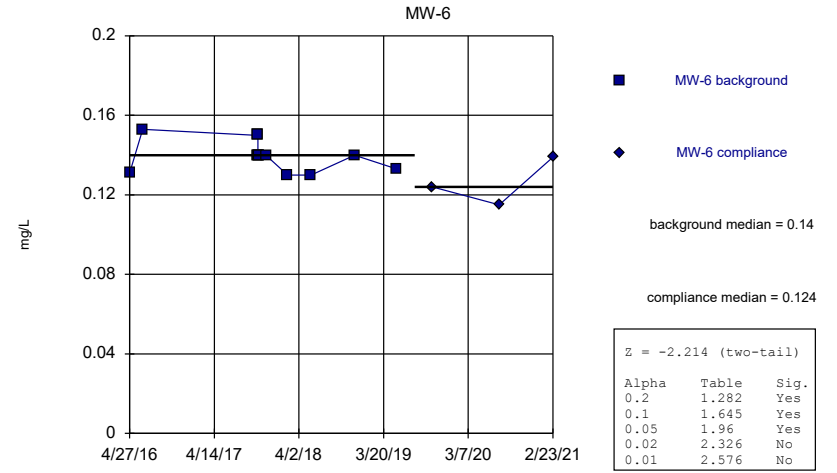
Constituent: Fluoride, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



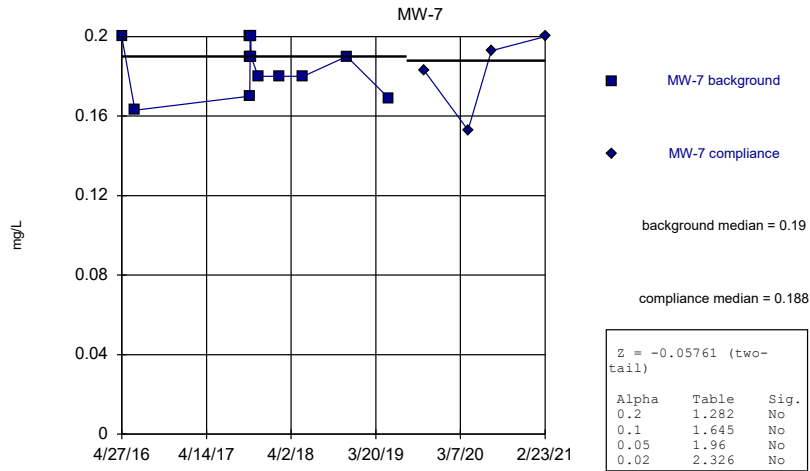
Constituent: Fluoride, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



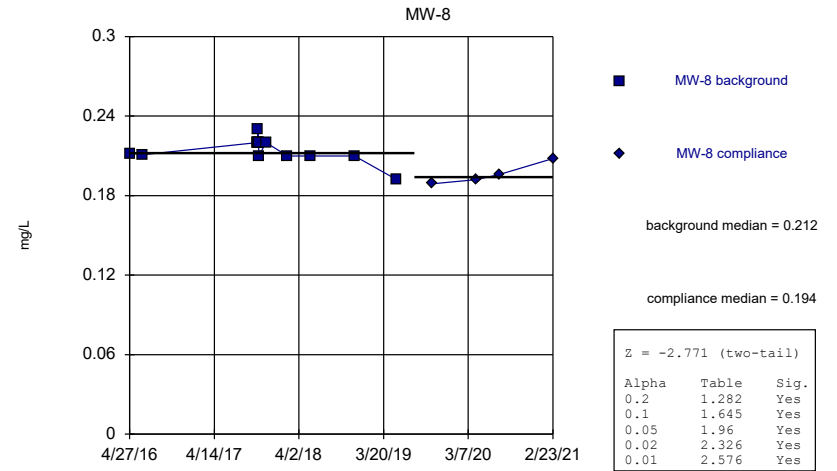
Constituent: Fluoride, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



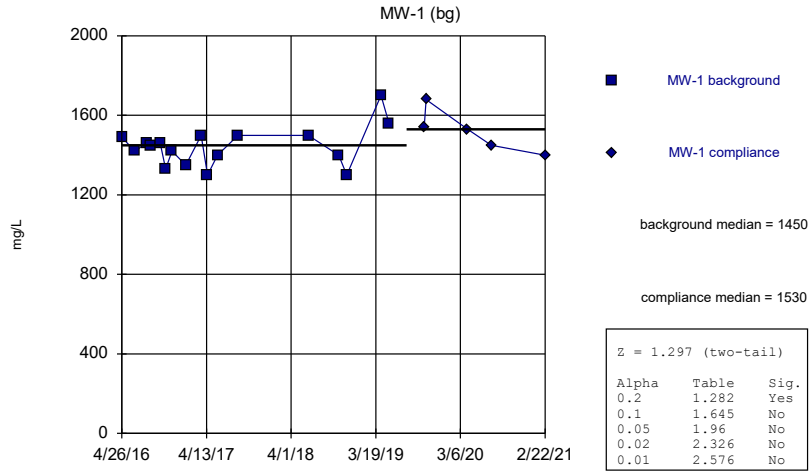
Constituent: Fluoride, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



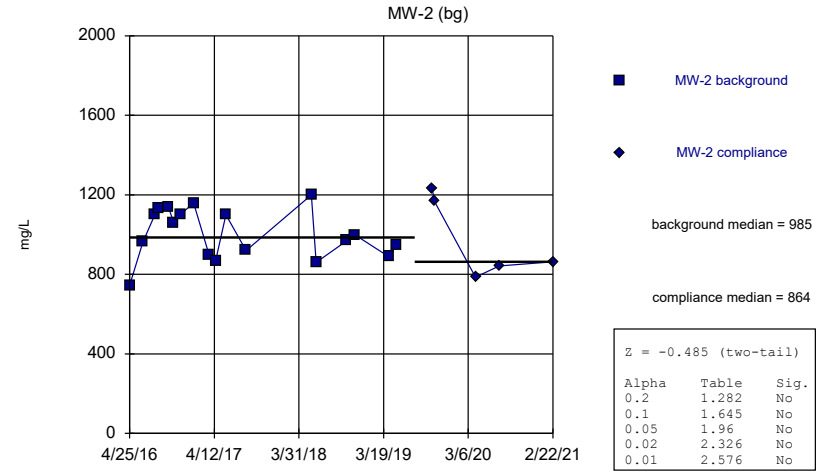
Constituent: Fluoride, total Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



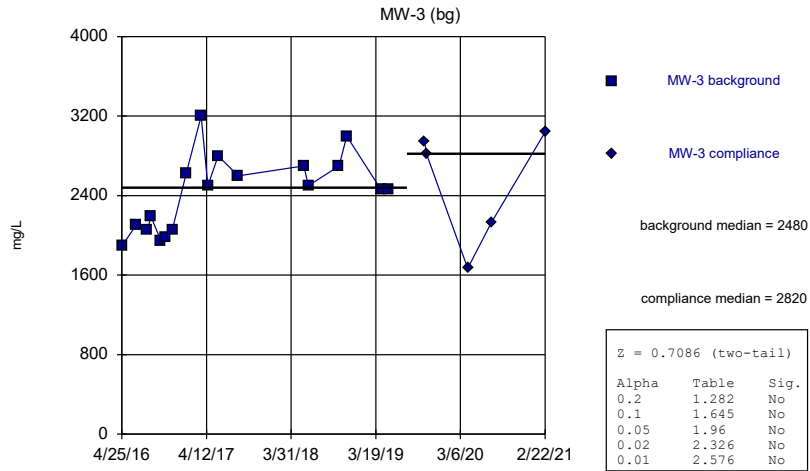
Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



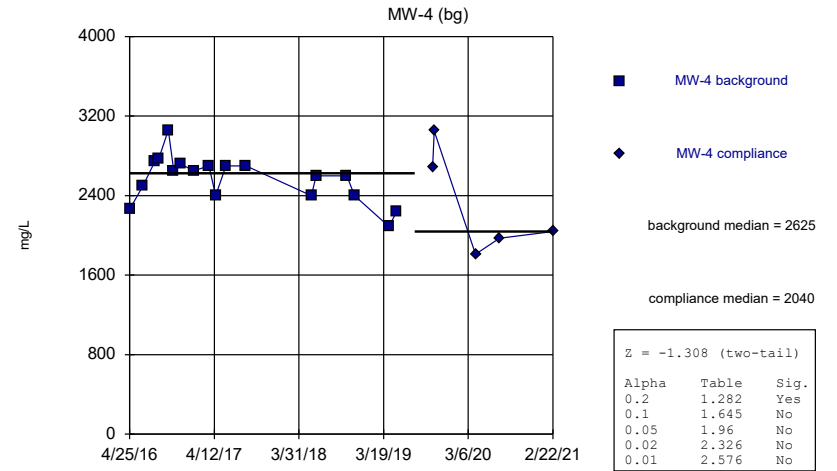
Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:41 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

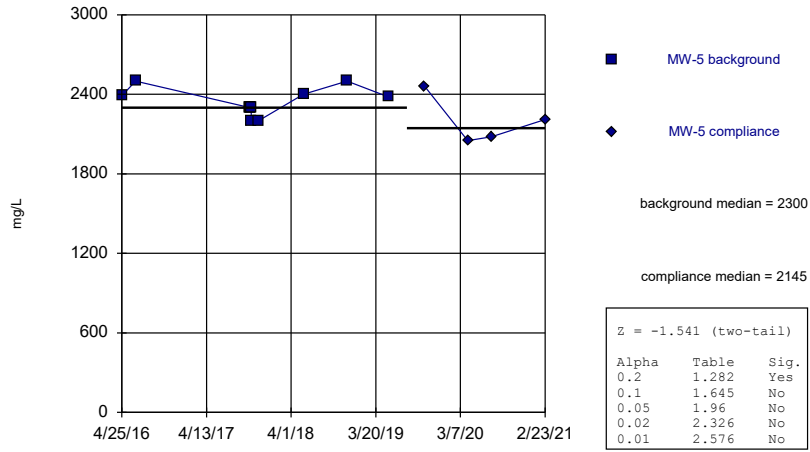
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)

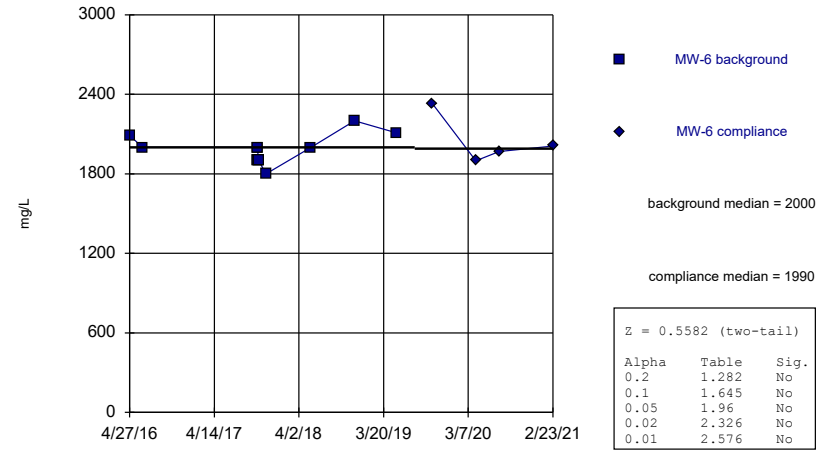
MW-5



Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)

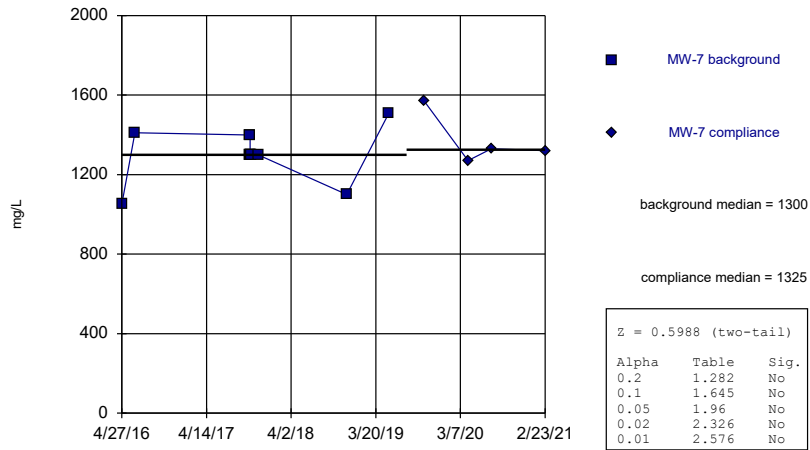
MW-6



Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)

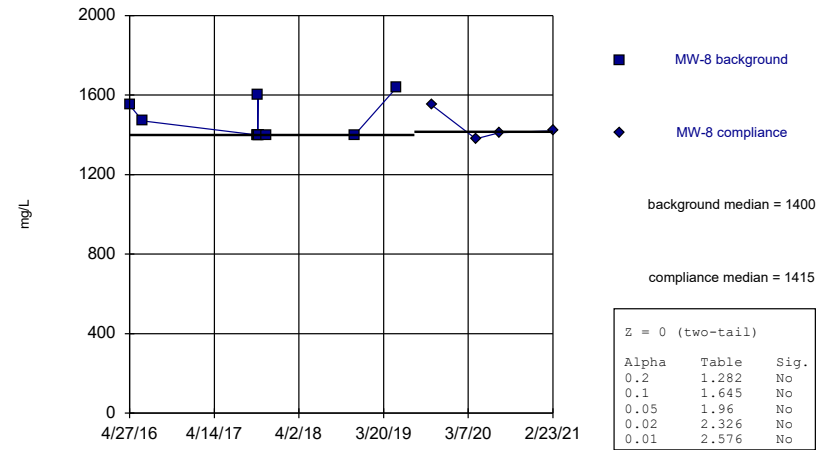
MW-7



Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

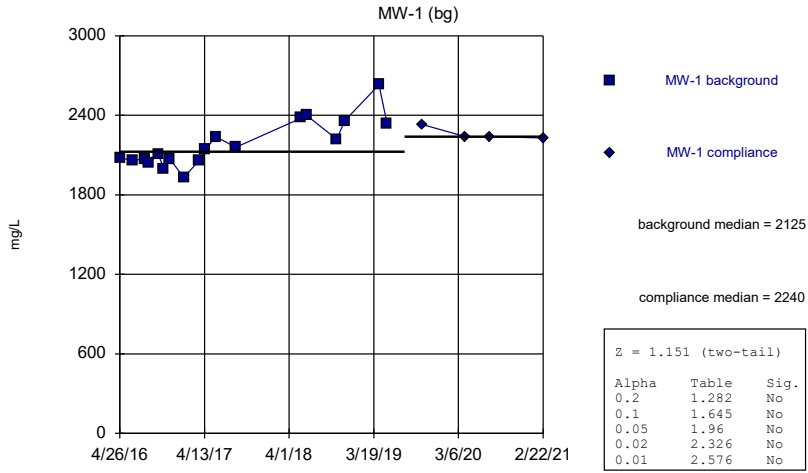
Mann-Whitney (Wilcoxon Rank Sum)

MW-8



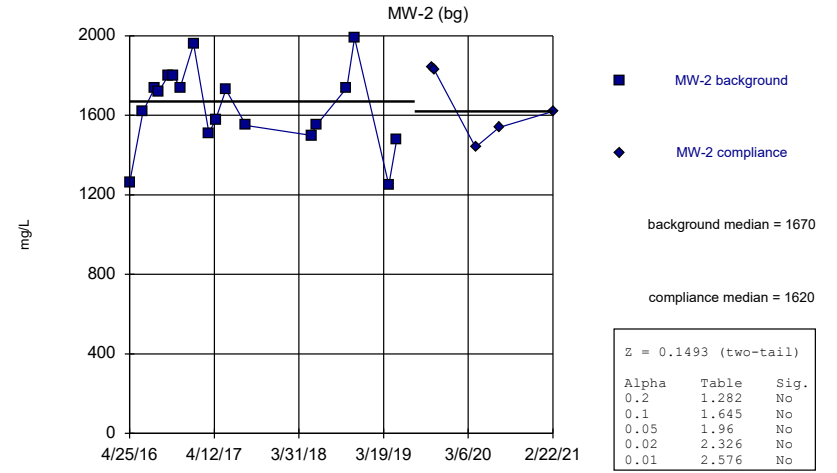
Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



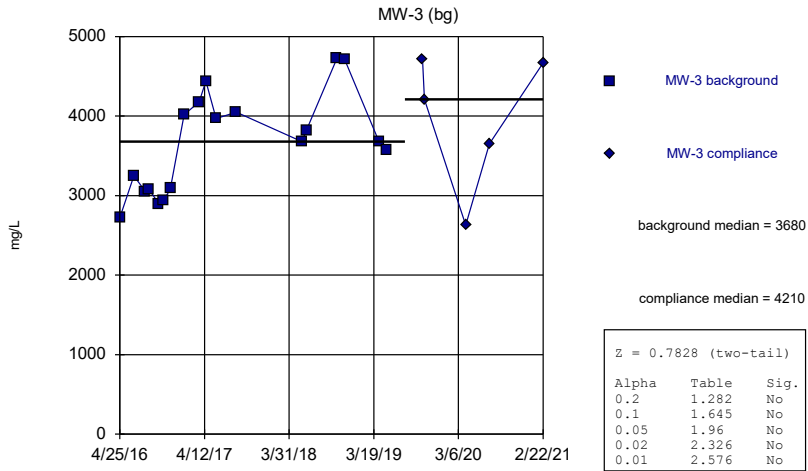
Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



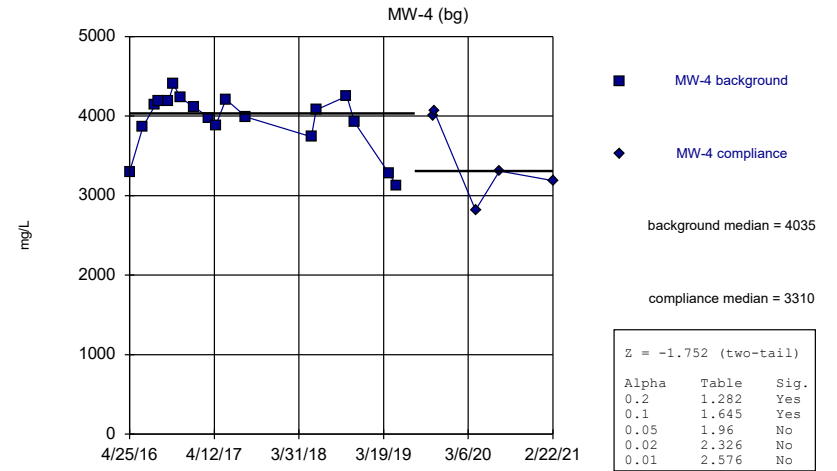
Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)



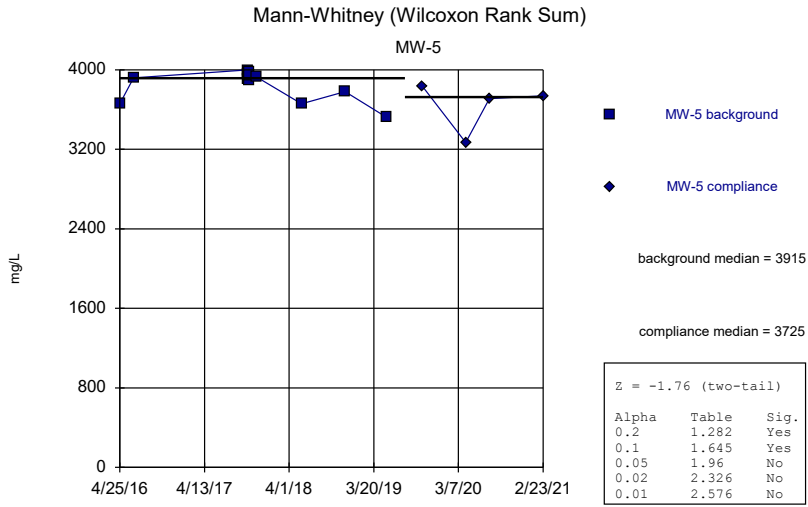
Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Mann-Whitney (Wilcoxon Rank Sum)

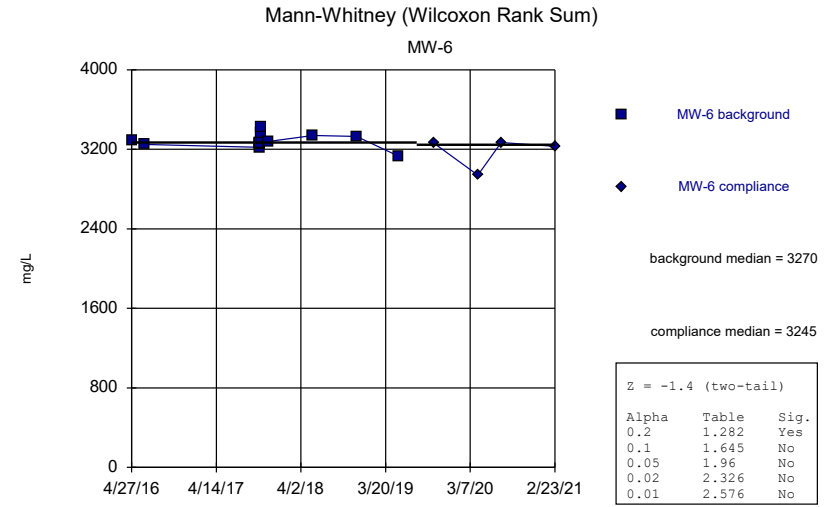


Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

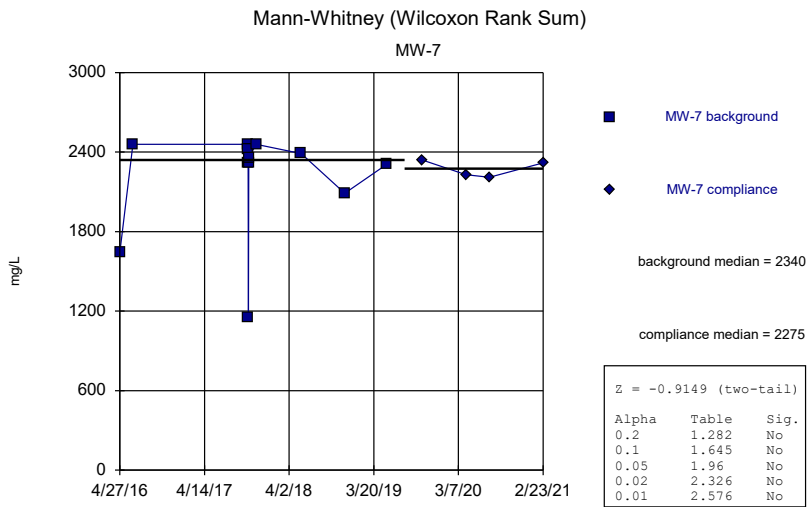




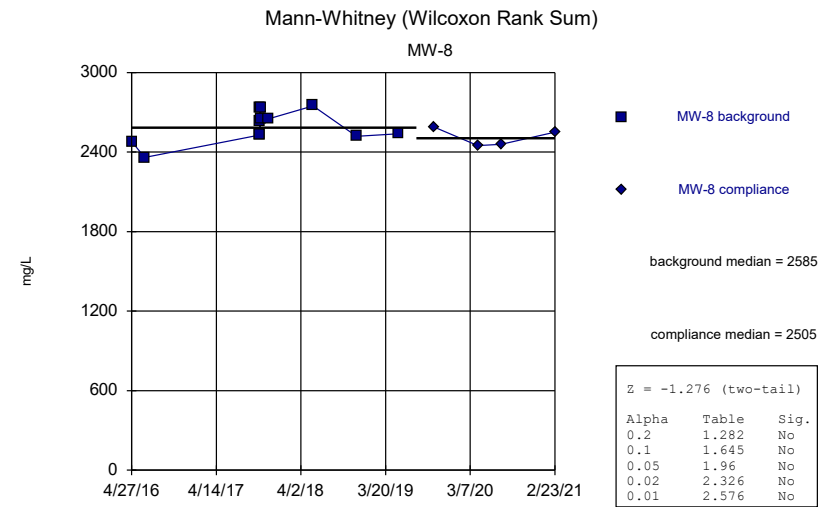
Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:42 AM View: Mann-Whitney  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-1       | MW-1       |
|------------|------------|------------|
| 4/26/2016  | 0.0231 (J) |            |
| 6/20/2016  | 0.0227 (J) |            |
| 8/8/2016   | 0.0278 (J) |            |
| 8/24/2016  | 0.0247 (J) |            |
| 10/3/2016  | 0.0307 (J) |            |
| 10/26/2016 | 0.0241 (J) |            |
| 11/21/2016 | 0.0202 (J) |            |
| 1/17/2017  | 0.0201 (J) |            |
| 3/22/2017  | 0.0224 (J) |            |
| 4/18/2017  | <0.1       |            |
| 5/30/2017  | <0.1       |            |
| 8/23/2017  | 0.0253 (J) |            |
| 5/22/2018  | 0.0224 (J) |            |
| 6/12/2018  | 0.0214 (J) |            |
| 10/17/2018 | 0.0216 (J) |            |
| 11/19/2018 | 0.0237 (J) |            |
| 4/10/2019  | 0.0304 (J) |            |
| 5/14/2019  | <0.1       |            |
| 10/8/2019  |            | <0.1       |
| 10/16/2019 |            | 0.0385 (J) |
| 4/6/2020   |            | <0.1       |
| 7/13/2020  |            | <0.1       |
| 2/22/2021  |            | 0.0307 (J) |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-2       | MW-2       |
|------------|------------|------------|
| 4/25/2016  | 0.0241 (J) |            |
| 6/20/2016  | 0.0284 (J) |            |
| 8/8/2016   | 0.034 (J)  |            |
| 8/24/2016  | 0.0316 (J) |            |
| 10/3/2016  | 0.0367 (J) |            |
| 10/26/2016 | 0.0331 (J) |            |
| 11/21/2016 | 0.035 (J)  |            |
| 1/17/2017  | 0.0259 (J) |            |
| 3/22/2017  | 0.0243 (J) |            |
| 4/18/2017  | 0.0206 (J) |            |
| 5/31/2017  | 0.0234 (J) |            |
| 8/23/2017  | 0.0267 (J) |            |
| 5/22/2018  | 0.0251 (J) |            |
| 6/12/2018  | 0.0275 (J) |            |
| 10/17/2018 | 0.0321 (J) |            |
| 11/19/2018 | 0.0324 (J) |            |
| 4/10/2019  | <0.1015    |            |
| 5/14/2019  | <0.1015    |            |
| 10/8/2019  |            | 0.0371 (J) |
| 10/16/2019 |            | 0.0419 (J) |
| 4/6/2020   |            | <0.1015    |
| 7/13/2020  |            | <0.1015    |
| 2/22/2021  |            | <0.1015    |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-3       | MW-3       |
|------------|------------|------------|
| 4/25/2016  | 0.028 (J)  |            |
| 6/22/2016  | 0.0433 (J) |            |
| 8/9/2016   | 0.0429 (J) |            |
| 8/24/2016  | 0.0431 (J) |            |
| 10/4/2016  | 0.04 (J)   |            |
| 10/26/2016 | 0.0375 (J) |            |
| 11/21/2016 | 0.0406 (J) |            |
| 1/18/2017  | 0.0548 (J) |            |
| 3/22/2017  | 0.0344 (J) |            |
| 4/18/2017  | <0.1015    |            |
| 5/31/2017  | 0.0454 (J) |            |
| 8/23/2017  | 0.0425 (J) |            |
| 5/24/2018  | 0.0339 (J) |            |
| 6/12/2018  | 0.0371 (J) |            |
| 10/17/2018 | 0.0596 (J) |            |
| 11/19/2018 | 0.0514 (J) |            |
| 4/10/2019  | <0.1015    |            |
| 5/14/2019  | <0.1015    |            |
| 10/8/2019  |            | 0.0537 (J) |
| 10/16/2019 |            | 0.05 (J)   |
| 4/6/2020   |            | <0.1015    |
| 7/13/2020  |            | 0.0366 (J) |
| 2/22/2021  |            | <0.1015    |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-4       | MW-4       |
|------------|------------|------------|
| 4/25/2016  | 0.0414 (J) |            |
| 6/20/2016  | 0.0434 (J) |            |
| 8/9/2016   | 0.0453 (J) |            |
| 8/24/2016  | 0.0451 (J) |            |
| 10/3/2016  | 0.0511 (J) |            |
| 10/26/2016 | 0.0507 (J) |            |
| 11/21/2016 | 0.0458 (J) |            |
| 1/18/2017  | 0.0445 (J) |            |
| 3/22/2017  | 0.0432 (J) |            |
| 4/18/2017  | 0.0409 (J) |            |
| 5/31/2017  | 0.0392 (J) |            |
| 8/23/2017  | 0.042 (J)  |            |
| 5/23/2018  | 0.0433 (J) |            |
| 6/12/2018  | 0.0478 (J) |            |
| 10/17/2018 | 0.0468 (J) |            |
| 11/19/2018 | 0.0526 (J) |            |
| 4/10/2019  | 0.0438 (J) |            |
| 5/14/2019  | <0.203 (o) |            |
| 10/10/2019 |            | 0.0487 (J) |
| 10/16/2019 |            | 0.0505 (J) |
| 4/6/2020   |            | 0.0428 (J) |
| 7/14/2020  |            | 0.0441 (J) |
| 2/22/2021  |            | 0.0397 (J) |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5       | MW-5       |
|------------|------------|------------|
| 4/25/2016  | 0.0301 (J) |            |
| 6/21/2016  | 0.0304 (J) |            |
| 10/12/2017 | 0.0285 (J) |            |
| 10/13/2017 | 0.0287 (J) |            |
| 10/14/2017 | 0.0305 (J) |            |
| 10/15/2017 | 0.0319 (J) |            |
| 10/16/2017 | 0.0304 (J) |            |
| 10/17/2017 | 0.036 (J)  |            |
| 11/16/2017 | 0.0377 (J) |            |
| 5/23/2018  | 0.0301 (J) |            |
| 11/20/2018 | 0.0357 (J) |            |
| 5/14/2019  | <0.203 (o) |            |
| 10/10/2019 |            | 0.0323 (J) |
| 4/7/2020   |            | 0.0399 (J) |
| 7/14/2020  |            | 0.033 (J)  |
| 2/23/2021  |            | 0.0369 (J) |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-6       | MW-6       |
|------------|------------|------------|
| 4/27/2016  | 0.075 (J)  |            |
| 6/21/2016  | 0.0729 (J) |            |
| 10/12/2017 | 0.0806 (J) |            |
| 10/13/2017 | 0.0803 (J) |            |
| 10/14/2017 | 0.0828 (J) |            |
| 10/15/2017 | 0.0852 (J) |            |
| 10/16/2017 | 0.0858 (J) |            |
| 10/17/2017 | 0.0846 (J) |            |
| 11/16/2017 | 0.0772 (J) |            |
| 5/23/2018  | 0.0757 (J) |            |
| 11/20/2018 | 0.0915 (J) |            |
| 5/15/2019  | 0.0616 (J) |            |
| 10/10/2019 |            | 0.0919 (J) |
| 4/8/2020   |            | 0.0499 (J) |
| 7/14/2020  |            | 0.0838 (J) |
| 2/23/2021  |            | 0.0866 (J) |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-7       | MW-7       |
|------------|------------|------------|
| 4/27/2016  | 0.253 (O)  |            |
| 6/21/2016  | 0.0768 (J) |            |
| 10/12/2017 | 0.0685 (J) |            |
| 10/13/2017 | 0.0674 (J) |            |
| 10/14/2017 | 0.0756 (J) |            |
| 10/15/2017 | 0.0719 (J) |            |
| 10/16/2017 | 0.0726 (J) |            |
| 10/17/2017 | 0.0716 (J) |            |
| 11/16/2017 | 0.0644 (J) |            |
| 5/23/2018  | 0.0715 (J) |            |
| 11/20/2018 | 0.0772 (J) |            |
| 5/15/2019  | 0.0678 (J) |            |
| 10/8/2019  |            | 0.073 (J)  |
| 4/8/2020   |            | 0.077 (J)  |
| 7/14/2020  |            | 0.0865 (J) |
| 2/23/2021  |            | 0.0803 (J) |



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-8       | MW-8       |
|------------|------------|------------|
| 4/27/2016  | 0.0662 (J) |            |
| 6/21/2016  | 0.0681 (J) |            |
| 10/12/2017 | 0.0687 (J) |            |
| 10/13/2017 | 0.0831 (J) |            |
| 10/14/2017 | 0.0702 (J) |            |
| 10/15/2017 | 0.0702 (J) |            |
| 10/16/2017 | 0.0707 (J) |            |
| 10/17/2017 | 0.0695 (J) |            |
| 11/16/2017 | 0.0675 (J) |            |
| 5/23/2018  | 0.0693 (J) |            |
| 11/20/2018 | 0.0771 (J) |            |
| 5/15/2019  | 0.0689 (J) |            |
| 10/9/2019  |            | 0.0723 (J) |
| 4/8/2020   |            | 0.0683 (J) |
| 7/15/2020  |            | 0.0723 (J) |
| 2/23/2021  |            | 0.0731 (J) |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-1 | MW-1 |
|------------|------|------|
| 4/26/2016  | 147  |      |
| 6/20/2016  | 152  |      |
| 8/8/2016   | 150  |      |
| 8/24/2016  | 142  |      |
| 10/3/2016  | 139  |      |
| 10/26/2016 | 133  |      |
| 11/21/2016 | 144  |      |
| 1/17/2017  | 131  |      |
| 3/22/2017  | 141  |      |
| 4/18/2017  | 149  |      |
| 5/30/2017  | 140  |      |
| 8/23/2017  | 152  |      |
| 5/22/2018  | 166  |      |
| 6/12/2018  | 203  |      |
| 10/17/2018 | 171  |      |
| 11/19/2018 | 154  |      |
| 4/10/2019  | 243  |      |
| 5/14/2019  | 167  |      |
| 10/8/2019  |      | 157  |
| 10/16/2019 |      | 157  |
| 4/6/2020   |      | 149  |
| 7/13/2020  |      | 147  |
| 2/22/2021  |      | 151  |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-2 | MW-2 |
|------------|------|------|
| 4/25/2016  | 123  |      |
| 6/20/2016  | 168  |      |
| 8/8/2016   | 180  |      |
| 8/24/2016  | 180  |      |
| 10/3/2016  | 184  |      |
| 10/26/2016 | 171  |      |
| 11/21/2016 | 179  |      |
| 1/17/2017  | 188  |      |
| 3/22/2017  | 155  |      |
| 4/18/2017  | 156  |      |
| 5/31/2017  | 151  |      |
| 8/23/2017  | 155  |      |
| 5/22/2018  | 172  |      |
| 6/12/2018  | 179  |      |
| 10/17/2018 | 200  |      |
| 11/19/2018 | 221  |      |
| 4/10/2019  | 200  |      |
| 5/14/2019  | 168  |      |
| 10/8/2019  |      | 190  |
| 10/16/2019 |      | 194  |
| 4/6/2020   |      | 152  |
| 7/13/2020  |      | 163  |
| 2/22/2021  |      | 178  |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-3 | MW-3 |
|------------|------|------|
| 4/25/2016  | 224  |      |
| 6/22/2016  | 266  |      |
| 8/9/2016   | 260  |      |
| 8/24/2016  | 274  |      |
| 10/4/2016  | 243  |      |
| 10/26/2016 | 254  |      |
| 11/21/2016 | 263  |      |
| 1/18/2017  | 431  |      |
| 3/22/2017  | 318  |      |
| 4/18/2017  | 296  |      |
| 5/31/2017  | 306  |      |
| 8/23/2017  | 298  |      |
| 5/24/2018  | 297  |      |
| 6/12/2018  | 318  |      |
| 10/17/2018 | 392  |      |
| 11/19/2018 | 387  |      |
| 4/10/2019  | 348  |      |
| 5/14/2019  | 254  |      |
| 10/8/2019  |      | 371  |
| 10/16/2019 |      | 346  |
| 4/6/2020   |      | 177  |
| 7/13/2020  |      | 264  |
| 2/22/2021  |      | 312  |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-4 | MW-4 |
|------------|------|------|
| 4/25/2016  | 261  |      |
| 6/20/2016  | 295  |      |
| 8/9/2016   | 318  |      |
| 8/24/2016  | 319  |      |
| 10/3/2016  | 293  |      |
| 10/26/2016 | 311  |      |
| 11/21/2016 | 320  |      |
| 1/18/2017  | 417  |      |
| 3/22/2017  | 292  |      |
| 4/18/2017  | 302  |      |
| 5/31/2017  | 284  |      |
| 8/23/2017  | 297  |      |
| 5/23/2018  | 296  |      |
| 6/12/2018  | 355  |      |
| 10/17/2018 | 342  |      |
| 11/19/2018 | 289  |      |
| 4/10/2019  | 356  |      |
| 5/14/2019  | 254  |      |
| 10/10/2019 |      | 302  |
| 10/16/2019 |      | 356  |
| 4/6/2020   |      | 222  |
| 7/14/2020  |      | 259  |
| 2/22/2021  |      | 271  |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5 | MW-5 |
|------------|------|------|
| 4/25/2016  | 399  |      |
| 6/21/2016  | 295  |      |
| 10/12/2017 | 394  |      |
| 10/13/2017 | 389  |      |
| 10/14/2017 | 391  |      |
| 10/15/2017 | 332  |      |
| 10/16/2017 | 380  |      |
| 10/17/2017 | 377  |      |
| 11/16/2017 | 368  |      |
| 5/23/2018  | 405  |      |
| 11/20/2018 | 414  |      |
| 5/14/2019  | 441  |      |
| 10/10/2019 |      | 386  |
| 4/7/2020   |      | 432  |
| 7/14/2020  |      | 395  |
| 2/23/2021  |      | 394  |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-6 | MW-6 |
|------------|------|------|
| 4/27/2016  | 411  |      |
| 6/21/2016  | 318  |      |
| 10/12/2017 | 421  |      |
| 10/13/2017 | 396  |      |
| 10/14/2017 | 400  |      |
| 10/15/2017 | 378  |      |
| 10/16/2017 | 402  |      |
| 10/17/2017 | 373  |      |
| 11/16/2017 | 367  |      |
| 5/23/2018  | 425  |      |
| 11/20/2018 | 449  |      |
| 5/15/2019  | 345  |      |
| 10/10/2019 |      | 461  |
| 4/8/2020   |      | 242  |
| 7/14/2020  |      | 406  |
| 2/23/2021  |      | 428  |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-7 | MW-7 |
|------------|------|------|
| 4/27/2016  | 198  |      |
| 6/21/2016  | 327  |      |
| 10/12/2017 | 317  |      |
| 10/13/2017 | 302  |      |
| 10/14/2017 | 283  |      |
| 10/15/2017 | 294  |      |
| 10/16/2017 | 284  |      |
| 10/17/2017 | 294  |      |
| 11/16/2017 | 299  |      |
| 5/23/2018  | 321  |      |
| 11/20/2018 | 306  |      |
| 5/15/2019  | 302  |      |
| 10/8/2019  |      | 294  |
| 4/8/2020   |      | 280  |
| 7/14/2020  |      | 261  |
| 2/23/2021  |      | 292  |



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-8 | MW-8 |
|------------|------|------|
| 4/27/2016  | 282  |      |
| 6/21/2016  | 291  |      |
| 10/12/2017 | 300  |      |
| 10/13/2017 | 298  |      |
| 10/14/2017 | 299  |      |
| 10/15/2017 | 307  |      |
| 10/16/2017 | 299  |      |
| 10/17/2017 | 294  |      |
| 11/16/2017 | 308  |      |
| 5/23/2018  | 344  |      |
| 11/20/2018 | 327  |      |
| 5/15/2019  | 305  |      |
| 10/9/2019  |      | 329  |
| 4/8/2020   |      | 281  |
| 7/15/2020  |      | 280  |
| 2/23/2021  |      | 306  |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-1      | MW-1       |
|------------|-----------|------------|
| 4/26/2016  | 0.146 (J) |            |
| 6/20/2016  | 0.148 (J) |            |
| 8/8/2016   | 0.137 (J) |            |
| 8/24/2016  | 0.133 (J) |            |
| 10/3/2016  | 0.103 (J) |            |
| 10/26/2016 | 0.05 (J)  |            |
| 11/21/2016 | 0.047 (J) |            |
| 1/17/2017  | 0.09 (J)  |            |
| 3/22/2017  | 0.12      |            |
| 4/18/2017  | 0.12      |            |
| 5/30/2017  | 0.13      |            |
| 8/23/2017  | 0.16      |            |
| 2/13/2018  | 0.14      |            |
| 5/22/2018  | 0.16      |            |
| 6/12/2018  | 0.16      |            |
| 10/17/2018 | 0.18      |            |
| 11/19/2018 | 0.15      |            |
| 4/10/2019  | 0.102     |            |
| 5/14/2019  | 0.119     |            |
| 10/8/2019  |           | 0.0924 (J) |
| 10/16/2019 |           | 0.0756 (J) |
| 4/6/2020   |           | 0.101      |
| 7/13/2020  |           | 0.0678 (J) |
| 2/22/2021  |           | 0.082 (J)  |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-2      | MW-2  |
|------------|-----------|-------|
| 4/25/2016  | 0.149 (J) |       |
| 6/20/2016  | 0.148 (J) |       |
| 8/8/2016   | 0.134 (J) |       |
| 8/24/2016  | 0.129 (J) |       |
| 10/3/2016  | 0.086 (J) |       |
| 10/26/2016 | 0.027 (J) |       |
| 11/21/2016 | 0.027 (J) |       |
| 1/17/2017  | 0.066 (J) |       |
| 3/22/2017  | 0.13      |       |
| 4/18/2017  | 0.16      |       |
| 5/31/2017  | 0.13      |       |
| 8/23/2017  | 0.16      |       |
| 2/13/2018  | 0.22      |       |
| 5/22/2018  | 0.17      |       |
| 6/12/2018  | 0.16      |       |
| 10/17/2018 | 0.16      |       |
| 11/19/2018 | 0.18      |       |
| 4/10/2019  | 0.262     |       |
| 5/14/2019  | 0.17      |       |
| 10/8/2019  |           | 0.164 |
| 10/16/2019 |           | 0.114 |
| 4/6/2020   |           | 0.207 |
| 7/13/2020  |           | 0.132 |
| 2/22/2021  |           | 0.209 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-3      | MW-3  |
|------------|-----------|-------|
| 4/25/2016  | 0.243 (J) |       |
| 6/22/2016  | 0.269 (J) |       |
| 8/9/2016   | 0.363     |       |
| 8/24/2016  | 0.346     |       |
| 10/4/2016  | 0.266 (J) |       |
| 10/26/2016 | 0.266 (J) |       |
| 11/21/2016 | 0.244 (J) |       |
| 1/18/2017  | 0.385     |       |
| 3/22/2017  | 0.41      |       |
| 4/18/2017  | 0.29      |       |
| 5/31/2017  | 0.37      |       |
| 8/23/2017  | 0.55      |       |
| 2/13/2018  | 0.27      |       |
| 5/24/2018  | 0.6       |       |
| 6/12/2018  | 0.53      |       |
| 10/17/2018 | 0.63      |       |
| 11/19/2018 | 0.31      |       |
| 4/10/2019  | 0.273     |       |
| 5/14/2019  | 0.281     |       |
| 10/8/2019  |           | 0.225 |
| 10/16/2019 |           | 0.106 |
| 4/6/2020   |           | 0.314 |
| 7/13/2020  |           | 0.13  |
| 2/22/2021  |           | 0.246 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-4      | MW-4  |
|------------|-----------|-------|
| 4/25/2016  | 0.372     |       |
| 6/20/2016  | 0.361     |       |
| 8/9/2016   | 0.326     |       |
| 8/24/2016  | 0.329     |       |
| 10/3/2016  | 0.287 (J) |       |
| 10/26/2016 | 0.194 (J) |       |
| 11/21/2016 | 0.192 (J) |       |
| 1/18/2017  | 0.223 (J) |       |
| 3/22/2017  | 0.32      |       |
| 4/18/2017  | 0.32      |       |
| 5/31/2017  | 0.31      |       |
| 8/23/2017  | 0.38      |       |
| 2/13/2018  | 0.38      |       |
| 5/23/2018  | 0.38      |       |
| 6/12/2018  | 0.39      |       |
| 10/17/2018 | 0.39      |       |
| 11/19/2018 | 0.36      |       |
| 4/10/2019  | 0.384     |       |
| 5/14/2019  | 0.335     |       |
| 10/10/2019 |           | 0.304 |
| 10/16/2019 |           | 0.302 |
| 4/6/2020   |           | 0.368 |
| 7/14/2020  |           | 0.33  |
| 2/22/2021  |           | 0.357 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5  | MW-5  |
|------------|-------|-------|
| 4/25/2016  | 0.307 |       |
| 6/21/2016  | 0.337 |       |
| 10/12/2017 | 0.35  |       |
| 10/13/2017 | 0.36  |       |
| 10/14/2017 | 0.37  |       |
| 10/15/2017 | 0.37  |       |
| 10/16/2017 | 0.36  |       |
| 10/17/2017 | 0.35  |       |
| 11/16/2017 | 0.37  |       |
| 2/14/2018  | 0.33  |       |
| 5/23/2018  | 0.29  |       |
| 11/20/2018 | 0.32  |       |
| 5/14/2019  | 0.22  |       |
| 10/10/2019 |       | 0.338 |
| 4/7/2020   |       | 0.225 |
| 7/14/2020  |       | 0.263 |
| 2/23/2021  |       | 0.287 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-6      | MW-6  |
|------------|-----------|-------|
| 4/27/2016  | 0.131 (J) |       |
| 6/21/2016  | 0.153 (J) |       |
| 10/12/2017 | 0.15      |       |
| 10/13/2017 | 0.15      |       |
| 10/14/2017 | 0.14      |       |
| 10/15/2017 | 0.14      |       |
| 10/16/2017 | 0.14      |       |
| 10/17/2017 | 0.14      |       |
| 11/16/2017 | 0.14      |       |
| 2/14/2018  | 0.13      |       |
| 5/23/2018  | 0.13      |       |
| 11/20/2018 | 0.14      |       |
| 5/15/2019  | 0.133     |       |
| 10/10/2019 |           | 0.124 |
| 4/8/2020   | <0.1 (o)  |       |
| 7/14/2020  |           | 0.115 |
| 2/23/2021  |           | 0.139 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-7      | MW-7  |
|------------|-----------|-------|
| 4/27/2016  | 0.2 (J)   |       |
| 6/21/2016  | 0.163 (J) |       |
| 10/12/2017 | 0.17      |       |
| 10/13/2017 | 0.19      |       |
| 10/14/2017 | 0.2       |       |
| 10/15/2017 | 0.2       |       |
| 10/16/2017 | 0.2       |       |
| 10/17/2017 | 0.19      |       |
| 11/16/2017 | 0.18      |       |
| 2/14/2018  | 0.18      |       |
| 5/23/2018  | 0.18      |       |
| 11/20/2018 | 0.19      |       |
| 5/15/2019  | 0.169     |       |
| 10/8/2019  |           | 0.183 |
| 4/8/2020   |           | 0.153 |
| 7/14/2020  |           | 0.193 |
| 2/23/2021  |           | 0.2   |



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-8      | MW-8  |
|------------|-----------|-------|
| 4/27/2016  | 0.212 (J) |       |
| 6/21/2016  | 0.211 (J) |       |
| 10/12/2017 | 0.22      |       |
| 10/13/2017 | 0.23      |       |
| 10/14/2017 | 0.22      |       |
| 10/15/2017 | 0.22      |       |
| 10/16/2017 | 0.22      |       |
| 10/17/2017 | 0.21      |       |
| 11/16/2017 | 0.22      |       |
| 2/14/2018  | 0.21      |       |
| 5/23/2018  | 0.21      |       |
| 11/20/2018 | 0.21      |       |
| 5/15/2019  | 0.192     |       |
| 10/9/2019  |           | 0.189 |
| 4/8/2020   |           | 0.192 |
| 7/15/2020  |           | 0.196 |
| 2/23/2021  |           | 0.208 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-1     | MW-1 |
|------------|----------|------|
| 4/26/2016  | 1490     |      |
| 6/20/2016  | 1420     |      |
| 8/8/2016   | 1460     |      |
| 8/24/2016  | 1450     |      |
| 10/3/2016  | 1460     |      |
| 10/26/2016 | 1330     |      |
| 11/21/2016 | 1420     |      |
| 1/17/2017  | 1350     |      |
| 3/22/2017  | 1500     |      |
| 4/18/2017  | 1300     |      |
| 5/30/2017  | 1400     |      |
| 8/23/2017  | 1500     |      |
| 5/22/2018  | 2100 (o) |      |
| 6/12/2018  | 1500     |      |
| 10/17/2018 | 1400     |      |
| 11/19/2018 | 1300     |      |
| 4/10/2019  | 1700     |      |
| 5/14/2019  | 1560     |      |
| 10/8/2019  |          | 1540 |
| 10/16/2019 |          | 1680 |
| 4/6/2020   |          | 1530 |
| 7/13/2020  |          | 1450 |
| 2/22/2021  |          | 1400 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-2 | MW-2 |
|------------|------|------|
| 4/25/2016  | 745  |      |
| 6/20/2016  | 964  |      |
| 8/8/2016   | 1100 |      |
| 8/24/2016  | 1130 |      |
| 10/3/2016  | 1140 |      |
| 10/26/2016 | 1060 |      |
| 11/21/2016 | 1100 |      |
| 1/17/2017  | 1160 |      |
| 3/22/2017  | 900  |      |
| 4/18/2017  | 870  |      |
| 5/31/2017  | 1100 |      |
| 8/23/2017  | 920  |      |
| 5/22/2018  | 1200 |      |
| 6/12/2018  | 860  |      |
| 10/17/2018 | 970  |      |
| 11/19/2018 | 1000 |      |
| 4/10/2019  | 889  |      |
| 5/14/2019  | 948  |      |
| 10/8/2019  |      | 1230 |
| 10/16/2019 |      | 1170 |
| 4/6/2020   |      | 786  |
| 7/13/2020  |      | 843  |
| 2/22/2021  |      | 864  |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-3 | MW-3 |
|------------|------|------|
| 4/25/2016  | 1890 |      |
| 6/22/2016  | 2100 |      |
| 8/9/2016   | 2050 |      |
| 8/24/2016  | 2190 |      |
| 10/4/2016  | 1950 |      |
| 10/26/2016 | 1980 |      |
| 11/21/2016 | 2060 |      |
| 1/18/2017  | 2620 |      |
| 3/22/2017  | 3200 |      |
| 4/18/2017  | 2500 |      |
| 5/31/2017  | 2800 |      |
| 8/23/2017  | 2600 |      |
| 5/24/2018  | 2700 |      |
| 6/12/2018  | 2500 |      |
| 10/17/2018 | 2700 |      |
| 11/19/2018 | 3000 |      |
| 4/10/2019  | 2460 |      |
| 5/14/2019  | 2460 |      |
| 10/8/2019  |      | 2950 |
| 10/16/2019 |      | 2820 |
| 4/6/2020   |      | 1670 |
| 7/13/2020  |      | 2130 |
| 2/22/2021  |      | 3040 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-4 | MW-4 |
|------------|------|------|
| 4/25/2016  | 2260 |      |
| 6/20/2016  | 2500 |      |
| 8/9/2016   | 2750 |      |
| 8/24/2016  | 2770 |      |
| 10/3/2016  | 3060 |      |
| 10/26/2016 | 2650 |      |
| 11/21/2016 | 2720 |      |
| 1/18/2017  | 2650 |      |
| 3/22/2017  | 2700 |      |
| 4/18/2017  | 2400 |      |
| 5/31/2017  | 2700 |      |
| 8/23/2017  | 2700 |      |
| 5/23/2018  | 2400 |      |
| 6/12/2018  | 2600 |      |
| 10/17/2018 | 2600 |      |
| 11/19/2018 | 2400 |      |
| 4/10/2019  | 2090 |      |
| 5/14/2019  | 2240 |      |
| 10/10/2019 |      | 2690 |
| 10/16/2019 |      | 3050 |
| 4/6/2020   |      | 1810 |
| 7/14/2020  |      | 1970 |
| 2/22/2021  |      | 2040 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-5 | MW-5 |
|------------|------|------|
| 4/25/2016  | 2390 |      |
| 6/21/2016  | 2500 |      |
| 10/12/2017 | 2300 |      |
| 10/13/2017 | 2300 |      |
| 10/14/2017 | 2300 |      |
| 10/15/2017 | 2300 |      |
| 10/16/2017 | 2300 |      |
| 10/17/2017 | 2200 |      |
| 11/16/2017 | 2200 |      |
| 5/23/2018  | 2400 |      |
| 11/20/2018 | 2500 |      |
| 5/14/2019  | 2380 |      |
| 10/10/2019 |      | 2460 |
| 4/7/2020   |      | 2050 |
| 7/14/2020  |      | 2080 |
| 2/23/2021  |      | 2210 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-6 | MW-6 |
|------------|------|------|
| 4/27/2016  | 2090 |      |
| 6/21/2016  | 2000 |      |
| 10/12/2017 | 2000 |      |
| 10/13/2017 | 2000 |      |
| 10/14/2017 | 1900 |      |
| 10/15/2017 | 1900 |      |
| 10/16/2017 | 1900 |      |
| 10/17/2017 | 1900 |      |
| 11/16/2017 | 1800 |      |
| 5/23/2018  | 2000 |      |
| 11/20/2018 | 2200 |      |
| 5/15/2019  | 2110 |      |
| 10/10/2019 |      | 2330 |
| 4/8/2020   |      | 1900 |
| 7/14/2020  |      | 1970 |
| 2/23/2021  |      | 2010 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-7     | MW-7 |
|------------|----------|------|
| 4/27/2016  | 1050     |      |
| 6/21/2016  | 1410     |      |
| 10/12/2017 | 1400     |      |
| 10/13/2017 | 1400     |      |
| 10/14/2017 | 1300     |      |
| 10/15/2017 | 1300     |      |
| 10/16/2017 | 1300     |      |
| 10/17/2017 | 1300     |      |
| 11/16/2017 | 1300     |      |
| 5/23/2018  | 1900 (O) |      |
| 11/20/2018 | 1100     |      |
| 5/15/2019  | 1510     |      |
| 10/8/2019  |          | 1570 |
| 4/8/2020   |          | 1270 |
| 7/14/2020  |          | 1330 |
| 2/23/2021  |          | 1320 |



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-8     | MW-8 |
|------------|----------|------|
| 4/27/2016  | 1550     |      |
| 6/21/2016  | 1470     |      |
| 10/12/2017 | 1400     |      |
| 10/13/2017 | 1600     |      |
| 10/14/2017 | 1400     |      |
| 10/15/2017 | 1400     |      |
| 10/16/2017 | 1400     |      |
| 10/17/2017 | 1400     |      |
| 11/16/2017 | 1400     |      |
| 5/23/2018  | 2100 (o) |      |
| 11/20/2018 | 1400     |      |
| 5/15/2019  | 1640     |      |
| 10/9/2019  |          | 1550 |
| 4/8/2020   |          | 1380 |
| 7/15/2020  |          | 1410 |
| 2/23/2021  |          | 1420 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-1     | MW-1 |
|------------|----------|------|
| 4/26/2016  | 2080     |      |
| 6/20/2016  | 2060     |      |
| 8/8/2016   | 2070     |      |
| 8/24/2016  | 2040     |      |
| 10/3/2016  | 2110     |      |
| 10/26/2016 | 2000     |      |
| 11/21/2016 | 2070     |      |
| 1/17/2017  | 1930     |      |
| 3/22/2017  | 2060     |      |
| 4/18/2017  | 2140     |      |
| 5/30/2017  | 2240     |      |
| 8/23/2017  | 2160     |      |
| 5/22/2018  | 2380     |      |
| 6/12/2018  | 2400     |      |
| 10/17/2018 | 2220     |      |
| 11/19/2018 | 2360     |      |
| 4/10/2019  | 2630     |      |
| 5/14/2019  | 2340     |      |
| 10/8/2019  |          | 2330 |
| 10/16/2019 | 3650 (o) |      |
| 4/6/2020   |          | 2240 |
| 7/13/2020  |          | 2240 |
| 2/22/2021  |          | 2230 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-2 | MW-2 |
|------------|------|------|
| 4/25/2016  | 1260 |      |
| 6/20/2016  | 1620 |      |
| 8/8/2016   | 1740 |      |
| 8/24/2016  | 1720 |      |
| 10/3/2016  | 1800 |      |
| 10/26/2016 | 1800 |      |
| 11/21/2016 | 1740 |      |
| 1/17/2017  | 1960 |      |
| 3/22/2017  | 1510 |      |
| 4/18/2017  | 1580 |      |
| 5/31/2017  | 1730 |      |
| 8/23/2017  | 1550 |      |
| 5/22/2018  | 1500 |      |
| 6/12/2018  | 1550 |      |
| 10/17/2018 | 1740 |      |
| 11/19/2018 | 1990 |      |
| 4/10/2019  | 1250 |      |
| 5/14/2019  | 1480 |      |
| 10/8/2019  |      | 1840 |
| 10/16/2019 |      | 1830 |
| 4/6/2020   |      | 1440 |
| 7/13/2020  |      | 1540 |
| 2/22/2021  |      | 1620 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-3 | MW-3 |
|------------|------|------|
| 4/25/2016  | 2720 |      |
| 6/22/2016  | 3250 |      |
| 8/9/2016   | 3050 |      |
| 8/24/2016  | 3080 |      |
| 10/4/2016  | 2900 |      |
| 10/26/2016 | 2940 |      |
| 11/21/2016 | 3090 |      |
| 1/18/2017  | 4020 |      |
| 3/22/2017  | 4180 |      |
| 4/18/2017  | 4440 |      |
| 5/31/2017  | 3970 |      |
| 8/23/2017  | 4050 |      |
| 5/24/2018  | 3680 |      |
| 6/12/2018  | 3820 |      |
| 10/17/2018 | 4730 |      |
| 11/19/2018 | 4710 |      |
| 4/10/2019  | 3680 |      |
| 5/14/2019  | 3580 |      |
| 10/8/2019  |      | 4720 |
| 10/16/2019 |      | 4210 |
| 4/6/2020   |      | 2630 |
| 7/13/2020  |      | 3650 |
| 2/22/2021  |      | 4670 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-4     | MW-4 |
|------------|----------|------|
| 4/25/2016  | 3300     |      |
| 6/20/2016  | 3870     |      |
| 8/9/2016   | 4140     |      |
| 8/24/2016  | 4190     |      |
| 10/3/2016  | 4190     |      |
| 10/26/2016 | 4400     |      |
| 11/21/2016 | 4230     |      |
| 1/18/2017  | 4120     |      |
| 3/22/2017  | 3980     |      |
| 4/18/2017  | 3880     |      |
| 5/31/2017  | 4210     |      |
| 8/23/2017  | 3990     |      |
| 5/23/2018  | 3740     |      |
| 6/12/2018  | 4080     |      |
| 10/17/2018 | 4250     |      |
| 11/19/2018 | 3920     |      |
| 4/10/2019  | 3280     |      |
| 5/14/2019  | 3130 (D) |      |
| 10/10/2019 |          | 4000 |
| 10/16/2019 |          | 4060 |
| 4/6/2020   |          | 2820 |
| 7/14/2020  |          | 3310 |
| 2/22/2021  |          | 3190 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-5 | MW-5 |
|------------|------|------|
| 4/25/2016  | 3660 |      |
| 6/21/2016  | 3920 |      |
| 10/12/2017 | 4000 |      |
| 10/13/2017 | 3960 |      |
| 10/14/2017 | 3910 |      |
| 10/15/2017 | 3890 |      |
| 10/16/2017 | 3980 |      |
| 10/17/2017 | 3940 |      |
| 11/16/2017 | 3930 |      |
| 5/23/2018  | 3660 |      |
| 11/20/2018 | 3780 |      |
| 5/14/2019  | 3520 |      |
| 10/10/2019 |      | 3830 |
| 4/7/2020   |      | 3270 |
| 7/14/2020  |      | 3710 |
| 2/23/2021  |      | 3740 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-6 | MW-6 |
|------------|------|------|
| 4/27/2016  | 3290 |      |
| 6/21/2016  | 3250 |      |
| 10/12/2017 | 3220 |      |
| 10/13/2017 | 3250 |      |
| 10/14/2017 | 3260 |      |
| 10/15/2017 | 3260 |      |
| 10/16/2017 | 3360 |      |
| 10/17/2017 | 3420 |      |
| 11/16/2017 | 3280 |      |
| 5/23/2018  | 3340 |      |
| 11/20/2018 | 3330 |      |
| 5/15/2019  | 3130 |      |
| 10/10/2019 |      | 3260 |
| 4/8/2020   |      | 2940 |
| 7/14/2020  |      | 3270 |
| 2/23/2021  |      | 3230 |

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-7 | MW-7 |
|------------|------|------|
| 4/27/2016  | 1640 |      |
| 6/21/2016  | 2460 |      |
| 10/12/2017 | 2460 |      |
| 10/13/2017 | 2420 |      |
| 10/14/2017 | 2320 |      |
| 10/15/2017 | 1150 |      |
| 10/16/2017 | 2320 |      |
| 10/17/2017 | 2360 |      |
| 11/16/2017 | 2460 |      |
| 5/23/2018  | 2390 |      |
| 11/20/2018 | 2090 |      |
| 5/15/2019  | 2310 |      |
| 10/8/2019  |      | 2340 |
| 4/8/2020   |      | 2230 |
| 7/14/2020  |      | 2210 |
| 2/23/2021  |      | 2320 |



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:43 AM View: Mann-Whitney  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

---

|            | MW-8 | MW-8 |
|------------|------|------|
| 4/27/2016  | 2480 |      |
| 6/21/2016  | 2360 |      |
| 10/12/2017 | 2530 |      |
| 10/13/2017 | 2740 |      |
| 10/14/2017 | 2630 |      |
| 10/15/2017 | 2530 |      |
| 10/16/2017 | 2740 |      |
| 10/17/2017 | 2650 |      |
| 11/16/2017 | 2650 |      |
| 5/23/2018  | 2750 |      |
| 11/20/2018 | 2520 |      |
| 5/15/2019  | 2540 |      |
| 10/9/2019  |      | 2590 |
| 4/8/2020   |      | 2450 |
| 7/15/2020  |      | 2460 |
| 2/23/2021  |      | 2550 |

FIGURE E.

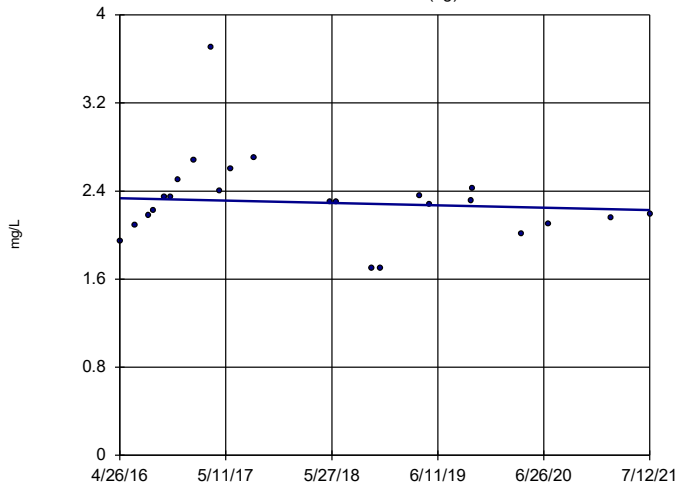
# Appendix III Trend Test - Upgradient Wells - All Results (No Significant)

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:50 AM

| <u>Constituent</u>     | <u>Well</u> | <u>Slope</u> | <u>Calc.</u> | <u>Critical</u> | <u>Sig.</u> | <u>N</u> | <u>%NDs</u> | <u>Normality</u> | <u>Xform</u> | <u>Alpha</u> | <u>Method</u> |
|------------------------|-------------|--------------|--------------|-----------------|-------------|----------|-------------|------------------|--------------|--------------|---------------|
| Chloride, Total (mg/L) | MW-1 (bg)   | -0.0204      | -17          | -105            | No          | 24       | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L) | MW-2 (bg)   | -0.05131     | -15          | -105            | No          | 24       | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L) | MW-3 (bg)   | 0.06882      | 59           | 105             | No          | 24       | 8.333       | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L) | MW-4 (bg)   | -0.06862     | -70          | -105            | No          | 24       | 4.167       | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)         | MW-1 (bg)   | -0.01437     | -88          | -105            | No          | 24       | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)         | MW-2 (bg)   | 0.04162      | 102          | 105             | No          | 24       | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)         | MW-3 (bg)   | -0.008517    | -8           | -105            | No          | 24       | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)         | MW-4 (bg)   | 0.01244      | 57           | 111             | No          | 25       | 0           | n/a              | n/a          | 0.01         | NP            |

### Sen's Slope Estimator

MW-1 (bg)

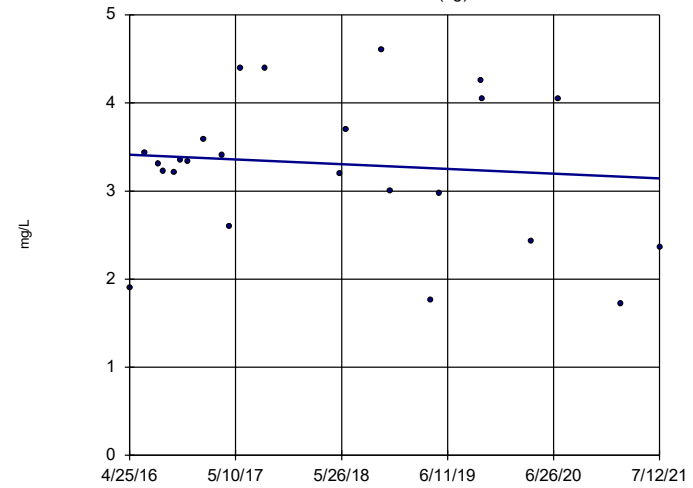


n = 24  
 Slope = -0.0204  
 units per year.  
 Mann-Kendall  
 statistic = -17  
 critical = -105  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:49 AM View: Appendix III - Interwell  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-2 (bg)

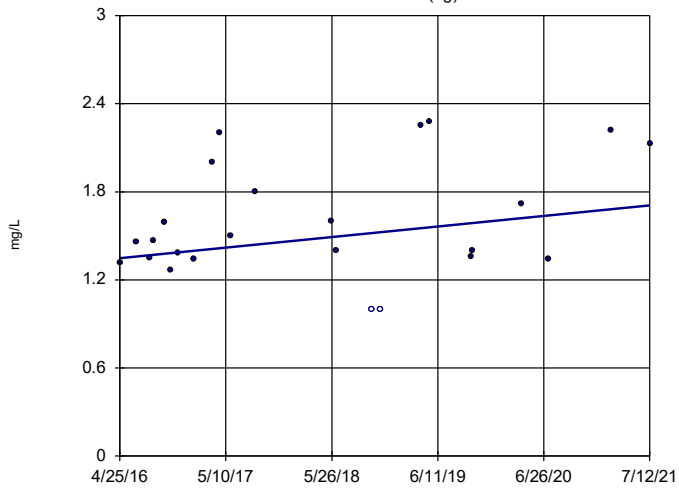


n = 24  
 Slope = -0.05131  
 units per year.  
 Mann-Kendall  
 statistic = -15  
 critical = -105  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:49 AM View: Appendix III - Interwell  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-3 (bg)

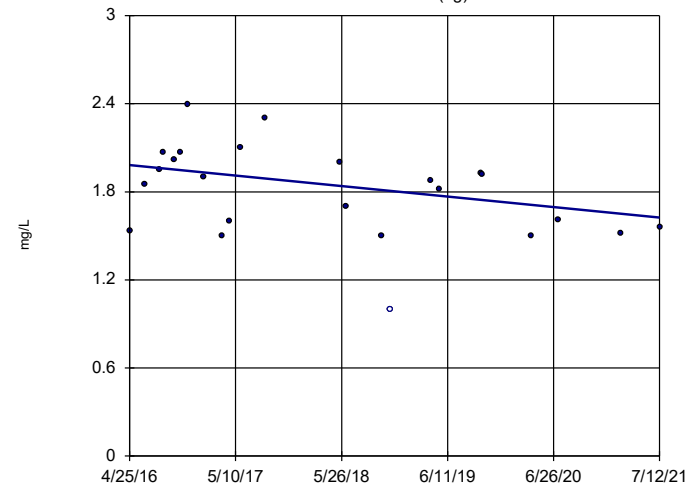


n = 24  
 Slope = 0.06882  
 units per year.  
 Mann-Kendall  
 statistic = 59  
 critical = 105  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:49 AM View: Appendix III - Interwell  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-4 (bg)

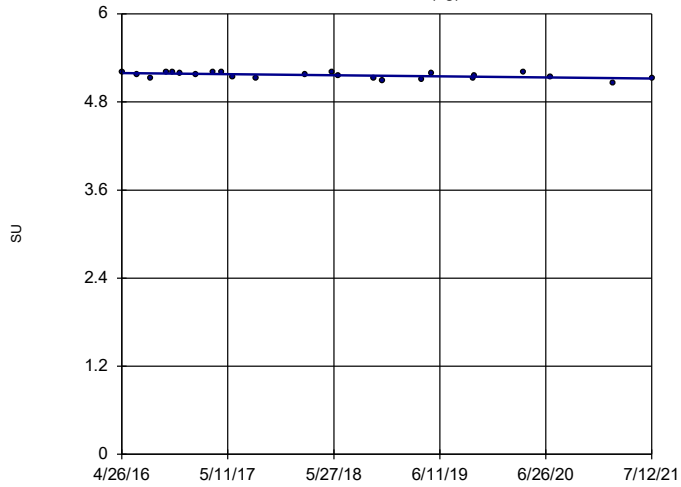


n = 24  
 Slope = -0.06862  
 units per year.  
 Mann-Kendall  
 statistic = -70  
 critical = -105  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:49 AM View: Appendix III - Interwell  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

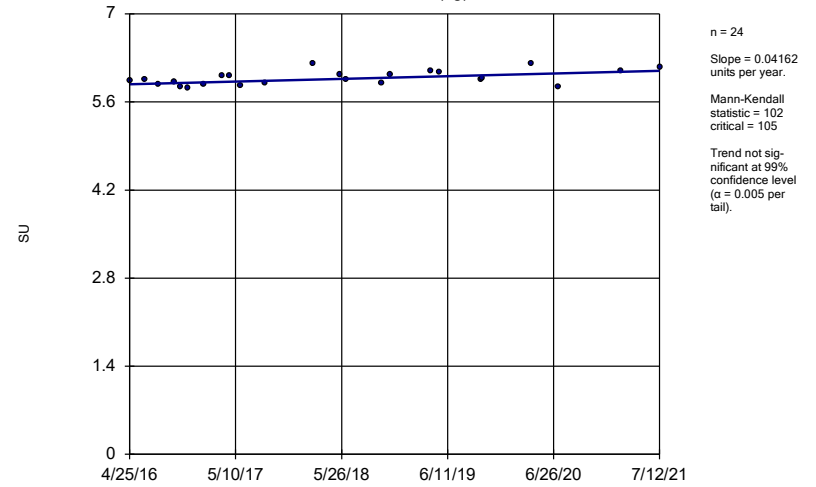
MW-1 (bg)



Constituent: pH, Field Analysis Run 11/16/2021 10:49 AM View: Appendix III - Interwell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

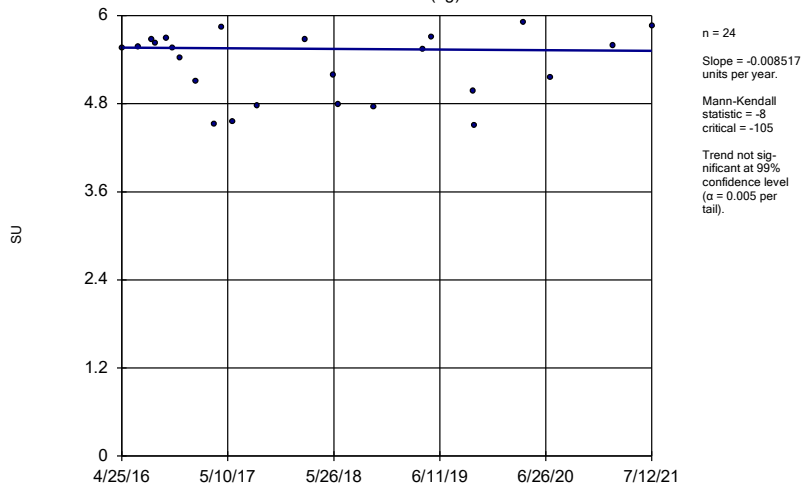
MW-2 (bg)



Constituent: pH, Field Analysis Run 11/16/2021 10:49 AM View: Appendix III - Interwell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

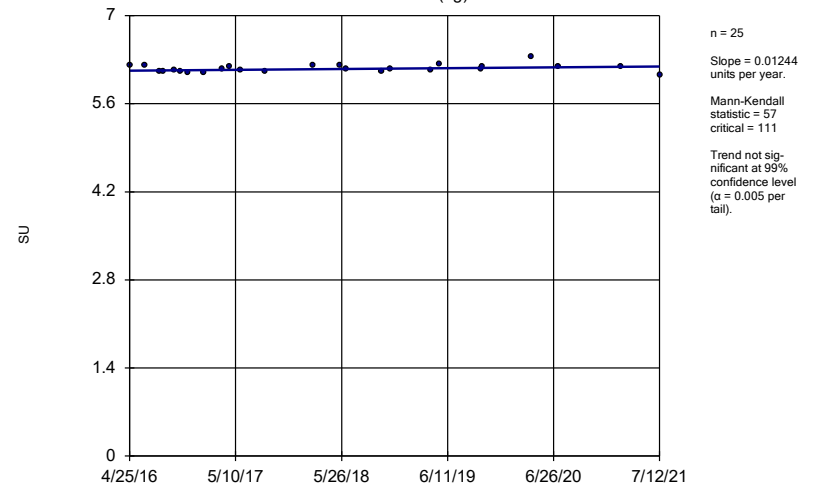
MW-3 (bg)



Constituent: pH, Field Analysis Run 11/16/2021 10:49 AM View: Appendix III - Interwell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-4 (bg)



Constituent: pH, Field Analysis Run 11/16/2021 10:49 AM View: Appendix III - Interwell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

FIGURE F.

# Appendix III Intrawell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:48 AM

| Constituent            | Well | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs | ND Adj. | Transform | Alpha   | Method             |
|------------------------|------|------------|------------|-----------|---------|------|------|---------|-----------|------|---------|-----------|---------|--------------------|
| Fluoride, total (mg/L) | MW-7 | 0.2144     | n/a        | 7/20/2021 | 0.286   | Yes  | 17   | 0.1848  | 0.01443   | 0    | None    | No        | 0.00188 | Param Intra 1 of 2 |
| Fluoride, total (mg/L) | MW-8 | 0.2341     | n/a        | 7/20/2021 | 0.262   | Yes  | 17   | 0.21    | 0.01171   | 0    | None    | No        | 0.00188 | Param Intra 1 of 2 |

# Appendix III Intrawell Prediction Limits - All Results

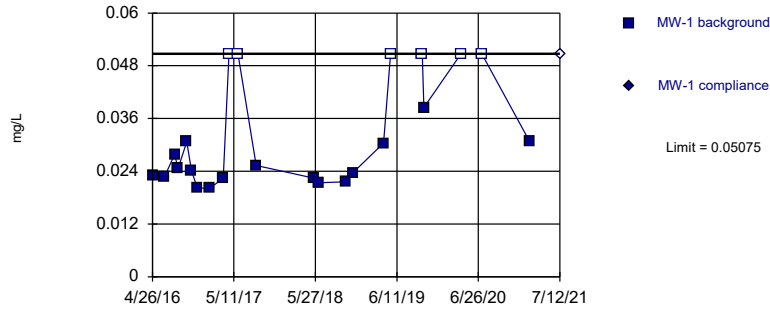
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:48 AM

| Constituent                         | Well        | Upper Lim.    | Lower Lim. | Date             | Observ.      | Sig.       | Bg N      | Bg Mean       | Std. Dev.      | %NDs     | ND Adj.      | Transform | Alpha          | Method                      |
|-------------------------------------|-------------|---------------|------------|------------------|--------------|------------|-----------|---------------|----------------|----------|--------------|-----------|----------------|-----------------------------|
| Boron, total (mg/L)                 | MW-1        | 0.05075       | n/a        | 7/12/2021        | 0.05075ND    | No         | 23        | n/a           | n/a            | 26.09    | n/a          | n/a       | 0.003415       | NP Intra (normality) 1 of 2 |
| Boron, total (mg/L)                 | MW-2        | 0.04152       | n/a        | 7/12/2021        | 0.05075ND    | No         | 23        | 0.1724        | 0.01607        | 21.74    | Kaplan-Meier | sqrt(x)   | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-3        | 0.05868       | n/a        | 7/12/2021        | 0.05075ND    | No         | 23        | 0.04304       | 0.008019       | 21.74    | Kaplan-Meier | No        | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-4        | 0.05253       | n/a        | 7/12/2021        | 0.0411J      | No         | 22        | 0.04512       | 0.003776       | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-5        | 0.04034       | n/a        | 7/21/2021        | 0.0319J      | No         | 15        | 0.03281       | 0.003562       | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-6        | 0.1015        | n/a        | 7/20/2021        | 0.0608J      | No         | 16        | 0.07909       | 0.01082        | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-7        | 0.0854        | n/a        | 7/20/2021        | 0.0721J      | No         | 15        | 0.07347       | 0.005639       | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Boron, total (mg/L)                 | MW-8        | 0.0831        | n/a        | 7/20/2021        | 0.0656J      | No         | 16        | n/a           | n/a            | 0        | n/a          | n/a       | 0.006456       | NP Intra (normality) 1 of 2 |
| Calcium, total (mg/L)               | MW-1        | 243           | n/a        | 7/12/2021        | 149          | No         | 23        | n/a           | n/a            | 0        | n/a          | n/a       | 0.003415       | NP Intra (normality) 1 of 2 |
| Calcium, total (mg/L)               | MW-2        | 214.8         | n/a        | 7/12/2021        | 159          | No         | 23        | 174.2         | 20.8           | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-3        | 416           | n/a        | 7/12/2021        | 252          | No         | 23        | 300           | 59.54          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-4        | 386.1         | n/a        | 7/12/2021        | 242          | No         | 23        | 304.8         | 41.68          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-5        | 459.6         | n/a        | 7/21/2021        | 384          | No         | 16        | 387           | 34.95          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-6        | 500.3         | n/a        | 7/20/2021        | 348          | No         | 16        | 388.9         | 53.66          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-7        | 343.5         | n/a        | 7/20/2021        | 254          | No         | 16        | 85434         | 15683          | 0        | None         | x^2       | 0.00188        | Param Intra 1 of 2          |
| Calcium, total (mg/L)               | MW-8        | 340           | n/a        | 7/20/2021        | 281          | No         | 16        | 303.1         | 17.76          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-1        | 0.1878        | n/a        | 7/12/2021        | 0.125        | No         | 24        | 0.1172        | 0.03644        | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-2        | 0.2528        | n/a        | 7/12/2021        | 0.196        | No         | 24        | 0.1456        | 0.05538        | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-3        | 0.5886        | n/a        | 7/12/2021        | 0.287        | No         | 24        | 0.3299        | 0.1336         | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-4        | 0.4215        | n/a        | 7/12/2021        | 0.35         | No         | 24        | 0.1114        | 0.03425        | 0        | None         | x^2       | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-5        | 0.42          | n/a        | 7/21/2021        | 0.331        | No         | 17        | 0.3204        | 0.0485         | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Fluoride, total (mg/L)              | MW-6        | 0.1576        | n/a        | 7/20/2021        | 0.131        | No         | 16        | 0.1372        | 0.009847       | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| <b>Fluoride, total (mg/L)</b>       | <b>MW-7</b> | <b>0.2144</b> | <b>n/a</b> | <b>7/20/2021</b> | <b>0.286</b> | <b>Yes</b> | <b>17</b> | <b>0.1848</b> | <b>0.01443</b> | <b>0</b> | <b>None</b>  | <b>No</b> | <b>0.00188</b> | <b>Param Intra 1 of 2</b>   |
| <b>Fluoride, total (mg/L)</b>       | <b>MW-8</b> | <b>0.2341</b> | <b>n/a</b> | <b>7/20/2021</b> | <b>0.262</b> | <b>Yes</b> | <b>17</b> | <b>0.21</b>   | <b>0.01171</b> | <b>0</b> | <b>None</b>  | <b>No</b> | <b>0.00188</b> | <b>Param Intra 1 of 2</b>   |
| Sulfate as SO4 (mg/L)               | MW-1        | 1665          | n/a        | 7/12/2021        | 1560         | No         | 22        | 1461          | 104.1          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-2        | 1274          | n/a        | 7/12/2021        | 763          | No         | 23        | 997.8         | 141.7          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-3        | 3272          | n/a        | 7/12/2021        | 2380         | No         | 23        | 2451          | 421.1          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-4        | 3143          | n/a        | 7/12/2021        | 1930         | No         | 23        | 2511          | 324            | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-5        | 2582          | n/a        | 7/21/2021        | 2240         | No         | 16        | 2304          | 133.9          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-6        | 2274          | n/a        | 7/20/2021        | 1930         | No         | 16        | 2001          | 131.7          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-7        | 1604          | n/a        | 7/20/2021        | 1170         | No         | 15        | 1324          | 132.3          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Sulfate as SO4 (mg/L)               | MW-8        | 1640          | n/a        | 7/20/2021        | 1500         | No         | 15        | n/a           | n/a            | 0        | n/a          | n/a       | 0.007533       | NP Intra (normality) 1 of 2 |
| Total Dissolved Solids [TDS] (mg/L) | MW-1        | 2519          | n/a        | 7/12/2021        | 2210         | No         | 22        | 2197          | 164            | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-2        | 2021          | n/a        | 7/12/2021        | 1390         | No         | 23        | 1643          | 193.7          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-3        | 5051          | n/a        | 7/12/2021        | 3510         | No         | 23        | 3729          | 678.1          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-4        | 4600          | n/a        | 7/12/2021        | 3000         | No         | 23        | 1.5e7         | 3201096        | 0        | None         | x^2       | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-5        | 4202          | n/a        | 7/21/2021        | 3570         | No         | 16        | 3794          | 196.6          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-6        | 3466          | n/a        | 7/20/2021        | 3090         | No         | 16        | 1.1e7         | 676605         | 0        | None         | x^2       | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-7        | 2590          | n/a        | 7/20/2021        | 2110         | No         | 16        | 6.3e16        | 2.6e16         | 0        | None         | x^5       | 0.00188        | Param Intra 1 of 2          |
| Total Dissolved Solids [TDS] (mg/L) | MW-8        | 2808          | n/a        | 7/20/2021        | 2420         | No         | 16        | 2573          | 113.3          | 0        | None         | No        | 0.00188        | Param Intra 1 of 2          |



Within Limit

Prediction Limit  
Intrawell Non-parametric

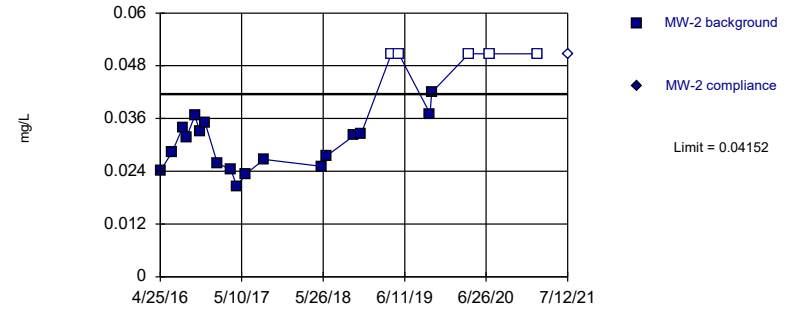


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 23 background values. 26.09% NDs. Well-constituent pair annual alpha = 0.006819. Individual comparison alpha = 0.003415 (1 of 2).

Constituent: Boron, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

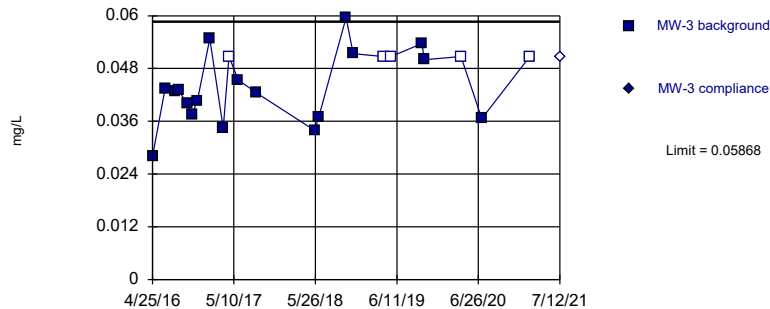


Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.1724, Std. Dev.=0.01607, n=23, 21.74% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9025, critical = 0.881. Kappa = 1.95 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Boron, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

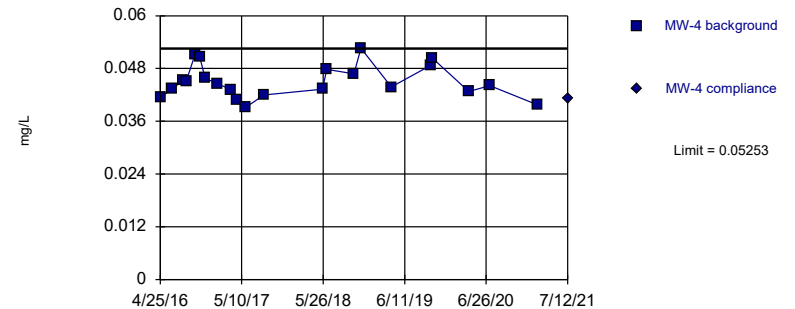


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.04304, Std. Dev.=0.008019, n=23, 21.74% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9637, critical = 0.881. Kappa = 1.95 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Boron, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

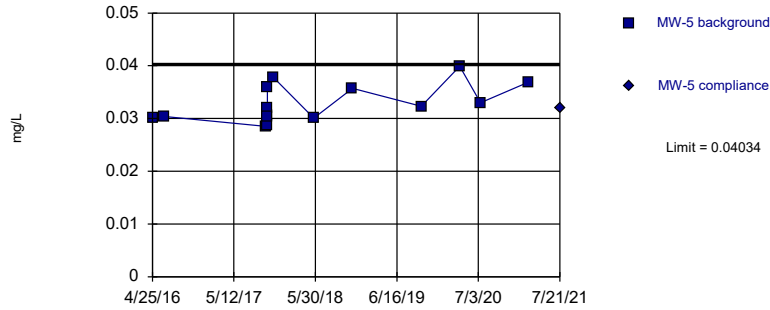


Background Data Summary: Mean=0.04512, Std. Dev.=0.003776, n=22. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9555, critical = 0.878. Kappa = 1.962 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Boron, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

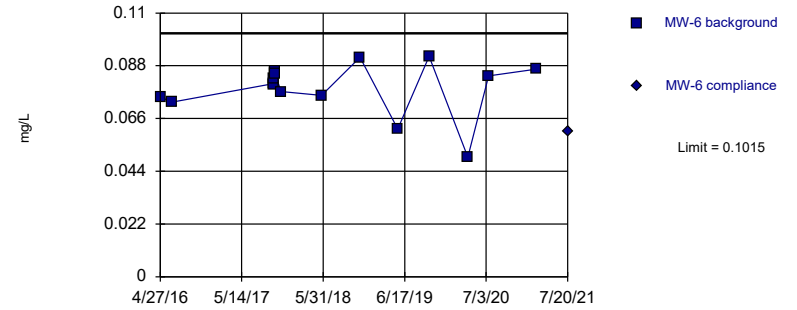


Background Data Summary: Mean=0.03281, Std. Dev.=0.003562, n=15. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9042, critical = 0.835. Kappa = 2.115 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Boron, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

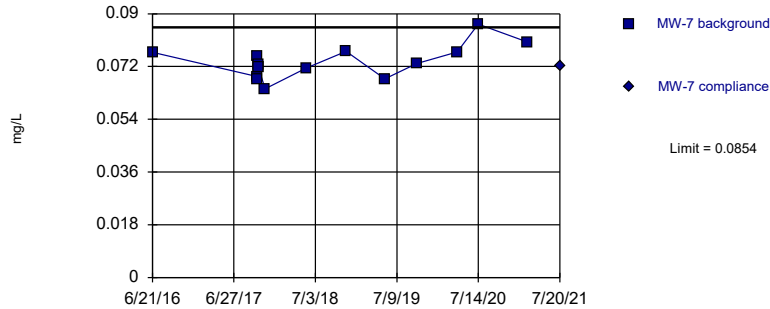


Background Data Summary: Mean=0.07909, Std. Dev.=0.01082, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8862, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Boron, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

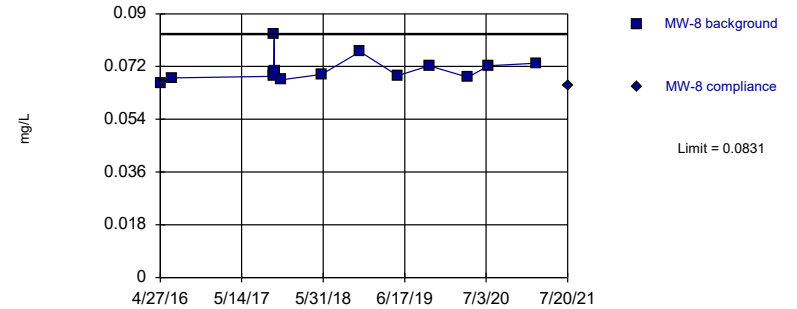


Background Data Summary: Mean=0.07347, Std. Dev.=0.005639, n=15. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9629, critical = 0.835. Kappa = 2.115 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Boron, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Non-parametric

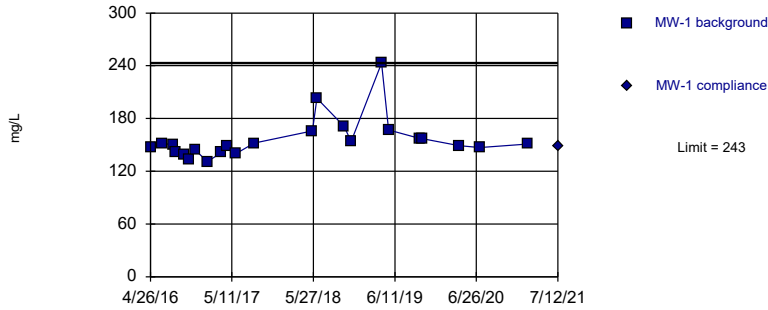


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 16 background values. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Boron, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

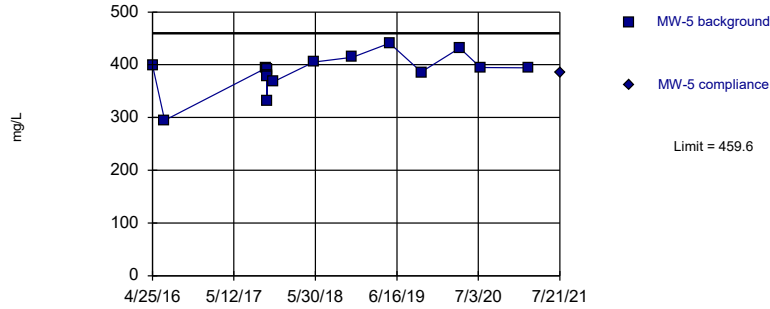
Within Limit

Prediction Limit  
Intrawell Non-parametric



Within Limit

Prediction Limit  
Intrawell Parametric

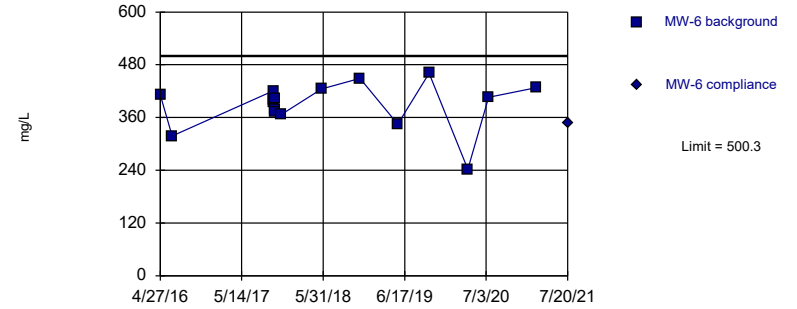


Background Data Summary: Mean=387, Std. Dev.=34.95, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8909, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

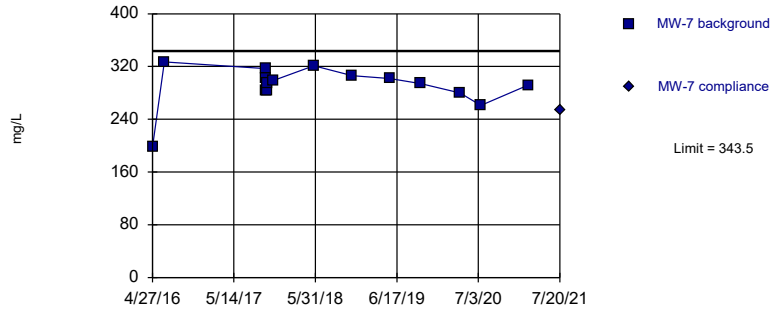


Background Data Summary: Mean=388.9, Std. Dev.=53.66, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8977, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

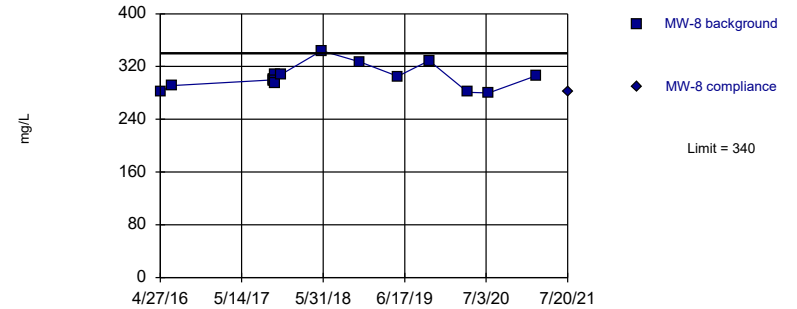


Background Data Summary (based on square transformation): Mean=85434, Std. Dev.=15683, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8569, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

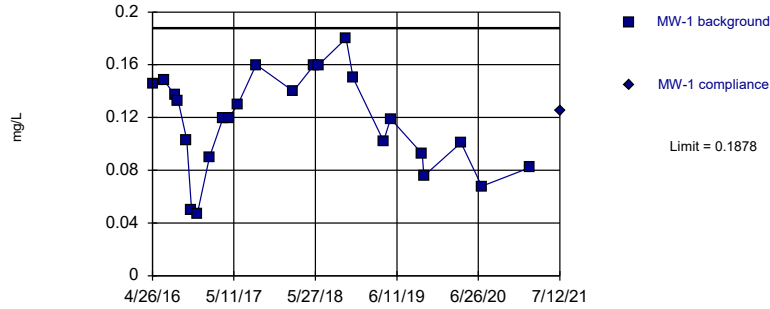


Background Data Summary: Mean=303.1, Std. Dev.=17.76, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9165, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

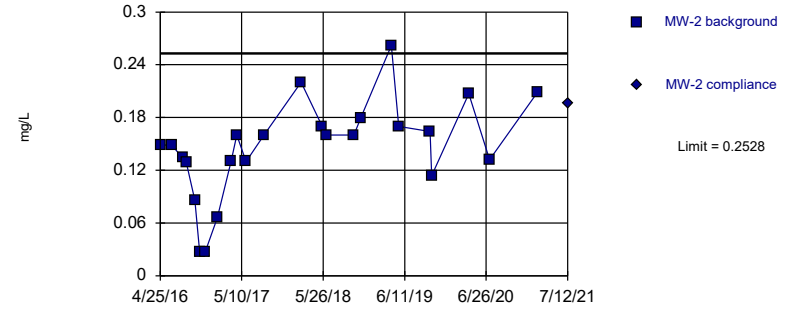


Background Data Summary: Mean=0.1172, Std. Dev.=0.03644, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9658, critical = 0.884. Kappa = 1.937 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

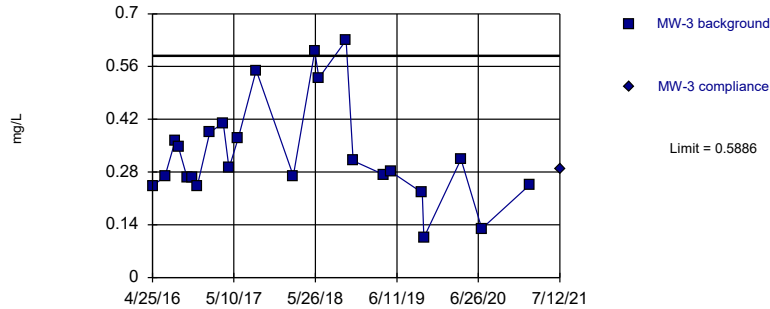


Background Data Summary: Mean=0.1456, Std. Dev.=0.05538, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9466, critical = 0.884. Kappa = 1.937 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

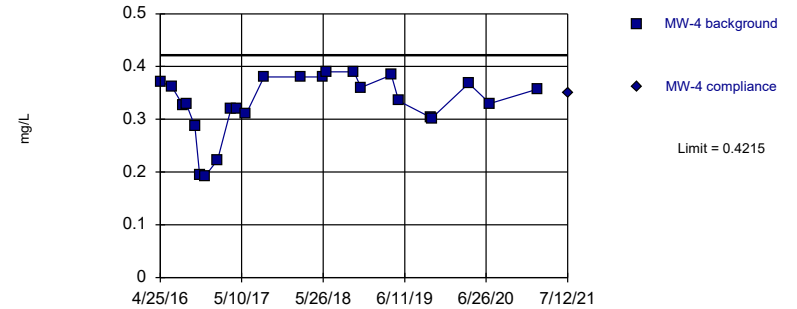


Background Data Summary: Mean=0.3299, Std. Dev.=0.1336, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9032, critical = 0.884. Kappa = 1.937 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

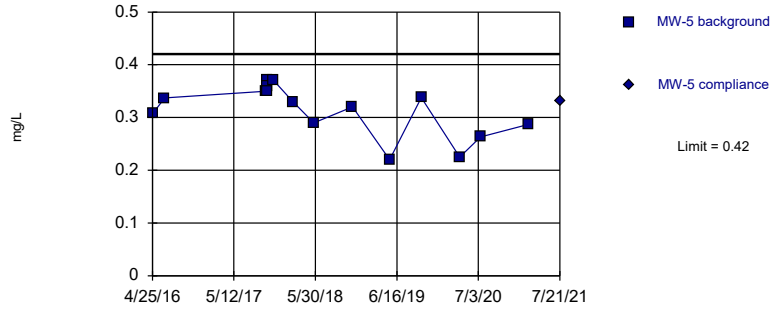


Background Data Summary (based on square transformation): Mean=0.1114, Std. Dev.=0.03425, n=24. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.897, critical = 0.884. Kappa = 1.937 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

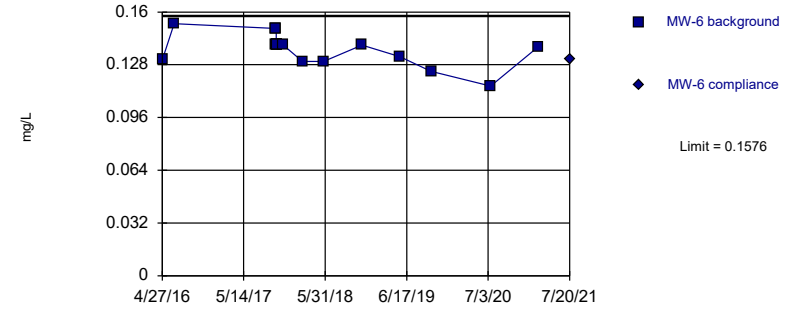


Background Data Summary: Mean=0.3204, Std. Dev.=0.0485, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8758, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

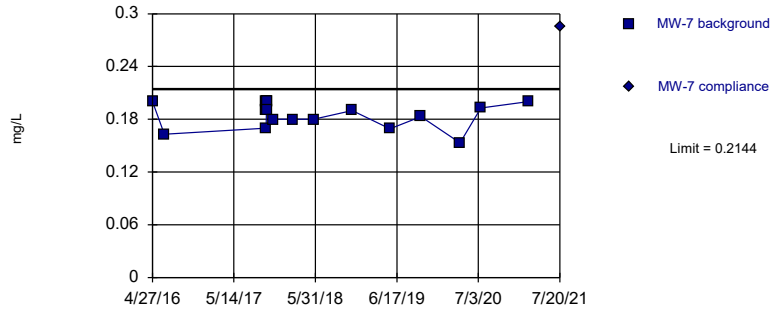


Background Data Summary: Mean=0.1372, Std. Dev.=0.009847, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9318, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Exceeds Limit

Prediction Limit  
Intrawell Parametric

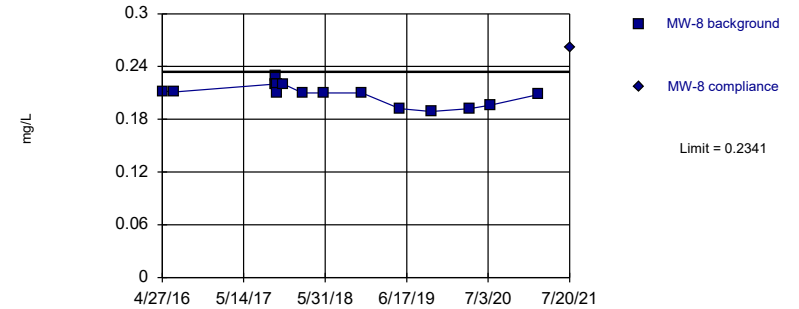


Background Data Summary: Mean=0.1848, Std. Dev.=0.01443, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9003, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Exceeds Limit

Prediction Limit  
Intrawell Parametric

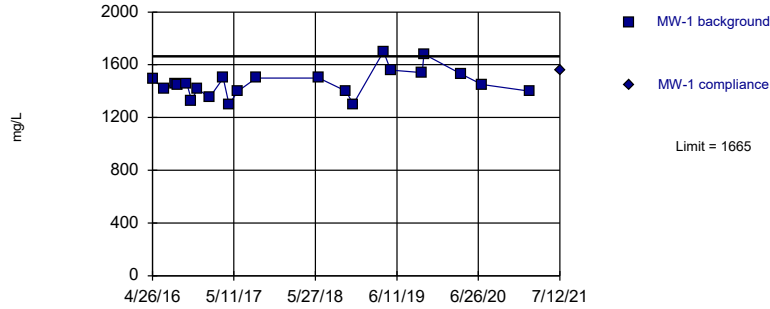


Background Data Summary: Mean=0.21, Std. Dev.=0.01171, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.904, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride, total Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

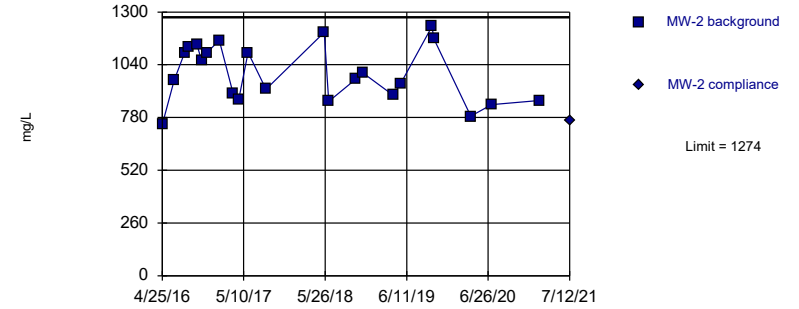


Background Data Summary: Mean=1461, Std. Dev.=104.1, n=22. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9462, critical = 0.878. Kappa = 1.962 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

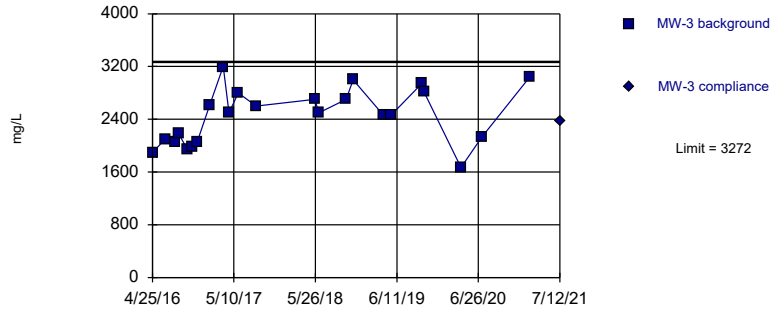


Background Data Summary: Mean=997.8, Std. Dev.=141.7, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9515, critical = 0.881. Kappa = 1.95 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

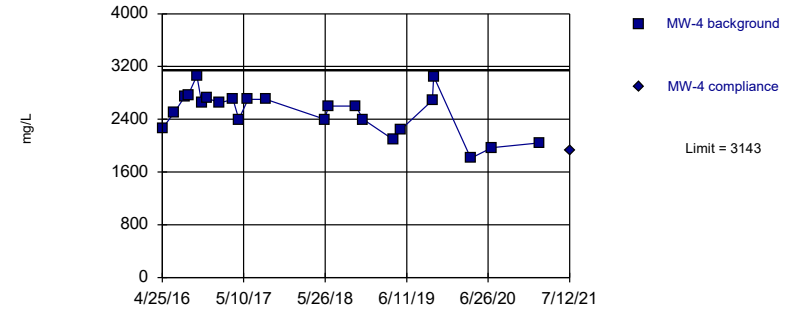


Background Data Summary: Mean=2451, Std. Dev.=421.1, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9657, critical = 0.881. Kappa = 1.95 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

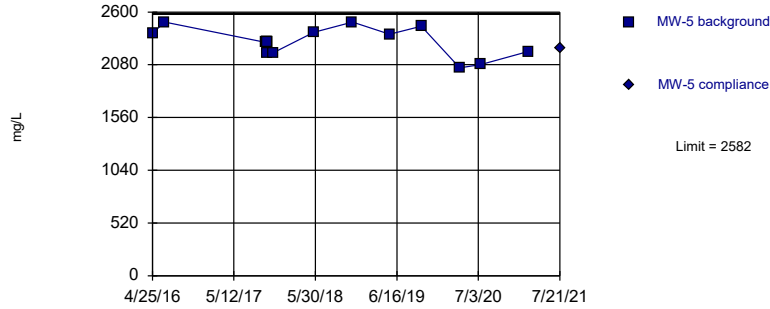


Background Data Summary: Mean=2511, Std. Dev.=324, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9443, critical = 0.881. Kappa = 1.95 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

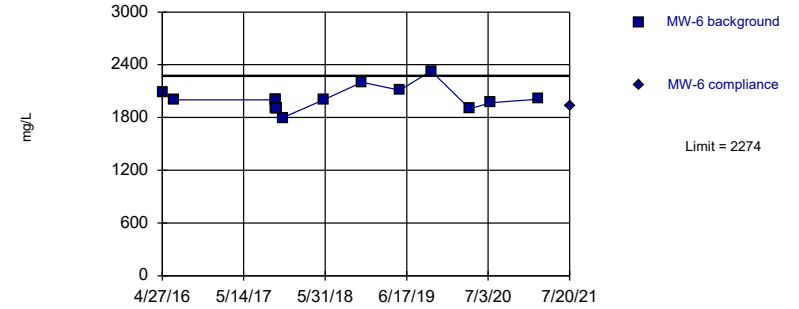


Background Data Summary: Mean=2304, Std. Dev.=133.9, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9454, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

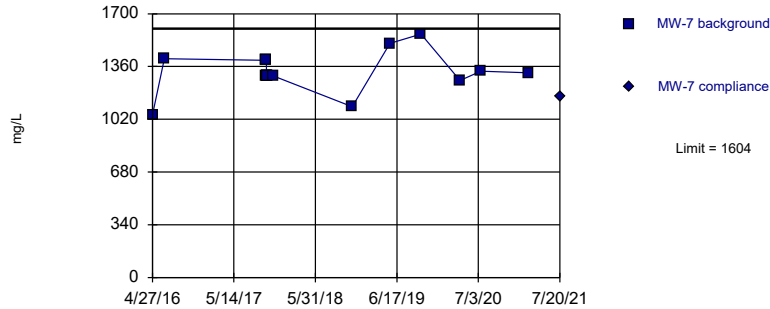


Background Data Summary: Mean=2001, Std. Dev.=131.7, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9014, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

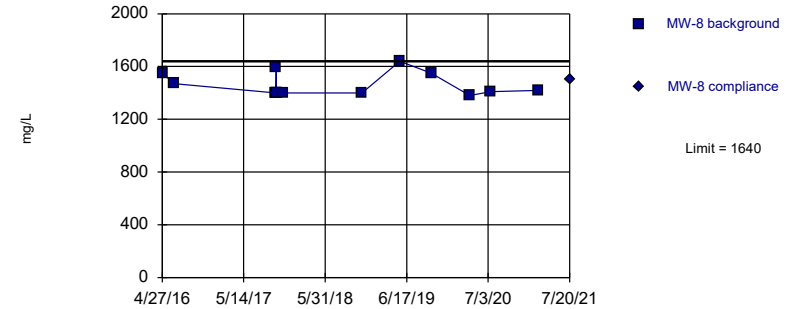


Background Data Summary: Mean=1324, Std. Dev.=132.3, n=15. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9168, critical = 0.835. Kappa = 2.115 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Non-parametric



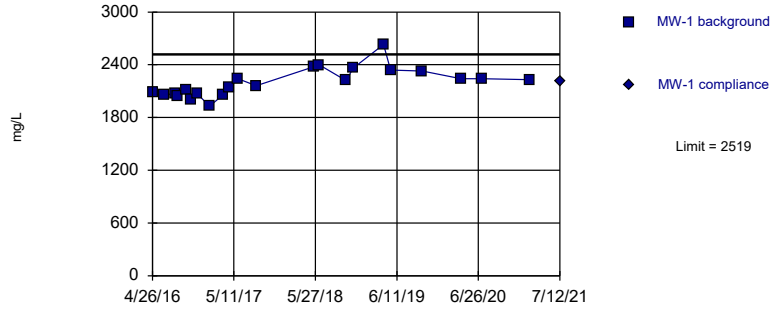
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 15 background values. Well-constituent pair annual alpha = 0.01501. Individual comparison alpha = 0.007533 (1 of 2).

Constituent: Sulfate as SO4 Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF



Within Limit

Prediction Limit  
Intrawell Parametric

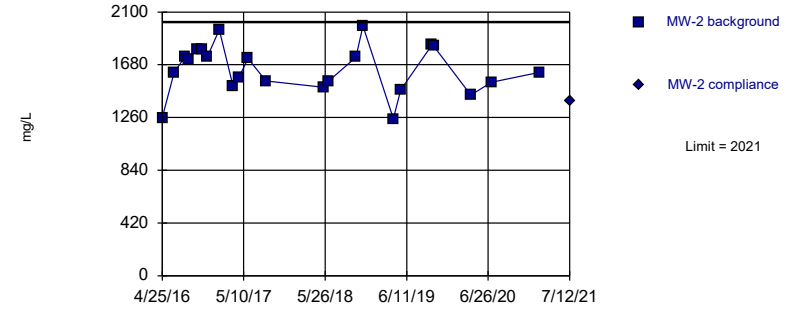


Background Data Summary: Mean=2197, Std. Dev.=164, n=22. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9479, critical = 0.878. Kappa = 1.962 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

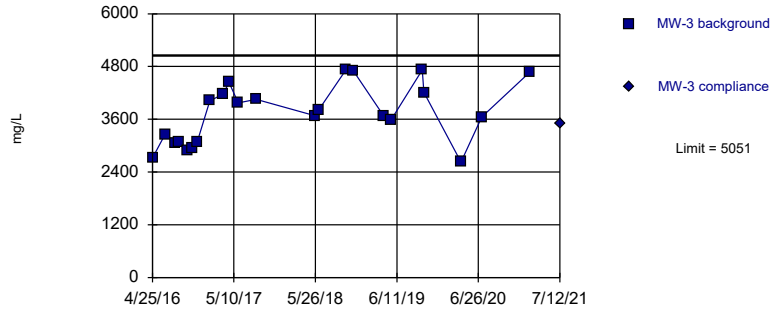


Background Data Summary: Mean=1643, Std. Dev.=193.7, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9661, critical = 0.881. Kappa = 1.95 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

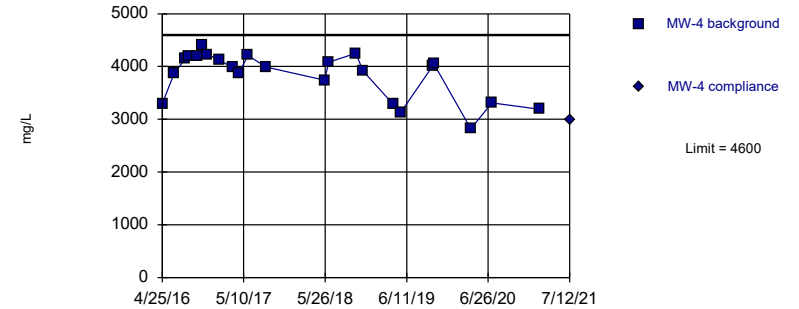


Background Data Summary: Mean=3729, Std. Dev.=678.1, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9398, critical = 0.881. Kappa = 1.95 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

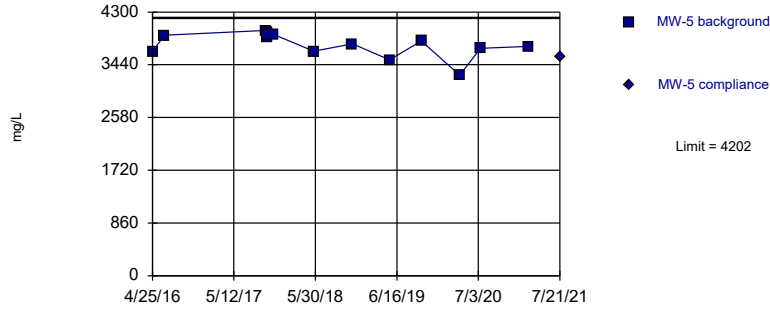


Background Data Summary (based on square transformation): Mean=1.5e7, Std. Dev.=3201096, n=23. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8861, critical = 0.881. Kappa = 1.95 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

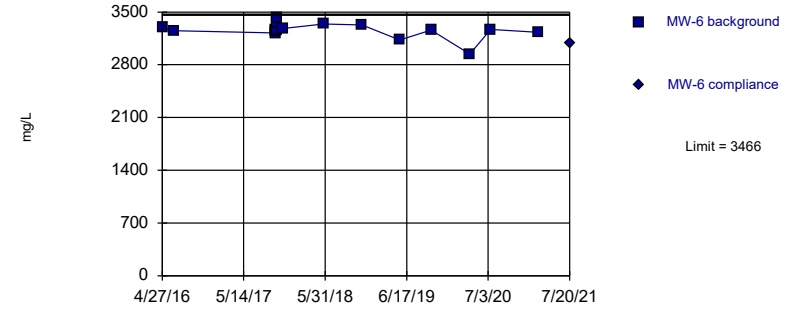


Background Data Summary: Mean=3794, Std. Dev.=196.6, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8671, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

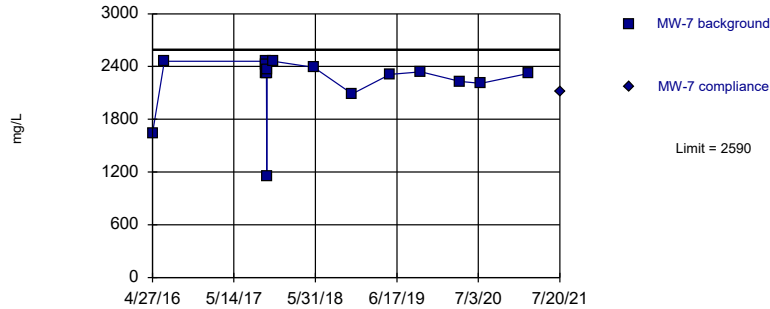


Background Data Summary (based on square transformation): Mean=1.1e7, Std. Dev.=676605, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.854, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric

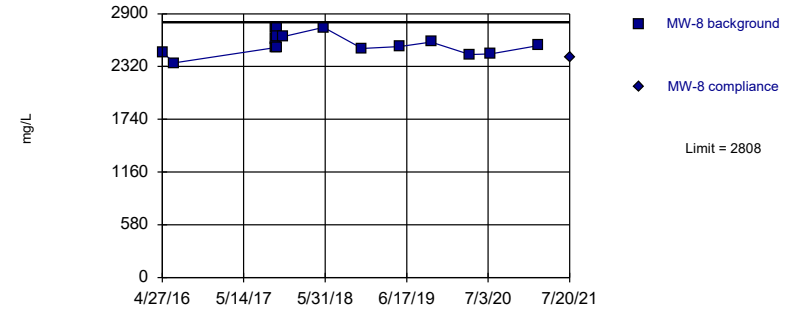


Background Data Summary (based on x^5 transformation): Mean=6.3e16, Std. Dev.=2.6e16, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8587, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=2573, Std. Dev.=113.3, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9548, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/16/2021 10:47 AM View: Appendix III - Intrawell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-1       | MW-1    |
|------------|------------|---------|
| 4/26/2016  | 0.0231 (J) |         |
| 6/20/2016  | 0.0227 (J) |         |
| 8/8/2016   | 0.0278 (J) |         |
| 8/24/2016  | 0.0247 (J) |         |
| 10/3/2016  | 0.0307 (J) |         |
| 10/26/2016 | 0.0241 (J) |         |
| 11/21/2016 | 0.0202 (J) |         |
| 1/17/2017  | 0.0201 (J) |         |
| 3/22/2017  | 0.0224 (J) |         |
| 4/18/2017  | <0.1015    |         |
| 5/30/2017  | <0.1015    |         |
| 8/23/2017  | 0.0253 (J) |         |
| 5/22/2018  | 0.0224 (J) |         |
| 6/12/2018  | 0.0214 (J) |         |
| 10/17/2018 | 0.0216 (J) |         |
| 11/19/2018 | 0.0237 (J) |         |
| 4/10/2019  | 0.0304 (J) |         |
| 5/14/2019  | <0.1015    |         |
| 10/8/2019  | <0.1015    |         |
| 10/16/2019 | 0.0385 (J) |         |
| 4/6/2020   | <0.1015    |         |
| 7/13/2020  | <0.1015    |         |
| 2/22/2021  | 0.0307 (J) |         |
| 7/12/2021  |            | <0.1015 |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-2       | MW-2    |
|------------|------------|---------|
| 4/25/2016  | 0.0241 (J) |         |
| 6/20/2016  | 0.0284 (J) |         |
| 8/8/2016   | 0.034 (J)  |         |
| 8/24/2016  | 0.0316 (J) |         |
| 10/3/2016  | 0.0367 (J) |         |
| 10/26/2016 | 0.0331 (J) |         |
| 11/21/2016 | 0.035 (J)  |         |
| 1/17/2017  | 0.0259 (J) |         |
| 3/22/2017  | 0.0243 (J) |         |
| 4/18/2017  | 0.0206 (J) |         |
| 5/31/2017  | 0.0234 (J) |         |
| 8/23/2017  | 0.0267 (J) |         |
| 5/22/2018  | 0.0251 (J) |         |
| 6/12/2018  | 0.0275 (J) |         |
| 10/17/2018 | 0.0321 (J) |         |
| 11/19/2018 | 0.0324 (J) |         |
| 4/10/2019  | <0.1015    |         |
| 5/14/2019  | <0.1015    |         |
| 10/8/2019  | 0.0371 (J) |         |
| 10/16/2019 | 0.0419 (J) |         |
| 4/6/2020   | <0.1015    |         |
| 7/13/2020  | <0.1015    |         |
| 2/22/2021  | <0.1015    |         |
| 7/12/2021  |            | <0.1015 |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-3       | MW-3    |
|------------|------------|---------|
| 4/25/2016  | 0.028 (J)  |         |
| 6/22/2016  | 0.0433 (J) |         |
| 8/9/2016   | 0.0429 (J) |         |
| 8/24/2016  | 0.0431 (J) |         |
| 10/4/2016  | 0.04 (J)   |         |
| 10/26/2016 | 0.0375 (J) |         |
| 11/21/2016 | 0.0406 (J) |         |
| 1/18/2017  | 0.0548 (J) |         |
| 3/22/2017  | 0.0344 (J) |         |
| 4/18/2017  | <0.1015    |         |
| 5/31/2017  | 0.0454 (J) |         |
| 8/23/2017  | 0.0425 (J) |         |
| 5/24/2018  | 0.0339 (J) |         |
| 6/12/2018  | 0.0371 (J) |         |
| 10/17/2018 | 0.0596 (J) |         |
| 11/19/2018 | 0.0514 (J) |         |
| 4/10/2019  | <0.1015    |         |
| 5/14/2019  | <0.1015    |         |
| 10/8/2019  | 0.0537 (J) |         |
| 10/16/2019 | 0.05 (J)   |         |
| 4/6/2020   | <0.1015    |         |
| 7/13/2020  | 0.0366 (J) |         |
| 2/22/2021  | <0.1015    |         |
| 7/12/2021  |            | <0.1015 |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-4       | MW-4       |
|------------|------------|------------|
| 4/25/2016  | 0.0414 (J) |            |
| 6/20/2016  | 0.0434 (J) |            |
| 8/9/2016   | 0.0453 (J) |            |
| 8/24/2016  | 0.0451 (J) |            |
| 10/3/2016  | 0.0511 (J) |            |
| 10/26/2016 | 0.0507 (J) |            |
| 11/21/2016 | 0.0458 (J) |            |
| 1/18/2017  | 0.0445 (J) |            |
| 3/22/2017  | 0.0432 (J) |            |
| 4/18/2017  | 0.0409 (J) |            |
| 5/31/2017  | 0.0392 (J) |            |
| 8/23/2017  | 0.042 (J)  |            |
| 5/23/2018  | 0.0433 (J) |            |
| 6/12/2018  | 0.0478 (J) |            |
| 10/17/2018 | 0.0468 (J) |            |
| 11/19/2018 | 0.0526 (J) |            |
| 4/10/2019  | 0.0438 (J) |            |
| 5/14/2019  | <0.203 (o) |            |
| 10/10/2019 | 0.0487 (J) |            |
| 10/16/2019 | 0.0505 (J) |            |
| 4/6/2020   | 0.0428 (J) |            |
| 7/14/2020  | 0.0441 (J) |            |
| 2/22/2021  | 0.0397 (J) |            |
| 7/12/2021  |            | 0.0411 (J) |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5       | MW-5       |
|------------|------------|------------|
| 4/25/2016  | 0.0301 (J) |            |
| 6/21/2016  | 0.0304 (J) |            |
| 10/12/2017 | 0.0285 (J) |            |
| 10/13/2017 | 0.0287 (J) |            |
| 10/14/2017 | 0.0305 (J) |            |
| 10/15/2017 | 0.0319 (J) |            |
| 10/16/2017 | 0.0304 (J) |            |
| 10/17/2017 | 0.036 (J)  |            |
| 11/16/2017 | 0.0377 (J) |            |
| 5/23/2018  | 0.0301 (J) |            |
| 11/20/2018 | 0.0357 (J) |            |
| 5/14/2019  | <0.203 (o) |            |
| 10/10/2019 | 0.0323 (J) |            |
| 4/7/2020   | 0.0399 (J) |            |
| 7/14/2020  | 0.033 (J)  |            |
| 2/23/2021  | 0.0369 (J) |            |
| 7/21/2021  |            | 0.0319 (J) |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-6       | MW-6       |
|------------|------------|------------|
| 4/27/2016  | 0.075 (J)  |            |
| 6/21/2016  | 0.0729 (J) |            |
| 10/12/2017 | 0.0806 (J) |            |
| 10/13/2017 | 0.0803 (J) |            |
| 10/14/2017 | 0.0828 (J) |            |
| 10/15/2017 | 0.0852 (J) |            |
| 10/16/2017 | 0.0858 (J) |            |
| 10/17/2017 | 0.0846 (J) |            |
| 11/16/2017 | 0.0772 (J) |            |
| 5/23/2018  | 0.0757 (J) |            |
| 11/20/2018 | 0.0915 (J) |            |
| 5/15/2019  | 0.0616 (J) |            |
| 10/10/2019 | 0.0919 (J) |            |
| 4/8/2020   | 0.0499 (J) |            |
| 7/14/2020  | 0.0838 (J) |            |
| 2/23/2021  | 0.0866 (J) |            |
| 7/20/2021  |            | 0.0608 (J) |



# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-7       | MW-7       |
|------------|------------|------------|
| 4/27/2016  | 0.253 (O)  |            |
| 6/21/2016  | 0.0768 (J) |            |
| 10/12/2017 | 0.0685 (J) |            |
| 10/13/2017 | 0.0674 (J) |            |
| 10/14/2017 | 0.0756 (J) |            |
| 10/15/2017 | 0.0719 (J) |            |
| 10/16/2017 | 0.0726 (J) |            |
| 10/17/2017 | 0.0716 (J) |            |
| 11/16/2017 | 0.0644 (J) |            |
| 5/23/2018  | 0.0715 (J) |            |
| 11/20/2018 | 0.0772 (J) |            |
| 5/15/2019  | 0.0678 (J) |            |
| 10/8/2019  | 0.073 (J)  |            |
| 4/8/2020   | 0.077 (J)  |            |
| 7/14/2020  | 0.0865 (J) |            |
| 2/23/2021  | 0.0803 (J) |            |
| 7/20/2021  |            | 0.0721 (J) |

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-8       | MW-8       |
|------------|------------|------------|
| 4/27/2016  | 0.0662 (J) |            |
| 6/21/2016  | 0.0681 (J) |            |
| 10/12/2017 | 0.0687 (J) |            |
| 10/13/2017 | 0.0831 (J) |            |
| 10/14/2017 | 0.0702 (J) |            |
| 10/15/2017 | 0.0702 (J) |            |
| 10/16/2017 | 0.0707 (J) |            |
| 10/17/2017 | 0.0695 (J) |            |
| 11/16/2017 | 0.0675 (J) |            |
| 5/23/2018  | 0.0693 (J) |            |
| 11/20/2018 | 0.0771 (J) |            |
| 5/15/2019  | 0.0689 (J) |            |
| 10/9/2019  | 0.0723 (J) |            |
| 4/8/2020   | 0.0683 (J) |            |
| 7/15/2020  | 0.0723 (J) |            |
| 2/23/2021  | 0.0731 (J) |            |
| 7/20/2021  |            | 0.0656 (J) |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-1 | MW-1 |
|------------|------|------|
| 4/26/2016  | 147  |      |
| 6/20/2016  | 152  |      |
| 8/8/2016   | 150  |      |
| 8/24/2016  | 142  |      |
| 10/3/2016  | 139  |      |
| 10/26/2016 | 133  |      |
| 11/21/2016 | 144  |      |
| 1/17/2017  | 131  |      |
| 3/22/2017  | 141  |      |
| 4/18/2017  | 149  |      |
| 5/30/2017  | 140  |      |
| 8/23/2017  | 152  |      |
| 5/22/2018  | 166  |      |
| 6/12/2018  | 203  |      |
| 10/17/2018 | 171  |      |
| 11/19/2018 | 154  |      |
| 4/10/2019  | 243  |      |
| 5/14/2019  | 167  |      |
| 10/8/2019  | 157  |      |
| 10/16/2019 | 157  |      |
| 4/6/2020   | 149  |      |
| 7/13/2020  | 147  |      |
| 2/22/2021  | 151  |      |
| 7/12/2021  |      | 149  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-2 | MW-2 |
|------------|------|------|
| 4/25/2016  | 123  |      |
| 6/20/2016  | 168  |      |
| 8/8/2016   | 180  |      |
| 8/24/2016  | 180  |      |
| 10/3/2016  | 184  |      |
| 10/26/2016 | 171  |      |
| 11/21/2016 | 179  |      |
| 1/17/2017  | 188  |      |
| 3/22/2017  | 155  |      |
| 4/18/2017  | 156  |      |
| 5/31/2017  | 151  |      |
| 8/23/2017  | 155  |      |
| 5/22/2018  | 172  |      |
| 6/12/2018  | 179  |      |
| 10/17/2018 | 200  |      |
| 11/19/2018 | 221  |      |
| 4/10/2019  | 200  |      |
| 5/14/2019  | 168  |      |
| 10/8/2019  | 190  |      |
| 10/16/2019 | 194  |      |
| 4/6/2020   | 152  |      |
| 7/13/2020  | 163  |      |
| 2/22/2021  | 178  |      |
| 7/12/2021  |      | 159  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-3 | MW-3 |
|------------|------|------|
| 4/25/2016  | 224  |      |
| 6/22/2016  | 266  |      |
| 8/9/2016   | 260  |      |
| 8/24/2016  | 274  |      |
| 10/4/2016  | 243  |      |
| 10/26/2016 | 254  |      |
| 11/21/2016 | 263  |      |
| 1/18/2017  | 431  |      |
| 3/22/2017  | 318  |      |
| 4/18/2017  | 296  |      |
| 5/31/2017  | 306  |      |
| 8/23/2017  | 298  |      |
| 5/24/2018  | 297  |      |
| 6/12/2018  | 318  |      |
| 10/17/2018 | 392  |      |
| 11/19/2018 | 387  |      |
| 4/10/2019  | 348  |      |
| 5/14/2019  | 254  |      |
| 10/8/2019  | 371  |      |
| 10/16/2019 | 346  |      |
| 4/6/2020   | 177  |      |
| 7/13/2020  | 264  |      |
| 2/22/2021  | 312  |      |
| 7/12/2021  |      | 252  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-4 | MW-4 |
|------------|------|------|
| 4/25/2016  | 261  |      |
| 6/20/2016  | 295  |      |
| 8/9/2016   | 318  |      |
| 8/24/2016  | 319  |      |
| 10/3/2016  | 293  |      |
| 10/26/2016 | 311  |      |
| 11/21/2016 | 320  |      |
| 1/18/2017  | 417  |      |
| 3/22/2017  | 292  |      |
| 4/18/2017  | 302  |      |
| 5/31/2017  | 284  |      |
| 8/23/2017  | 297  |      |
| 5/23/2018  | 296  |      |
| 6/12/2018  | 355  |      |
| 10/17/2018 | 342  |      |
| 11/19/2018 | 289  |      |
| 4/10/2019  | 356  |      |
| 5/14/2019  | 254  |      |
| 10/10/2019 | 302  |      |
| 10/16/2019 | 356  |      |
| 4/6/2020   | 222  |      |
| 7/14/2020  | 259  |      |
| 2/22/2021  | 271  |      |
| 7/12/2021  |      | 242  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5 | MW-5 |
|------------|------|------|
| 4/25/2016  | 399  |      |
| 6/21/2016  | 295  |      |
| 10/12/2017 | 394  |      |
| 10/13/2017 | 389  |      |
| 10/14/2017 | 391  |      |
| 10/15/2017 | 332  |      |
| 10/16/2017 | 380  |      |
| 10/17/2017 | 377  |      |
| 11/16/2017 | 368  |      |
| 5/23/2018  | 405  |      |
| 11/20/2018 | 414  |      |
| 5/14/2019  | 441  |      |
| 10/10/2019 | 386  |      |
| 4/7/2020   | 432  |      |
| 7/14/2020  | 395  |      |
| 2/23/2021  | 394  |      |
| 7/21/2021  |      | 384  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-6 | MW-6 |
|------------|------|------|
| 4/27/2016  | 411  |      |
| 6/21/2016  | 318  |      |
| 10/12/2017 | 421  |      |
| 10/13/2017 | 396  |      |
| 10/14/2017 | 400  |      |
| 10/15/2017 | 378  |      |
| 10/16/2017 | 402  |      |
| 10/17/2017 | 373  |      |
| 11/16/2017 | 367  |      |
| 5/23/2018  | 425  |      |
| 11/20/2018 | 449  |      |
| 5/15/2019  | 345  |      |
| 10/10/2019 | 461  |      |
| 4/8/2020   | 242  |      |
| 7/14/2020  | 406  |      |
| 2/23/2021  | 428  |      |
| 7/20/2021  |      | 348  |



# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-7 | MW-7 |
|------------|------|------|
| 4/27/2016  | 198  |      |
| 6/21/2016  | 327  |      |
| 10/12/2017 | 317  |      |
| 10/13/2017 | 302  |      |
| 10/14/2017 | 283  |      |
| 10/15/2017 | 294  |      |
| 10/16/2017 | 284  |      |
| 10/17/2017 | 294  |      |
| 11/16/2017 | 299  |      |
| 5/23/2018  | 321  |      |
| 11/20/2018 | 306  |      |
| 5/15/2019  | 302  |      |
| 10/8/2019  | 294  |      |
| 4/8/2020   | 280  |      |
| 7/14/2020  | 261  |      |
| 2/23/2021  | 292  |      |
| 7/20/2021  |      | 254  |

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-8 | MW-8 |
|------------|------|------|
| 4/27/2016  | 282  |      |
| 6/21/2016  | 291  |      |
| 10/12/2017 | 300  |      |
| 10/13/2017 | 298  |      |
| 10/14/2017 | 299  |      |
| 10/15/2017 | 307  |      |
| 10/16/2017 | 299  |      |
| 10/17/2017 | 294  |      |
| 11/16/2017 | 308  |      |
| 5/23/2018  | 344  |      |
| 11/20/2018 | 327  |      |
| 5/15/2019  | 305  |      |
| 10/9/2019  | 329  |      |
| 4/8/2020   | 281  |      |
| 7/15/2020  | 280  |      |
| 2/23/2021  | 306  |      |
| 7/20/2021  |      | 281  |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-1       | MW-1  |
|------------|------------|-------|
| 4/26/2016  | 0.146 (J)  |       |
| 6/20/2016  | 0.148 (J)  |       |
| 8/8/2016   | 0.137 (J)  |       |
| 8/24/2016  | 0.133 (J)  |       |
| 10/3/2016  | 0.103 (J)  |       |
| 10/26/2016 | 0.05 (J)   |       |
| 11/21/2016 | 0.047 (J)  |       |
| 1/17/2017  | 0.09 (J)   |       |
| 3/22/2017  | 0.12       |       |
| 4/18/2017  | 0.12       |       |
| 5/30/2017  | 0.13       |       |
| 8/23/2017  | 0.16       |       |
| 2/13/2018  | 0.14       |       |
| 5/22/2018  | 0.16       |       |
| 6/12/2018  | 0.16       |       |
| 10/17/2018 | 0.18       |       |
| 11/19/2018 | 0.15       |       |
| 4/10/2019  | 0.102      |       |
| 5/14/2019  | 0.119      |       |
| 10/8/2019  | 0.0924 (J) |       |
| 10/16/2019 | 0.0756 (J) |       |
| 4/6/2020   | 0.101      |       |
| 7/13/2020  | 0.0678 (J) |       |
| 2/22/2021  | 0.082 (J)  |       |
| 7/12/2021  |            | 0.125 |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-2      | MW-2  |
|------------|-----------|-------|
| 4/25/2016  | 0.149 (J) |       |
| 6/20/2016  | 0.148 (J) |       |
| 8/8/2016   | 0.134 (J) |       |
| 8/24/2016  | 0.129 (J) |       |
| 10/3/2016  | 0.086 (J) |       |
| 10/26/2016 | 0.027 (J) |       |
| 11/21/2016 | 0.027 (J) |       |
| 1/17/2017  | 0.066 (J) |       |
| 3/22/2017  | 0.13      |       |
| 4/18/2017  | 0.16      |       |
| 5/31/2017  | 0.13      |       |
| 8/23/2017  | 0.16      |       |
| 2/13/2018  | 0.22      |       |
| 5/22/2018  | 0.17      |       |
| 6/12/2018  | 0.16      |       |
| 10/17/2018 | 0.16      |       |
| 11/19/2018 | 0.18      |       |
| 4/10/2019  | 0.262     |       |
| 5/14/2019  | 0.17      |       |
| 10/8/2019  | 0.164     |       |
| 10/16/2019 | 0.114     |       |
| 4/6/2020   | 0.207     |       |
| 7/13/2020  | 0.132     |       |
| 2/22/2021  | 0.209     |       |
| 7/12/2021  |           | 0.196 |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-3      | MW-3  |
|------------|-----------|-------|
| 4/25/2016  | 0.243 (J) |       |
| 6/22/2016  | 0.269 (J) |       |
| 8/9/2016   | 0.363     |       |
| 8/24/2016  | 0.346     |       |
| 10/4/2016  | 0.266 (J) |       |
| 10/26/2016 | 0.266 (J) |       |
| 11/21/2016 | 0.244 (J) |       |
| 1/18/2017  | 0.385     |       |
| 3/22/2017  | 0.41      |       |
| 4/18/2017  | 0.29      |       |
| 5/31/2017  | 0.37      |       |
| 8/23/2017  | 0.55      |       |
| 2/13/2018  | 0.27      |       |
| 5/24/2018  | 0.6       |       |
| 6/12/2018  | 0.53      |       |
| 10/17/2018 | 0.63      |       |
| 11/19/2018 | 0.31      |       |
| 4/10/2019  | 0.273     |       |
| 5/14/2019  | 0.281     |       |
| 10/8/2019  | 0.225     |       |
| 10/16/2019 | 0.106     |       |
| 4/6/2020   | 0.314     |       |
| 7/13/2020  | 0.13      |       |
| 2/22/2021  | 0.246     |       |
| 7/12/2021  |           | 0.287 |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-4      | MW-4 |
|------------|-----------|------|
| 4/25/2016  | 0.372     |      |
| 6/20/2016  | 0.361     |      |
| 8/9/2016   | 0.326     |      |
| 8/24/2016  | 0.329     |      |
| 10/3/2016  | 0.287 (J) |      |
| 10/26/2016 | 0.194 (J) |      |
| 11/21/2016 | 0.192 (J) |      |
| 1/18/2017  | 0.223 (J) |      |
| 3/22/2017  | 0.32      |      |
| 4/18/2017  | 0.32      |      |
| 5/31/2017  | 0.31      |      |
| 8/23/2017  | 0.38      |      |
| 2/13/2018  | 0.38      |      |
| 5/23/2018  | 0.38      |      |
| 6/12/2018  | 0.39      |      |
| 10/17/2018 | 0.39      |      |
| 11/19/2018 | 0.36      |      |
| 4/10/2019  | 0.384     |      |
| 5/14/2019  | 0.335     |      |
| 10/10/2019 | 0.304     |      |
| 10/16/2019 | 0.302     |      |
| 4/6/2020   | 0.368     |      |
| 7/14/2020  | 0.33      |      |
| 2/22/2021  | 0.357     |      |
| 7/12/2021  |           | 0.35 |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5  | MW-5  |
|------------|-------|-------|
| 4/25/2016  | 0.307 |       |
| 6/21/2016  | 0.337 |       |
| 10/12/2017 | 0.35  |       |
| 10/13/2017 | 0.36  |       |
| 10/14/2017 | 0.37  |       |
| 10/15/2017 | 0.37  |       |
| 10/16/2017 | 0.36  |       |
| 10/17/2017 | 0.35  |       |
| 11/16/2017 | 0.37  |       |
| 2/14/2018  | 0.33  |       |
| 5/23/2018  | 0.29  |       |
| 11/20/2018 | 0.32  |       |
| 5/14/2019  | 0.22  |       |
| 10/10/2019 | 0.338 |       |
| 4/7/2020   | 0.225 |       |
| 7/14/2020  | 0.263 |       |
| 2/23/2021  | 0.287 |       |
| 7/21/2021  |       | 0.331 |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-6      | MW-6  |
|------------|-----------|-------|
| 4/27/2016  | 0.131 (J) |       |
| 6/21/2016  | 0.153 (J) |       |
| 10/12/2017 | 0.15      |       |
| 10/13/2017 | 0.15      |       |
| 10/14/2017 | 0.14      |       |
| 10/15/2017 | 0.14      |       |
| 10/16/2017 | 0.14      |       |
| 10/17/2017 | 0.14      |       |
| 11/16/2017 | 0.14      |       |
| 2/14/2018  | 0.13      |       |
| 5/23/2018  | 0.13      |       |
| 11/20/2018 | 0.14      |       |
| 5/15/2019  | 0.133     |       |
| 10/10/2019 | 0.124     |       |
| 4/8/2020   | <0.1 (o)  |       |
| 7/14/2020  | 0.115     |       |
| 2/23/2021  | 0.139     |       |
| 7/20/2021  |           | 0.131 |



# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-7      | MW-7  |
|------------|-----------|-------|
| 4/27/2016  | 0.2 (J)   |       |
| 6/21/2016  | 0.163 (J) |       |
| 10/12/2017 | 0.17      |       |
| 10/13/2017 | 0.19      |       |
| 10/14/2017 | 0.2       |       |
| 10/15/2017 | 0.2       |       |
| 10/16/2017 | 0.2       |       |
| 10/17/2017 | 0.19      |       |
| 11/16/2017 | 0.18      |       |
| 2/14/2018  | 0.18      |       |
| 5/23/2018  | 0.18      |       |
| 11/20/2018 | 0.19      |       |
| 5/15/2019  | 0.169     |       |
| 10/8/2019  | 0.183     |       |
| 4/8/2020   | 0.153     |       |
| 7/14/2020  | 0.193     |       |
| 2/23/2021  | 0.2       |       |
| 7/20/2021  |           | 0.286 |

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - Intrawell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-8      | MW-8  |
|------------|-----------|-------|
| 4/27/2016  | 0.212 (J) |       |
| 6/21/2016  | 0.211 (J) |       |
| 10/12/2017 | 0.22      |       |
| 10/13/2017 | 0.23      |       |
| 10/14/2017 | 0.22      |       |
| 10/15/2017 | 0.22      |       |
| 10/16/2017 | 0.22      |       |
| 10/17/2017 | 0.21      |       |
| 11/16/2017 | 0.22      |       |
| 2/14/2018  | 0.21      |       |
| 5/23/2018  | 0.21      |       |
| 11/20/2018 | 0.21      |       |
| 5/15/2019  | 0.192     |       |
| 10/9/2019  | 0.189     |       |
| 4/8/2020   | 0.192     |       |
| 7/15/2020  | 0.196     |       |
| 2/23/2021  | 0.208     |       |
| 7/20/2021  |           | 0.262 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-1     | MW-1 |
|------------|----------|------|
| 4/26/2016  | 1490     |      |
| 6/20/2016  | 1420     |      |
| 8/8/2016   | 1460     |      |
| 8/24/2016  | 1450     |      |
| 10/3/2016  | 1460     |      |
| 10/26/2016 | 1330     |      |
| 11/21/2016 | 1420     |      |
| 1/17/2017  | 1350     |      |
| 3/22/2017  | 1500     |      |
| 4/18/2017  | 1300     |      |
| 5/30/2017  | 1400     |      |
| 8/23/2017  | 1500     |      |
| 5/22/2018  | 2100 (o) |      |
| 6/12/2018  | 1500     |      |
| 10/17/2018 | 1400     |      |
| 11/19/2018 | 1300     |      |
| 4/10/2019  | 1700     |      |
| 5/14/2019  | 1560     |      |
| 10/8/2019  | 1540     |      |
| 10/16/2019 | 1680     |      |
| 4/6/2020   | 1530     |      |
| 7/13/2020  | 1450     |      |
| 2/22/2021  | 1400     |      |
| 7/12/2021  |          | 1560 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-2 | MW-2 |
|------------|------|------|
| 4/25/2016  | 745  |      |
| 6/20/2016  | 964  |      |
| 8/8/2016   | 1100 |      |
| 8/24/2016  | 1130 |      |
| 10/3/2016  | 1140 |      |
| 10/26/2016 | 1060 |      |
| 11/21/2016 | 1100 |      |
| 1/17/2017  | 1160 |      |
| 3/22/2017  | 900  |      |
| 4/18/2017  | 870  |      |
| 5/31/2017  | 1100 |      |
| 8/23/2017  | 920  |      |
| 5/22/2018  | 1200 |      |
| 6/12/2018  | 860  |      |
| 10/17/2018 | 970  |      |
| 11/19/2018 | 1000 |      |
| 4/10/2019  | 889  |      |
| 5/14/2019  | 948  |      |
| 10/8/2019  | 1230 |      |
| 10/16/2019 | 1170 |      |
| 4/6/2020   | 786  |      |
| 7/13/2020  | 843  |      |
| 2/22/2021  | 864  |      |
| 7/12/2021  |      | 763  |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-3 | MW-3 |
|------------|------|------|
| 4/25/2016  | 1890 |      |
| 6/22/2016  | 2100 |      |
| 8/9/2016   | 2050 |      |
| 8/24/2016  | 2190 |      |
| 10/4/2016  | 1950 |      |
| 10/26/2016 | 1980 |      |
| 11/21/2016 | 2060 |      |
| 1/18/2017  | 2620 |      |
| 3/22/2017  | 3200 |      |
| 4/18/2017  | 2500 |      |
| 5/31/2017  | 2800 |      |
| 8/23/2017  | 2600 |      |
| 5/24/2018  | 2700 |      |
| 6/12/2018  | 2500 |      |
| 10/17/2018 | 2700 |      |
| 11/19/2018 | 3000 |      |
| 4/10/2019  | 2460 |      |
| 5/14/2019  | 2460 |      |
| 10/8/2019  | 2950 |      |
| 10/16/2019 | 2820 |      |
| 4/6/2020   | 1670 |      |
| 7/13/2020  | 2130 |      |
| 2/22/2021  | 3040 |      |
| 7/12/2021  |      | 2380 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-4 | MW-4 |
|------------|------|------|
| 4/25/2016  | 2260 |      |
| 6/20/2016  | 2500 |      |
| 8/9/2016   | 2750 |      |
| 8/24/2016  | 2770 |      |
| 10/3/2016  | 3060 |      |
| 10/26/2016 | 2650 |      |
| 11/21/2016 | 2720 |      |
| 1/18/2017  | 2650 |      |
| 3/22/2017  | 2700 |      |
| 4/18/2017  | 2400 |      |
| 5/31/2017  | 2700 |      |
| 8/23/2017  | 2700 |      |
| 5/23/2018  | 2400 |      |
| 6/12/2018  | 2600 |      |
| 10/17/2018 | 2600 |      |
| 11/19/2018 | 2400 |      |
| 4/10/2019  | 2090 |      |
| 5/14/2019  | 2240 |      |
| 10/10/2019 | 2690 |      |
| 10/16/2019 | 3050 |      |
| 4/6/2020   | 1810 |      |
| 7/14/2020  | 1970 |      |
| 2/22/2021  | 2040 |      |
| 7/12/2021  |      | 1930 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5 | MW-5 |
|------------|------|------|
| 4/25/2016  | 2390 |      |
| 6/21/2016  | 2500 |      |
| 10/12/2017 | 2300 |      |
| 10/13/2017 | 2300 |      |
| 10/14/2017 | 2300 |      |
| 10/15/2017 | 2300 |      |
| 10/16/2017 | 2300 |      |
| 10/17/2017 | 2200 |      |
| 11/16/2017 | 2200 |      |
| 5/23/2018  | 2400 |      |
| 11/20/2018 | 2500 |      |
| 5/14/2019  | 2380 |      |
| 10/10/2019 | 2460 |      |
| 4/7/2020   | 2050 |      |
| 7/14/2020  | 2080 |      |
| 2/23/2021  | 2210 |      |
| 7/21/2021  |      | 2240 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-6 | MW-6 |
|------------|------|------|
| 4/27/2016  | 2090 |      |
| 6/21/2016  | 2000 |      |
| 10/12/2017 | 2000 |      |
| 10/13/2017 | 2000 |      |
| 10/14/2017 | 1900 |      |
| 10/15/2017 | 1900 |      |
| 10/16/2017 | 1900 |      |
| 10/17/2017 | 1900 |      |
| 11/16/2017 | 1800 |      |
| 5/23/2018  | 2000 |      |
| 11/20/2018 | 2200 |      |
| 5/15/2019  | 2110 |      |
| 10/10/2019 | 2330 |      |
| 4/8/2020   | 1900 |      |
| 7/14/2020  | 1970 |      |
| 2/23/2021  | 2010 |      |
| 7/20/2021  |      | 1930 |



# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-7     | MW-7 |
|------------|----------|------|
| 4/27/2016  | 1050     |      |
| 6/21/2016  | 1410     |      |
| 10/12/2017 | 1400     |      |
| 10/13/2017 | 1400     |      |
| 10/14/2017 | 1300     |      |
| 10/15/2017 | 1300     |      |
| 10/16/2017 | 1300     |      |
| 10/17/2017 | 1300     |      |
| 11/16/2017 | 1300     |      |
| 5/23/2018  | 1900 (O) |      |
| 11/20/2018 | 1100     |      |
| 5/15/2019  | 1510     |      |
| 10/8/2019  | 1570     |      |
| 4/8/2020   | 1270     |      |
| 7/14/2020  | 1330     |      |
| 2/23/2021  | 1320     |      |
| 7/20/2021  |          | 1170 |

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - Intravel

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-8     | MW-8 |
|------------|----------|------|
| 4/27/2016  | 1550     |      |
| 6/21/2016  | 1470     |      |
| 10/12/2017 | 1400     |      |
| 10/13/2017 | 1600     |      |
| 10/14/2017 | 1400     |      |
| 10/15/2017 | 1400     |      |
| 10/16/2017 | 1400     |      |
| 10/17/2017 | 1400     |      |
| 11/16/2017 | 1400     |      |
| 5/23/2018  | 2100 (o) |      |
| 11/20/2018 | 1400     |      |
| 5/15/2019  | 1640     |      |
| 10/9/2019  | 1550     |      |
| 4/8/2020   | 1380     |      |
| 7/15/2020  | 1410     |      |
| 2/23/2021  | 1420     |      |
| 7/20/2021  |          | 1500 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-1     | MW-1 |
|------------|----------|------|
| 4/26/2016  | 2080     |      |
| 6/20/2016  | 2060     |      |
| 8/8/2016   | 2070     |      |
| 8/24/2016  | 2040     |      |
| 10/3/2016  | 2110     |      |
| 10/26/2016 | 2000     |      |
| 11/21/2016 | 2070     |      |
| 1/17/2017  | 1930     |      |
| 3/22/2017  | 2060     |      |
| 4/18/2017  | 2140     |      |
| 5/30/2017  | 2240     |      |
| 8/23/2017  | 2160     |      |
| 5/22/2018  | 2380     |      |
| 6/12/2018  | 2400     |      |
| 10/17/2018 | 2220     |      |
| 11/19/2018 | 2360     |      |
| 4/10/2019  | 2630     |      |
| 5/14/2019  | 2340     |      |
| 10/8/2019  | 2330     |      |
| 10/16/2019 | 3650 (o) |      |
| 4/6/2020   | 2240     |      |
| 7/13/2020  | 2240     |      |
| 2/22/2021  | 2230     |      |
| 7/12/2021  |          | 2210 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-2 | MW-2 |
|------------|------|------|
| 4/25/2016  | 1260 |      |
| 6/20/2016  | 1620 |      |
| 8/8/2016   | 1740 |      |
| 8/24/2016  | 1720 |      |
| 10/3/2016  | 1800 |      |
| 10/26/2016 | 1800 |      |
| 11/21/2016 | 1740 |      |
| 1/17/2017  | 1960 |      |
| 3/22/2017  | 1510 |      |
| 4/18/2017  | 1580 |      |
| 5/31/2017  | 1730 |      |
| 8/23/2017  | 1550 |      |
| 5/22/2018  | 1500 |      |
| 6/12/2018  | 1550 |      |
| 10/17/2018 | 1740 |      |
| 11/19/2018 | 1990 |      |
| 4/10/2019  | 1250 |      |
| 5/14/2019  | 1480 |      |
| 10/8/2019  | 1840 |      |
| 10/16/2019 | 1830 |      |
| 4/6/2020   | 1440 |      |
| 7/13/2020  | 1540 |      |
| 2/22/2021  | 1620 |      |
| 7/12/2021  |      | 1390 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - Intravel  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-3 | MW-3 |
|------------|------|------|
| 4/25/2016  | 2720 |      |
| 6/22/2016  | 3250 |      |
| 8/9/2016   | 3050 |      |
| 8/24/2016  | 3080 |      |
| 10/4/2016  | 2900 |      |
| 10/26/2016 | 2940 |      |
| 11/21/2016 | 3090 |      |
| 1/18/2017  | 4020 |      |
| 3/22/2017  | 4180 |      |
| 4/18/2017  | 4440 |      |
| 5/31/2017  | 3970 |      |
| 8/23/2017  | 4050 |      |
| 5/24/2018  | 3680 |      |
| 6/12/2018  | 3820 |      |
| 10/17/2018 | 4730 |      |
| 11/19/2018 | 4710 |      |
| 4/10/2019  | 3680 |      |
| 5/14/2019  | 3580 |      |
| 10/8/2019  | 4720 |      |
| 10/16/2019 | 4210 |      |
| 4/6/2020   | 2630 |      |
| 7/13/2020  | 3650 |      |
| 2/22/2021  | 4670 |      |
| 7/12/2021  |      | 3510 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-4     | MW-4 |
|------------|----------|------|
| 4/25/2016  | 3300     |      |
| 6/20/2016  | 3870     |      |
| 8/9/2016   | 4140     |      |
| 8/24/2016  | 4190     |      |
| 10/3/2016  | 4190     |      |
| 10/26/2016 | 4400     |      |
| 11/21/2016 | 4230     |      |
| 1/18/2017  | 4120     |      |
| 3/22/2017  | 3980     |      |
| 4/18/2017  | 3880     |      |
| 5/31/2017  | 4210     |      |
| 8/23/2017  | 3990     |      |
| 5/23/2018  | 3740     |      |
| 6/12/2018  | 4080     |      |
| 10/17/2018 | 4250     |      |
| 11/19/2018 | 3920     |      |
| 4/10/2019  | 3280     |      |
| 5/14/2019  | 3130 (D) |      |
| 10/10/2019 | 4000     |      |
| 10/16/2019 | 4060     |      |
| 4/6/2020   | 2820     |      |
| 7/14/2020  | 3310     |      |
| 2/22/2021  | 3190     |      |
| 7/12/2021  |          | 3000 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5 | MW-5 |
|------------|------|------|
| 4/25/2016  | 3660 |      |
| 6/21/2016  | 3920 |      |
| 10/12/2017 | 4000 |      |
| 10/13/2017 | 3960 |      |
| 10/14/2017 | 3910 |      |
| 10/15/2017 | 3890 |      |
| 10/16/2017 | 3980 |      |
| 10/17/2017 | 3940 |      |
| 11/16/2017 | 3930 |      |
| 5/23/2018  | 3660 |      |
| 11/20/2018 | 3780 |      |
| 5/14/2019  | 3520 |      |
| 10/10/2019 | 3830 |      |
| 4/7/2020   | 3270 |      |
| 7/14/2020  | 3710 |      |
| 2/23/2021  | 3740 |      |
| 7/21/2021  |      | 3570 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-6 | MW-6 |
|------------|------|------|
| 4/27/2016  | 3290 |      |
| 6/21/2016  | 3250 |      |
| 10/12/2017 | 3220 |      |
| 10/13/2017 | 3250 |      |
| 10/14/2017 | 3260 |      |
| 10/15/2017 | 3260 |      |
| 10/16/2017 | 3360 |      |
| 10/17/2017 | 3420 |      |
| 11/16/2017 | 3280 |      |
| 5/23/2018  | 3340 |      |
| 11/20/2018 | 3330 |      |
| 5/15/2019  | 3130 |      |
| 10/10/2019 | 3260 |      |
| 4/8/2020   | 2940 |      |
| 7/14/2020  | 3270 |      |
| 2/23/2021  | 3230 |      |
| 7/20/2021  |      | 3090 |



# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-7 | MW-7 |
|------------|------|------|
| 4/27/2016  | 1640 |      |
| 6/21/2016  | 2460 |      |
| 10/12/2017 | 2460 |      |
| 10/13/2017 | 2420 |      |
| 10/14/2017 | 2320 |      |
| 10/15/2017 | 1150 |      |
| 10/16/2017 | 2320 |      |
| 10/17/2017 | 2360 |      |
| 11/16/2017 | 2460 |      |
| 5/23/2018  | 2390 |      |
| 11/20/2018 | 2090 |      |
| 5/15/2019  | 2310 |      |
| 10/8/2019  | 2340 |      |
| 4/8/2020   | 2230 |      |
| 7/14/2020  | 2210 |      |
| 2/23/2021  | 2320 |      |
| 7/20/2021  |      | 2110 |

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/16/2021 10:48 AM View: Appendix III - IntraWell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-8 | MW-8 |
|------------|------|------|
| 4/27/2016  | 2480 |      |
| 6/21/2016  | 2360 |      |
| 10/12/2017 | 2530 |      |
| 10/13/2017 | 2740 |      |
| 10/14/2017 | 2630 |      |
| 10/15/2017 | 2530 |      |
| 10/16/2017 | 2740 |      |
| 10/17/2017 | 2650 |      |
| 11/16/2017 | 2650 |      |
| 5/23/2018  | 2750 |      |
| 11/20/2018 | 2520 |      |
| 5/15/2019  | 2540 |      |
| 10/9/2019  | 2590 |      |
| 4/8/2020   | 2450 |      |
| 7/15/2020  | 2460 |      |
| 2/23/2021  | 2550 |      |
| 7/20/2021  |      | 2420 |

FIGURE G.

# Appendix III Interwell Prediction Limits - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:52 AM

| Constituent            | Well | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha     | Method                      |
|------------------------|------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|-----------|-----------------------------|
| Chloride, Total (mg/L) | MW-5 | 3.775      | n/a        | 7/21/2021 | 6.73    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-6 | 3.775      | n/a        | 7/20/2021 | 4.04    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-7 | 3.775      | n/a        | 7/20/2021 | 6.35    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-8 | 3.775      | n/a        | 7/20/2021 | 14.3    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| pH, Field (SU)         | MW-5 | 6.35       | 4.51       | 7/21/2021 | 6.4     | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-7 | 6.35       | 4.51       | 7/20/2021 | 6.58    | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-8 | 6.35       | 4.51       | 7/20/2021 | 6.64    | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |

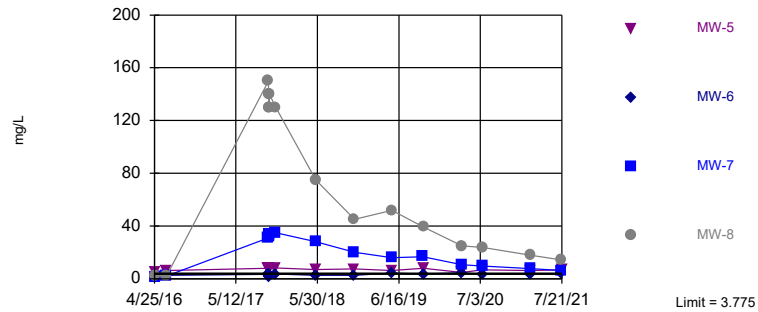
# Appendix III Interwell Prediction Limits - All Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:52 AM

| Constituent            | Well | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha     | Method                      |
|------------------------|------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|-----------|-----------------------------|
| Chloride, Total (mg/L) | MW-5 | 3.775      | n/a        | 7/21/2021 | 6.73    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-6 | 3.775      | n/a        | 7/20/2021 | 4.04    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-7 | 3.775      | n/a        | 7/20/2021 | 6.35    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| Chloride, Total (mg/L) | MW-8 | 3.775      | n/a        | 7/20/2021 | 14.3    | Yes  | 96   | 1.291   | 0.1517    | 3.125 | None    | x^(1/3)   | 0.00188   | Param Inter 1 of 2          |
| pH, Field (SU)         | MW-5 | 6.35       | 4.51       | 7/21/2021 | 6.4     | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-6 | 6.35       | 4.51       | 7/20/2021 | 5.99    | No   | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-7 | 6.35       | 4.51       | 7/20/2021 | 6.58    | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |
| pH, Field (SU)         | MW-8 | 6.35       | 4.51       | 7/20/2021 | 6.64    | Yes  | 97   | n/a     | n/a       | 0     | n/a     | n/a       | 0.0004137 | NP Inter (normality) 1 of 2 |

Exceeds Limit: MW-5, MW-6, MW-7, MW-8

Prediction Limit  
Interwell Parametric

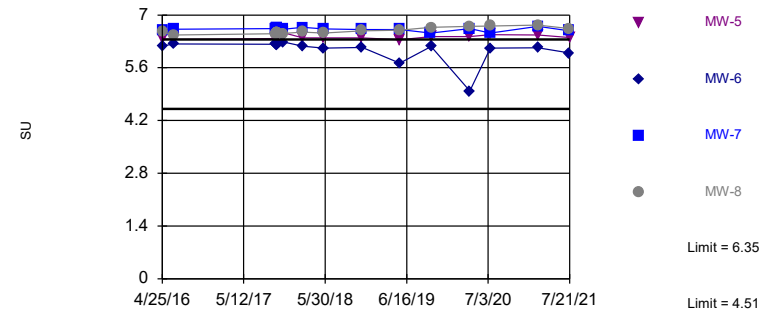


Background Data Summary (based on cube root transformation): Mean=1.291, Std. Dev.=0.1517, n=96, 3.125% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9671, critical = 0.965. Kappa = 1.752 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 4 points to limit.

Constituent: Chloride, Total Analysis Run 11/16/2021 10:51 AM View: Appendix III - Interwell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Exceeds Limits: MW-5, MW-7, MW-8

Prediction Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 97 background values. Annual per-constituent alpha = 0.003307. Individual comparison alpha = 0.0004137 (1 of 2). Comparing 4 points to limit.

Constituent: pH, Field Analysis Run 11/16/2021 10:51 AM View: Appendix III - Interwell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 11/16/2021 10:52 AM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-3 (bg) | MW-4 (bg) | MW-2 (bg) | MW-5  | MW-1 (bg) | MW-8    | MW-7   | MW-6    |
|------------|-----------|-----------|-----------|-------|-----------|---------|--------|---------|
| 4/25/2016  | 1.32      | 1.53      | 1.9       | 5.44  |           |         |        |         |
| 4/26/2016  |           |           |           |       | 1.94      |         |        |         |
| 4/27/2016  |           |           |           |       |           | 2.34    | 1.71   | 2.19    |
| 6/20/2016  |           | 1.85      | 3.43      |       | 2.09      |         |        |         |
| 6/21/2016  |           |           |           | 6.32  |           | 2.29    | 2.04   | 2.56    |
| 6/22/2016  | 1.46      |           |           |       |           |         |        |         |
| 8/8/2016   |           |           | 3.31      |       | 2.18      |         |        |         |
| 8/9/2016   | 1.35      | 1.95      |           |       |           |         |        |         |
| 8/24/2016  | 1.47      | 2.07      | 3.23      |       | 2.22      |         |        |         |
| 10/3/2016  |           | 2.02      | 3.21      |       | 2.34      |         |        |         |
| 10/4/2016  | 1.59      |           |           |       |           |         |        |         |
| 10/26/2016 | 1.27      | 2.07      | 3.35      |       | 2.34      |         |        |         |
| 11/21/2016 | 1.38      | 2.39      | 3.34      |       | 2.5       |         |        |         |
| 1/17/2017  |           |           | 3.58      |       | 2.68      |         |        |         |
| 1/18/2017  | 1.34      | 1.9       |           |       |           |         |        |         |
| 3/22/2017  | 2         | 1.5 (J)   | 3.4       |       | 3.7       |         |        |         |
| 4/18/2017  | 2.2       | 1.6 (J)   | 2.6       |       | 2.4       |         |        |         |
| 5/30/2017  |           |           |           |       | 2.6       |         |        |         |
| 5/31/2017  | 1.5 (J)   | 2.1       | 4.4       |       |           |         |        |         |
| 8/23/2017  | 1.8 (J)   | 2.3       | 4.4       |       | 2.7       |         |        |         |
| 10/12/2017 |           |           |           | 7.9   |           | 150     | 31     | 3.4     |
| 10/13/2017 |           |           |           | 8 (B) |           | 130 (B) | 32 (B) | 3 (B)   |
| 10/14/2017 |           |           |           | 7.4   |           | 140     | 33     | 2.8     |
| 10/15/2017 |           |           |           | 7.2   |           | 130     | 34     | 1.9 (J) |
| 10/16/2017 |           |           |           | 8.1   |           | 140     | 34     | 1.8 (J) |
| 10/17/2017 |           |           |           | 7.9   |           | 140     | 34     | 3.1     |
| 11/16/2017 |           |           |           | 8.1   |           | 130     | 35     | 3.5     |
| 5/22/2018  |           |           | 3.2       |       | 2.3       |         |        |         |
| 5/23/2018  |           | 2         |           | 7     |           | 75      | 28     | 2.6     |
| 5/24/2018  | 1.6 (J)   |           |           |       |           |         |        |         |
| 6/12/2018  | 1.4 (J)   | 1.7 (J)   | 3.7       |       | 2.3       |         |        |         |
| 10/17/2018 | <2        | 1.5 (J)   | 4.6       |       | 1.7 (J)   |         |        |         |
| 11/19/2018 | <2        | <2        | 3         |       | 1.7 (J)   |         |        |         |
| 11/20/2018 |           |           |           | 7.4   |           | 45      | 20     | 2.7     |
| 4/10/2019  | 2.25      | 1.88      | 1.76      |       | 2.36      |         |        |         |
| 5/14/2019  | 2.28      | 1.82      | 2.98      | 6.24  | 2.28      |         |        |         |
| 5/15/2019  |           |           |           |       |           | 52      | 15.9   | 4.45    |
| 10/8/2019  | 1.36      |           | 4.26      |       | 2.31      |         | 16.8   |         |
| 10/9/2019  |           |           |           |       |           | 39.2    |        |         |
| 10/10/2019 |           | 1.93      |           | 7.88  |           |         |        | 3.61    |
| 10/16/2019 | 1.4       | 1.92      | 4.04      |       | 2.42      |         |        |         |
| 4/6/2020   | 1.72      | 1.5       | 2.43      |       | 2.01      |         |        |         |
| 4/7/2020   |           |           |           | 4.83  |           |         |        |         |
| 4/8/2020   |           |           |           |       |           | 24.9    | 10.6   | 4.63    |
| 7/13/2020  | 1.34      |           | 4.05      |       | 2.1       |         |        |         |
| 7/14/2020  |           | 1.61      |           | 6.84  |           |         | 9.68   | 3.25    |
| 7/15/2020  |           |           |           |       |           | 23.8    |        |         |
| 2/22/2021  | 2.22      | 1.52      | 1.72      |       | 2.16      |         |        |         |
| 2/23/2021  |           |           |           | 6.19  |           | 17.9    | 7.85   | 3.47    |
| 7/12/2021  | 2.13      | 1.56      | 2.36      |       | 2.19      |         |        |         |
| 7/20/2021  |           |           |           |       |           | 14.3    | 6.35   | 4.04    |
| 7/21/2021  |           |           |           | 6.73  |           |         |        |         |

# Prediction Limit

Constituent: pH, Field (SU) Analysis Run 11/16/2021 10:52 AM View: Appendix III - Interwell

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

|            | MW-2 (bg) | MW-3 (bg) | MW-5 | MW-4 (bg) | MW-1 (bg) | MW-7 | MW-6 | MW-8 |
|------------|-----------|-----------|------|-----------|-----------|------|------|------|
| 4/25/2016  | 5.94      | 5.56      | 6.37 | 6.22      |           |      |      |      |
| 4/26/2016  |           |           |      |           | 5.2       |      |      |      |
| 4/27/2016  |           |           |      |           |           | 6.6  | 6.18 | 6.55 |
| 6/20/2016  | 5.96      |           |      | 6.21      | 5.18      |      |      |      |
| 6/21/2016  |           |           | 6.35 |           |           | 6.62 | 6.23 | 6.47 |
| 6/22/2016  |           | 5.57      |      |           |           |      |      |      |
| 8/8/2016   | 5.88      |           |      |           | 5.12      |      |      |      |
| 8/9/2016   |           | 5.67      |      | 6.11      |           |      |      |      |
| 8/24/2016  |           | 5.63      |      | 6.11      |           |      |      |      |
| 10/3/2016  | 5.91      |           |      | 6.13      | 5.21      |      |      |      |
| 10/4/2016  |           | 5.69      |      |           |           |      |      |      |
| 10/26/2016 | 5.84      | 5.56      |      | 6.12      | 5.2       |      |      |      |
| 11/21/2016 | 5.82      | 5.42      |      | 6.09      | 5.19      |      |      |      |
| 1/17/2017  | 5.87      |           |      |           | 5.17      |      |      |      |
| 1/18/2017  |           | 5.11      |      | 6.09      |           |      |      |      |
| 3/22/2017  | 6.01      | 4.52      |      | 6.15      | 5.2       |      |      |      |
| 4/18/2017  | 6.02      | 5.84      |      | 6.19      | 5.2       |      |      |      |
| 5/30/2017  |           |           |      |           | 5.14      |      |      |      |
| 5/31/2017  | 5.85      | 4.56      |      | 6.13      |           |      |      |      |
| 8/23/2017  | 5.89      | 4.77      |      | 6.12      | 5.12      |      |      |      |
| 10/12/2017 |           |           | 6.38 |           |           | 6.64 | 6.22 | 6.5  |
| 10/13/2017 |           |           | 6.43 |           |           | 6.64 | 6.23 | 6.51 |
| 10/14/2017 |           |           | 6.41 |           |           | 6.66 | 6.22 | 6.53 |
| 10/15/2017 |           |           | 6.42 |           |           | 6.67 | 6.22 | 6.53 |
| 10/16/2017 |           |           | 6.42 |           |           | 6.67 | 6.21 | 6.54 |
| 10/17/2017 |           |           | 6.41 |           |           | 6.66 | 6.2  | 6.54 |
| 11/16/2017 |           |           | 6.53 |           |           | 6.62 | 6.28 | 6.51 |
| 2/13/2018  | 6.21      | 5.67      |      | 6.22      | 5.18      |      |      |      |
| 2/14/2018  |           |           | 6.39 |           |           | 6.67 | 6.17 | 6.55 |
| 5/22/2018  | 6.04      |           |      |           | 5.2       |      |      |      |
| 5/23/2018  |           |           | 6.39 | 6.21      |           | 6.63 | 6.12 | 6.52 |
| 5/24/2018  |           | 5.19      |      |           |           |      |      |      |
| 6/12/2018  | 5.95      | 4.79      |      | 6.16      | 5.15      |      |      |      |
| 10/17/2018 | 5.9       | 4.75      |      | 6.12      | 5.12      |      |      |      |
| 11/19/2018 | 6.03      | 3.77 (o)  |      | 6.16      | 5.09      |      |      |      |
| 11/20/2018 |           |           | 6.39 |           |           | 6.61 | 6.14 | 6.58 |
| 4/10/2019  | 6.1       | 5.54      |      | 6.14      | 5.11      |      |      |      |
| 5/14/2019  | 6.07      | 5.71      | 6.34 | 6.23      | 5.19      |      |      |      |
| 5/15/2019  |           |           |      |           |           | 6.61 | 5.72 | 6.6  |
| 10/8/2019  | 5.96      | 4.98      |      |           | 5.12      | 6.52 |      |      |
| 10/9/2019  |           |           |      |           |           |      |      | 6.67 |
| 10/10/2019 |           |           | 6.43 | 6.15      |           |      | 6.16 |      |
| 10/16/2019 | 5.98      | 4.51      |      | 6.19      | 5.16      |      |      |      |
| 4/6/2020   | 6.21      | 5.91      |      | 6.35      | 5.21      |      |      |      |
| 4/7/2020   |           |           | 6.43 |           |           |      |      |      |
| 4/8/2020   |           |           |      |           |           | 6.64 | 4.98 | 6.7  |
| 7/13/2020  | 5.84      | 5.16      |      |           | 5.14      |      |      |      |
| 7/14/2020  |           |           | 6.48 | 6.2       |           | 6.52 | 6.12 |      |
| 7/15/2020  |           |           |      |           |           |      |      | 6.71 |
| 2/22/2021  | 6.1       | 5.59      |      | 6.19      | 5.06      |      |      |      |
| 2/23/2021  |           |           | 6.47 |           |           | 6.7  | 6.13 | 6.73 |
| 7/12/2021  | 6.16      | 5.86      |      | 6.06      | 5.13      |      |      |      |



# Prediction Limit

Constituent: pH, Field (SU) Analysis Run 11/16/2021 10:52 AM View: Appendix III - Interwell  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|           | MW-2 (bg) | MW-3 (bg) | MW-5 | MW-4 (bg) | MW-1 (bg) | MW-7 | MW-6 | MW-8 |
|-----------|-----------|-----------|------|-----------|-----------|------|------|------|
| 7/20/2021 |           |           |      |           |           | 6.58 | 5.99 | 6.64 |
| 7/21/2021 |           |           | 6.4  |           |           |      |      |      |

FIGURE H.

# Appendix III Trend Test - Significant Results

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:54 AM

| Constituent            | Well      | Slope   | Calc. | Critical | Sig. | N  | %NDs | Normality | Xform | Alpha | Method |
|------------------------|-----------|---------|-------|----------|------|----|------|-----------|-------|-------|--------|
| Fluoride, total (mg/L) | MW-2 (bg) | 0.01443 | 123   | 111      | Yes  | 25 | 0    | n/a       | n/a   | 0.01  | NP     |
| pH, Field (SU)         | MW-8      | 0.05301 | 105   | 68       | Yes  | 18 | 0    | n/a       | n/a   | 0.01  | NP     |

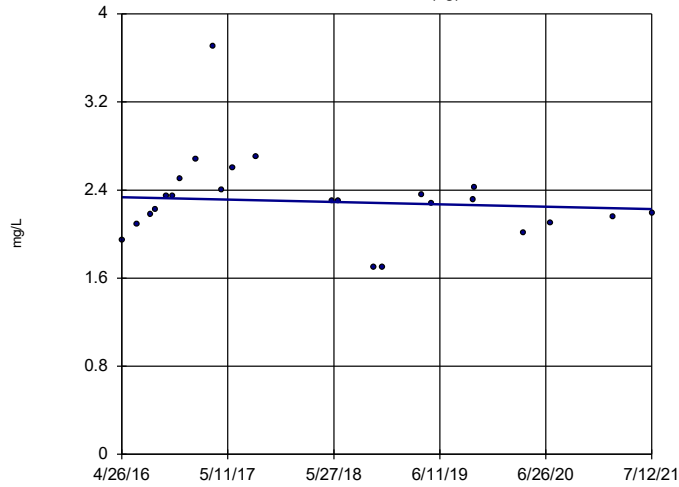
# Appendix III Trend Test - All Results

Plant Gorgas    Client: Southern Company    Data: Gorgas CCR LF    Printed 11/16/2021, 10:54 AM

| <u>Constituent</u>            | <u>Well</u>      | <u>Slope</u>   | <u>Calc.</u> | <u>Critical</u> | <u>Sig.</u> | <u>N</u>  | <u>%NDs</u> | <u>Normality</u> | <u>Xform</u> | <u>Alpha</u> | <u>Method</u> |
|-------------------------------|------------------|----------------|--------------|-----------------|-------------|-----------|-------------|------------------|--------------|--------------|---------------|
| Chloride, Total (mg/L)        | MW-1 (bg)        | -0.0204        | -17          | -105            | No          | 24        | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-2 (bg)        | -0.05131       | -15          | -105            | No          | 24        | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-3 (bg)        | 0.06882        | 59           | 105             | No          | 24        | 8.333       | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-4 (bg)        | -0.06862       | -70          | -105            | No          | 24        | 4.167       | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-5             | -0.1427        | -29          | -63             | No          | 17        | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-6             | 0.3235         | 62           | 63              | No          | 17        | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-7             | -6.069         | -33          | -63             | No          | 17        | 0           | n/a              | n/a          | 0.01         | NP            |
| Chloride, Total (mg/L)        | MW-8             | -30.38         | -58          | -63             | No          | 17        | 0           | n/a              | n/a          | 0.01         | NP            |
| Fluoride, total (mg/L)        | MW-1 (bg)        | -0.006304      | -46          | -111            | No          | 25        | 0           | n/a              | n/a          | 0.01         | NP            |
| <b>Fluoride, total (mg/L)</b> | <b>MW-2 (bg)</b> | <b>0.01443</b> | <b>123</b>   | <b>111</b>      | <b>Yes</b>  | <b>25</b> | <b>0</b>    | <b>n/a</b>       | <b>n/a</b>   | <b>0.01</b>  | <b>NP</b>     |
| Fluoride, total (mg/L)        | MW-3 (bg)        | -0.007263      | -15          | -111            | No          | 25        | 0           | n/a              | n/a          | 0.01         | NP            |
| Fluoride, total (mg/L)        | MW-4 (bg)        | 0.005907       | 41           | 111             | No          | 25        | 0           | n/a              | n/a          | 0.01         | NP            |
| Fluoride, total (mg/L)        | MW-7             | 0              | 7            | 68              | No          | 18        | 0           | n/a              | n/a          | 0.01         | NP            |
| Fluoride, total (mg/L)        | MW-8             | -0.003792      | -58          | -68             | No          | 18        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-1 (bg)        | -0.01437       | -88          | -105            | No          | 24        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-2 (bg)        | 0.04162        | 102          | 105             | No          | 24        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-3 (bg)        | -0.008517      | -8           | -105            | No          | 24        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-4 (bg)        | 0.01244        | 57           | 111             | No          | 25        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-5             | 0.01006        | 41           | 68              | No          | 18        | 0           | n/a              | n/a          | 0.01         | NP            |
| pH, Field (SU)                | MW-7             | -0.008049      | -21          | -68             | No          | 18        | 0           | n/a              | n/a          | 0.01         | NP            |
| <b>pH, Field (SU)</b>         | <b>MW-8</b>      | <b>0.05301</b> | <b>105</b>   | <b>68</b>       | <b>Yes</b>  | <b>18</b> | <b>0</b>    | <b>n/a</b>       | <b>n/a</b>   | <b>0.01</b>  | <b>NP</b>     |

### Sen's Slope Estimator

MW-1 (bg)

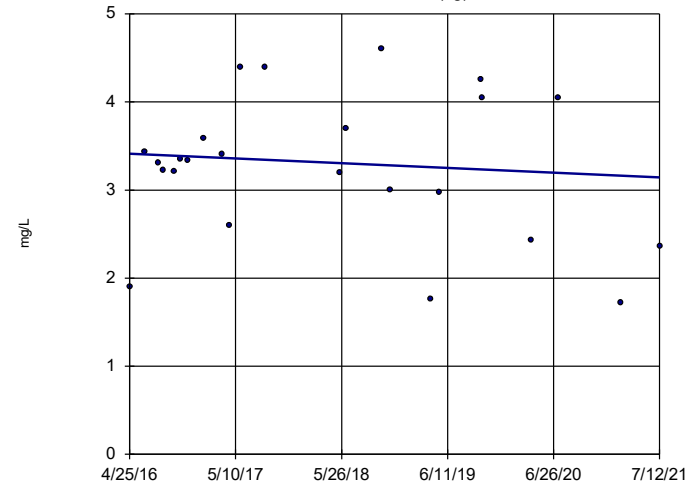


n = 24  
 Slope = -0.0204  
 units per year.  
 Mann-Kendall  
 statistic = -17  
 critical = -105  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:52 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-2 (bg)

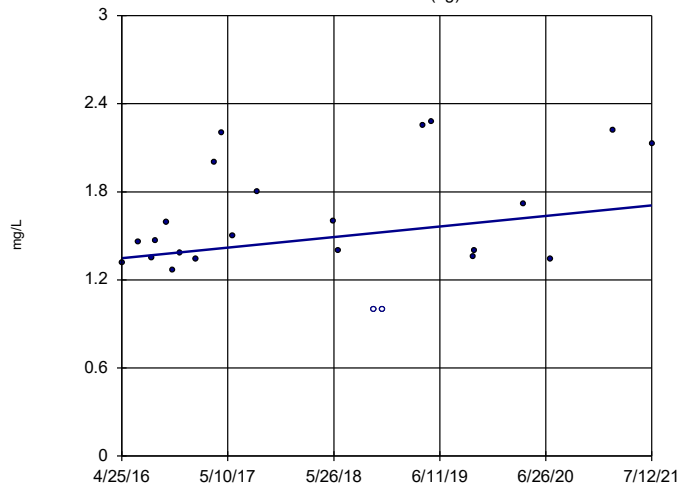


n = 24  
 Slope = -0.05131  
 units per year.  
 Mann-Kendall  
 statistic = -15  
 critical = -105  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:52 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-3 (bg)

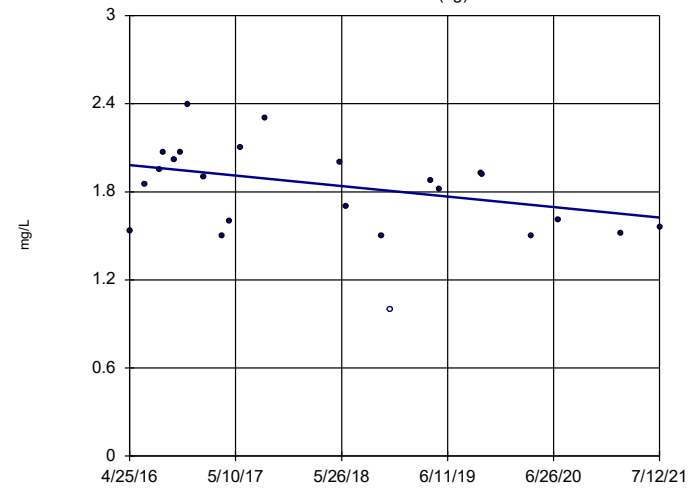


n = 24  
 Slope = 0.06882  
 units per year.  
 Mann-Kendall  
 statistic = 59  
 critical = 105  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-4 (bg)

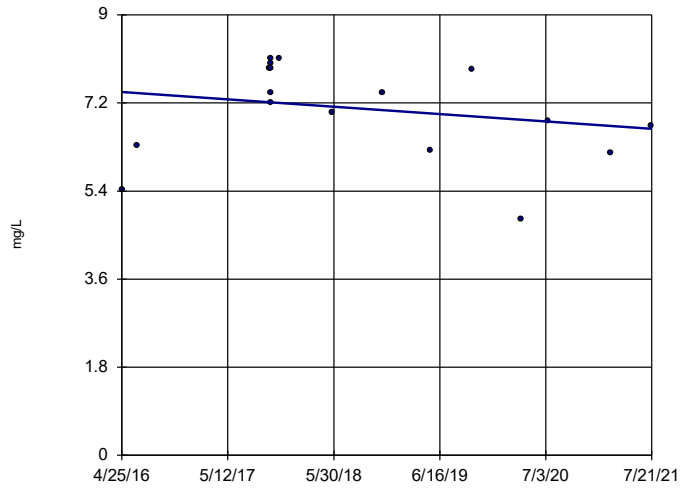


n = 24  
 Slope = -0.06862  
 units per year.  
 Mann-Kendall  
 statistic = -70  
 critical = -105  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-5

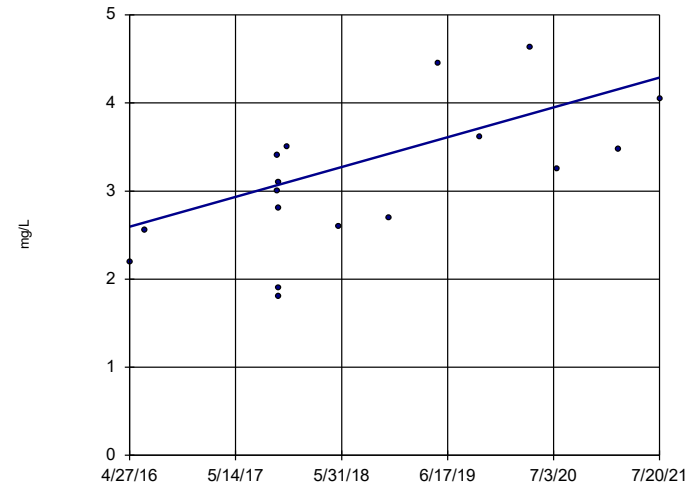


n = 17  
 Slope = -0.1427 units per year.  
 Mann-Kendall statistic = -29  
 critical = -63  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-6

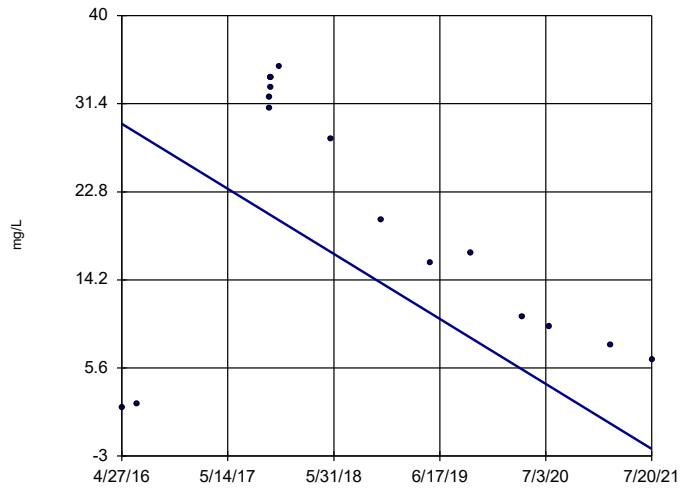


n = 17  
 Slope = 0.3235 units per year.  
 Mann-Kendall statistic = 62  
 critical = 63  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-7

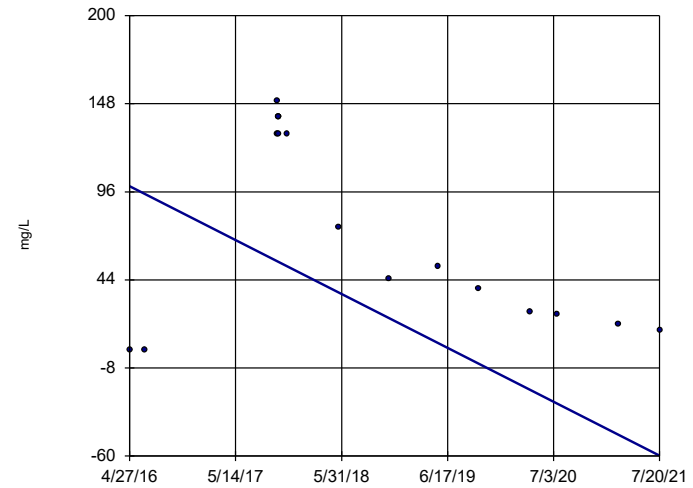


n = 17  
 Slope = -6.069 units per year.  
 Mann-Kendall statistic = -33  
 critical = -63  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-8

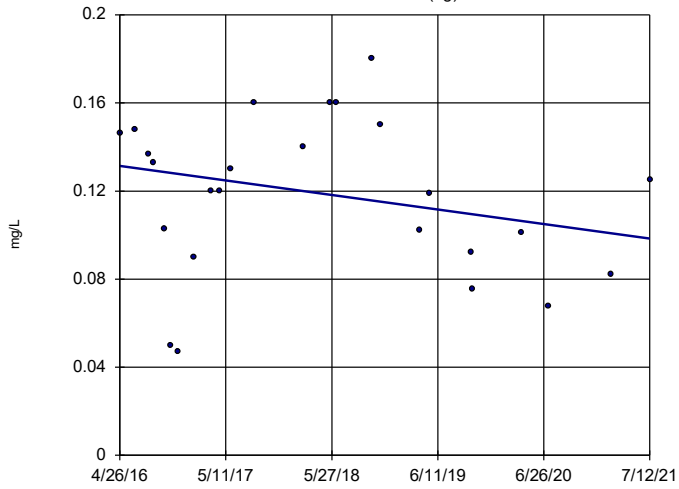


n = 17  
 Slope = -30.38 units per year.  
 Mann-Kendall statistic = -58  
 critical = -63  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-1 (bg)

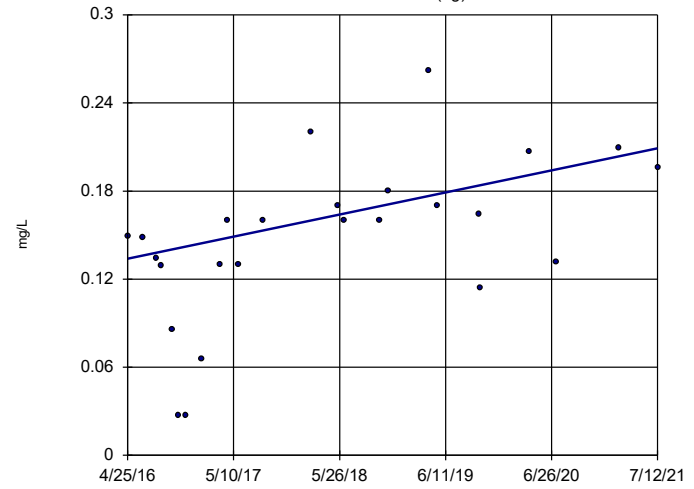


n = 25  
 Slope = -0.006304  
 units per year.  
 Mann-Kendall  
 statistic = -46  
 critical = -111  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Fluoride, total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-2 (bg)

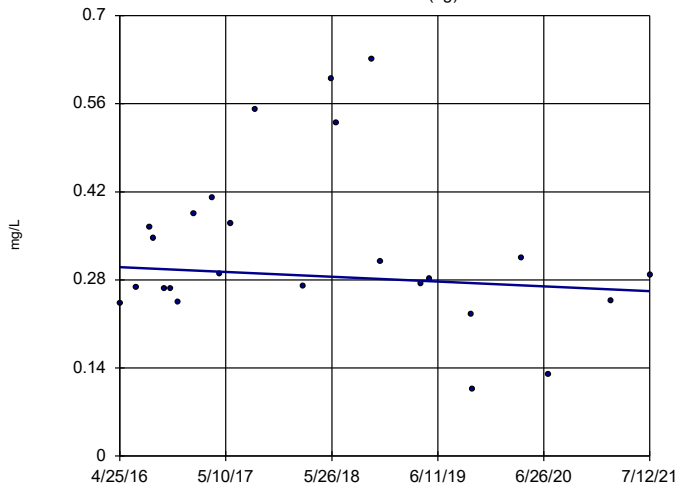


n = 25  
 Slope = 0.01443  
 units per year.  
 Mann-Kendall  
 statistic = 123  
 critical = 111  
 Increasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Fluoride, total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-3 (bg)

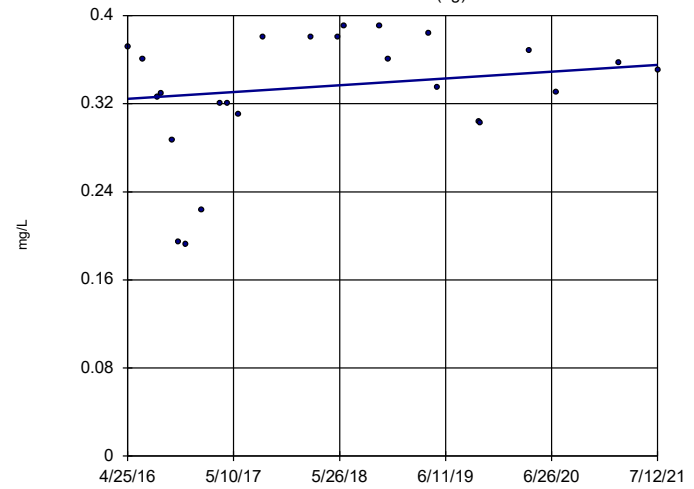


n = 25  
 Slope = -0.007263  
 units per year.  
 Mann-Kendall  
 statistic = -15  
 critical = -111  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Fluoride, total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-4 (bg)

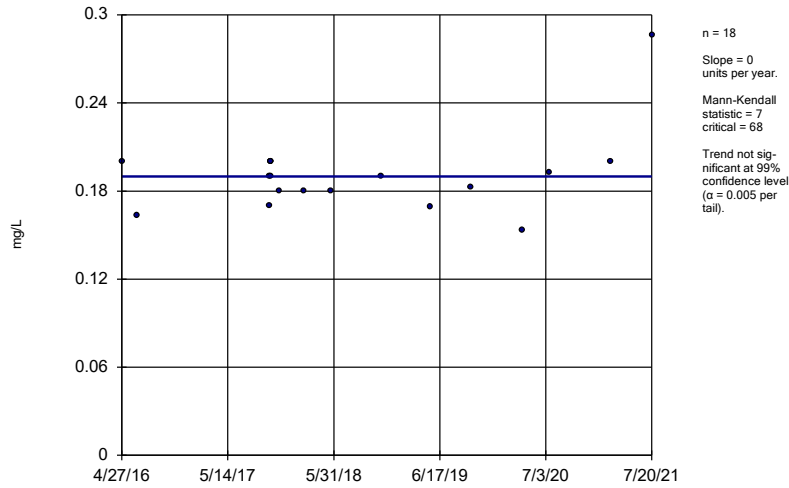


n = 25  
 Slope = 0.005907  
 units per year.  
 Mann-Kendall  
 statistic = 41  
 critical = 111  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Fluoride, total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

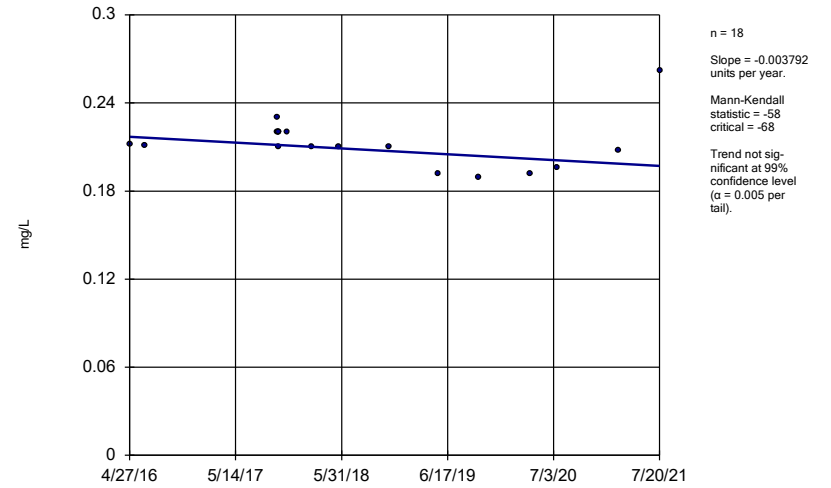
MW-7



Constituent: Fluoride, total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

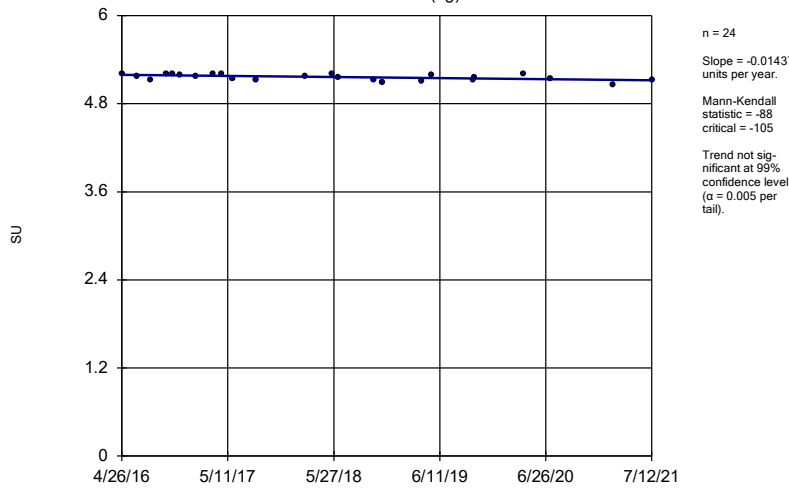
MW-8



Constituent: Fluoride, total Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

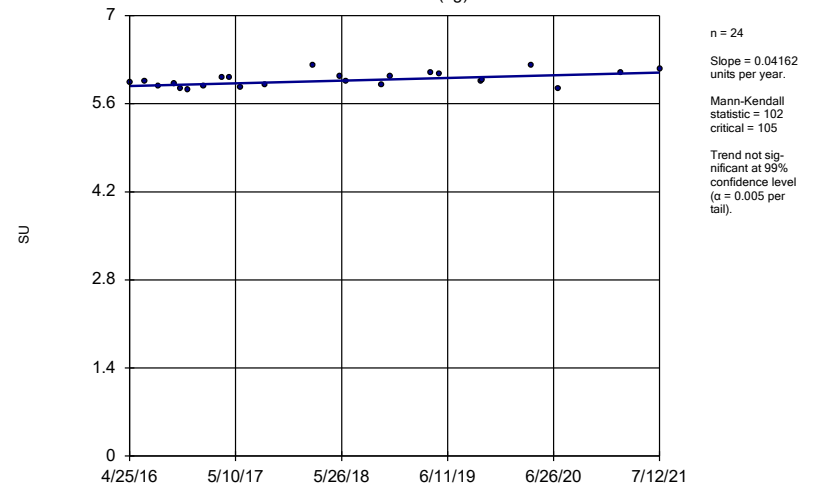
MW-1 (bg)



Constituent: pH, Field Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-2 (bg)

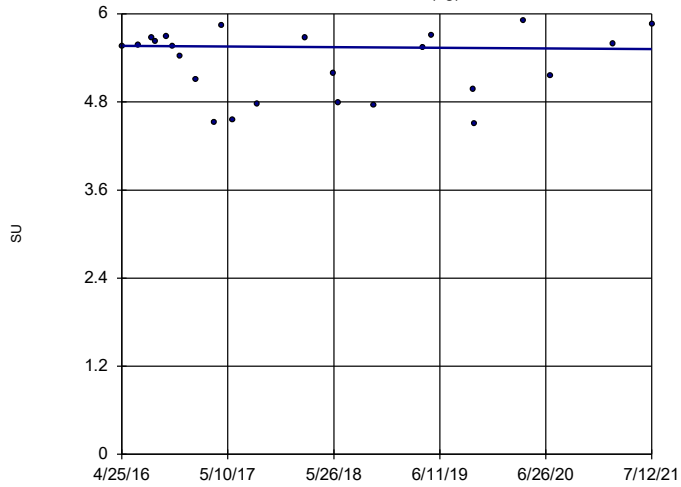


Constituent: pH, Field Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF



### Sen's Slope Estimator

MW-3 (bg)

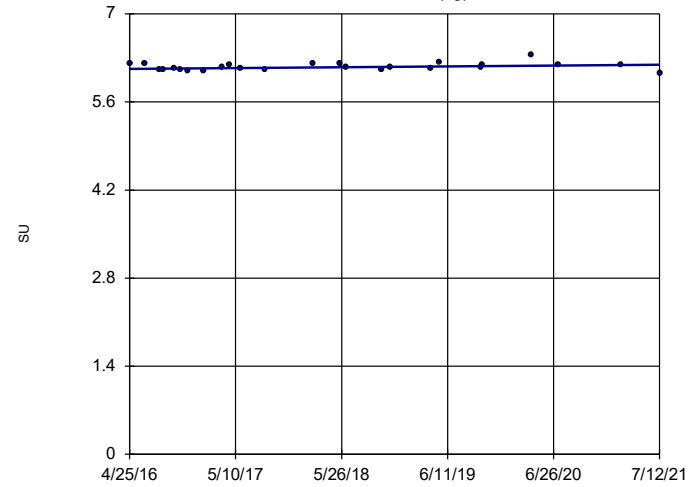


n = 24  
 Slope = -0.008517 units per year.  
 Mann-Kendall statistic = -8  
 critical = -105  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, Field Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-4 (bg)

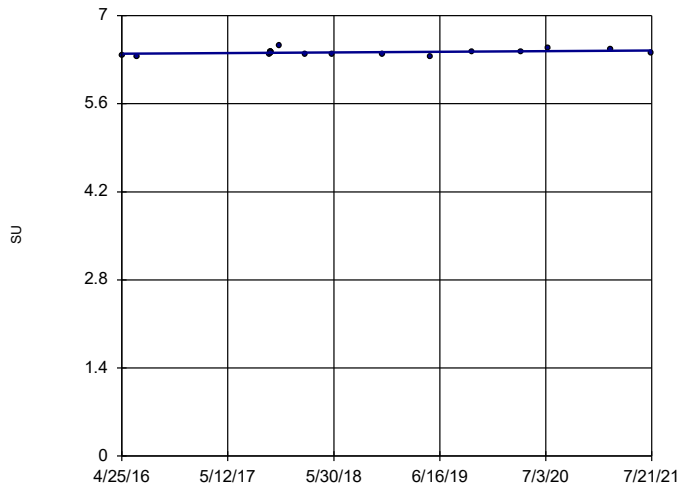


n = 25  
 Slope = 0.01244 units per year.  
 Mann-Kendall statistic = 57  
 critical = 111  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, Field Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-5

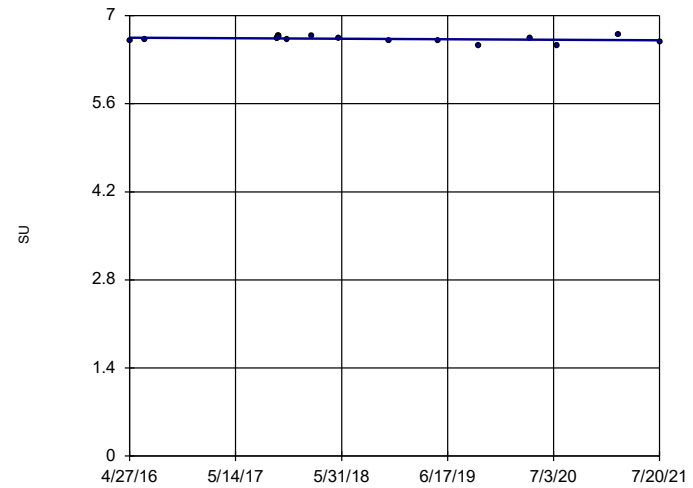


n = 18  
 Slope = 0.01006 units per year.  
 Mann-Kendall statistic = 41  
 critical = 68  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, Field Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-7

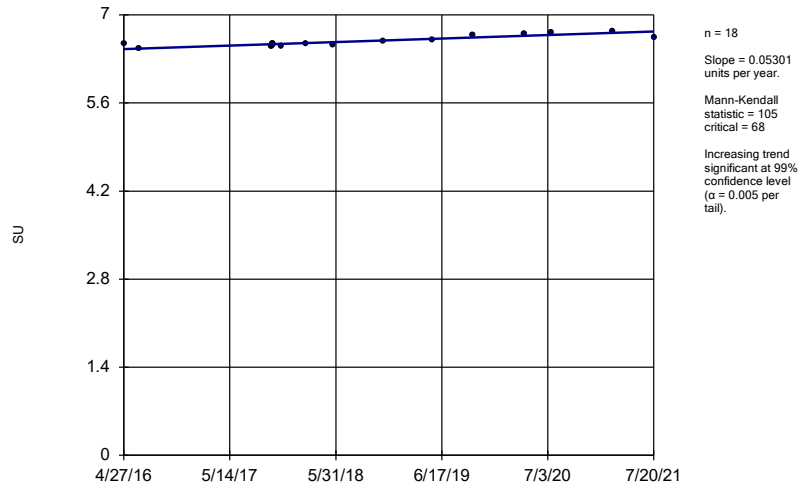


n = 18  
 Slope = -0.008049 units per year.  
 Mann-Kendall statistic = -21  
 critical = -68  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, Field Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Sen's Slope Estimator

MW-8



Constituent: pH, Field Analysis Run 11/16/2021 10:53 AM View: Appendix III - Trend Tests  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

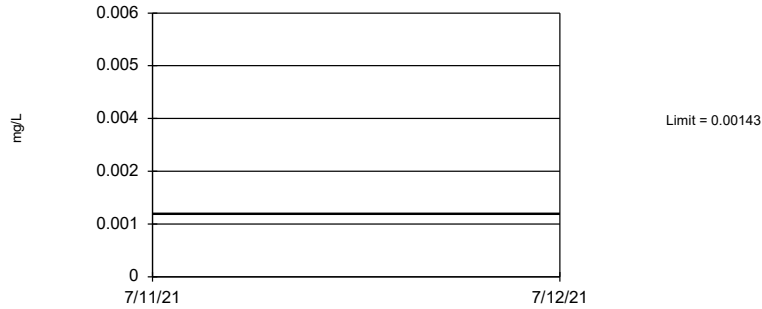
FIGURE I.

# Upper Tolerance Limits Summary Table

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF Printed 11/16/2021, 10:57 AM

| <u>Constituent</u>                | <u>Well</u> | <u>Upper Lim.</u> | <u>Date</u> | <u>Observ.</u> | <u>Sig.</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)                   | n/a         | 0.00143           | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 93.75       | n/a            | n/a              | 0.007269     | NP Inter      |
| Arsenic (mg/L)                    | n/a         | 0.005             | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 83.33       | n/a            | n/a              | 0.007269     | NP Inter      |
| Barium (mg/L)                     | n/a         | 0.0165            | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 0           | n/a            | n/a              | 0.007269     | NP Inter      |
| Beryllium (mg/L)                  | n/a         | 0.0121            | n/a         | n/a            | n/a         | 94          | n/a            | n/a              | 84.04       | n/a            | n/a              | 0.008054     | NP Inter      |
| Cadmium (mg/L)                    | n/a         | 0.00598           | n/a         | n/a            | n/a         | 94          | n/a            | n/a              | 45.74       | n/a            | n/a              | 0.008054     | NP Inter      |
| Chromium (mg/L)                   | n/a         | 0.0105            | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 89.58       | n/a            | n/a              | 0.007269     | NP Inter      |
| Cobalt (mg/L)                     | n/a         | 0.49              | n/a         | n/a            | n/a         | 94          | n/a            | n/a              | 26.6        | n/a            | n/a              | 0.008054     | NP Inter      |
| Combined Radium 226 + 228 (pCi/L) | n/a         | 1.47              | n/a         | n/a            | n/a         | 92          | n/a            | n/a              | 0           | n/a            | n/a              | 0.008924     | NP Inter      |
| Fluoride, total (mg/L)            | n/a         | 0.63              | n/a         | n/a            | n/a         | 100         | n/a            | n/a              | 0           | n/a            | n/a              | 0.005921     | NP Inter      |
| Lead (mg/L)                       | n/a         | 0.00108           | n/a         | n/a            | n/a         | 95          | n/a            | n/a              | 95.79       | n/a            | n/a              | 0.007651     | NP Inter      |
| Lithium (mg/L)                    | n/a         | 0.419             | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 0           | n/a            | n/a              | 0.007269     | NP Inter      |
| Mercury (mg/L)                    | n/a         | 0.0005            | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 100         | n/a            | n/a              | 0.007269     | NP Inter      |
| Molybdenum (mg/L)                 | n/a         | 0.0002            | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 97.92       | n/a            | n/a              | 0.007269     | NP Inter      |
| Selenium (mg/L)                   | n/a         | 0.0209            | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 60.42       | n/a            | n/a              | 0.007269     | NP Inter      |
| Thallium (mg/L)                   | n/a         | 0.000226          | n/a         | n/a            | n/a         | 96          | n/a            | n/a              | 96.88       | n/a            | n/a              | 0.007269     | NP Inter      |

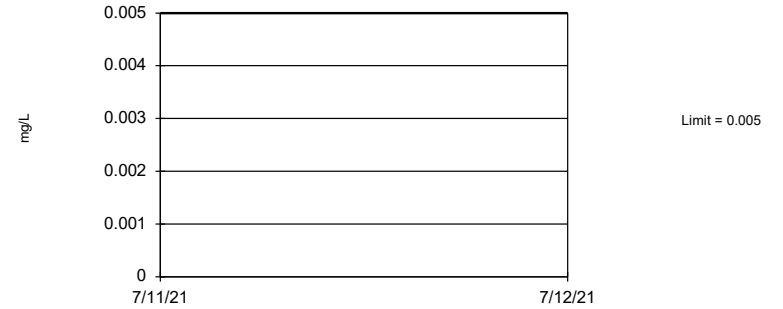
### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 93.75% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Antimony Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 83.33% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Arsenic Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

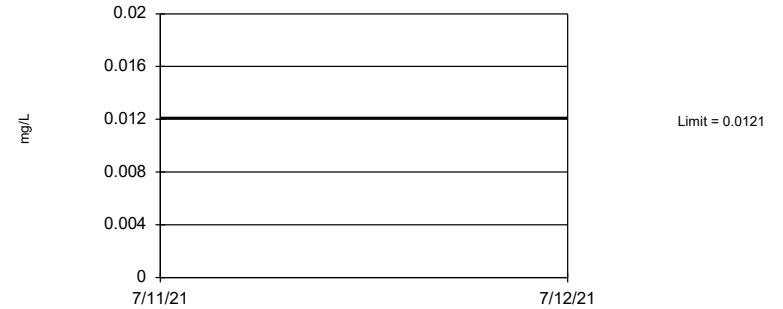
### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Barium Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 94 background values. 84.04% NDs. 95.12% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.008054.

Constituent: Beryllium Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

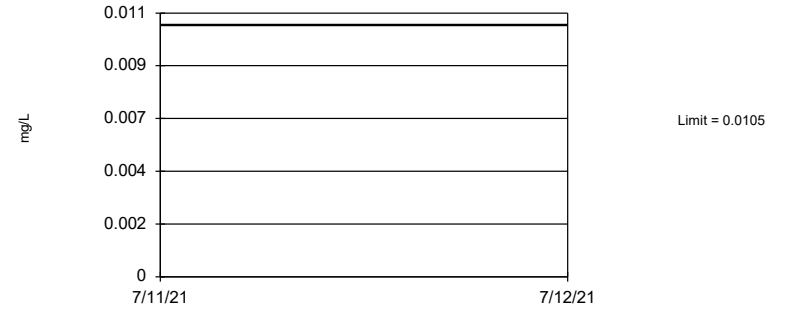
### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 94 background values. 45.74% NDs. 95.12% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.008054.

Constituent: Cadmium Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 89.58% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Chromium Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

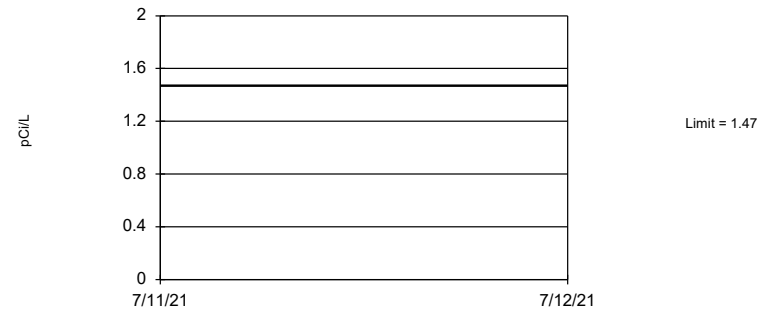
### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 94 background values. 26.6% NDs. 95.12% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.008054.

Constituent: Cobalt Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

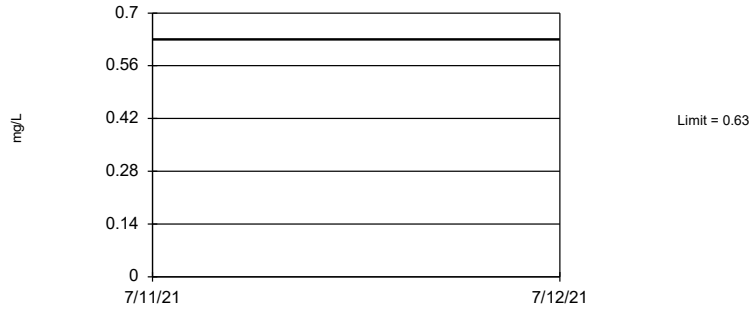
### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 92 background values. 95.12% coverage at alpha=0.01; 96.68% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.008924.

Constituent: Combined Radium 226 + 228 Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

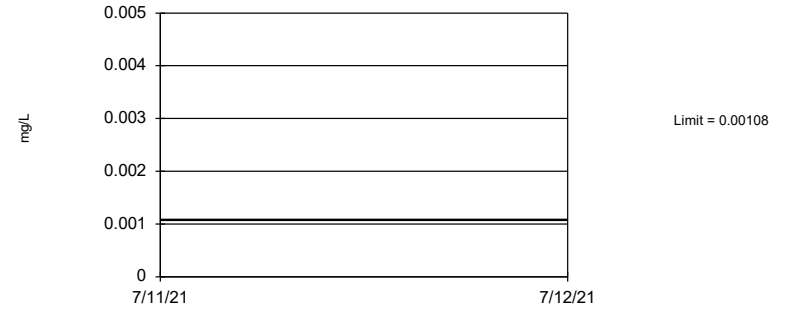
### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 100 background values. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.005921.

Constituent: Fluoride, total Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

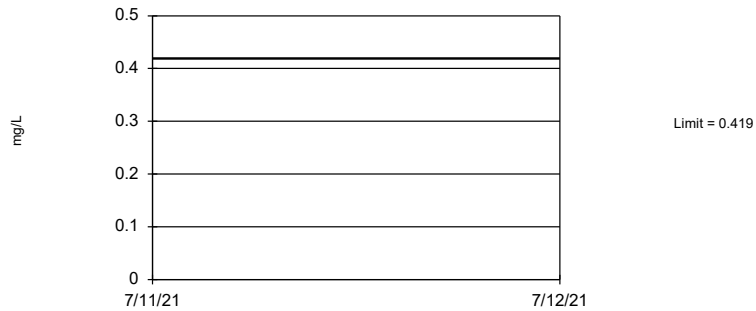
### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 95 background values. 95.79% NDs. 95.12% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007651.

Constituent: Lead Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

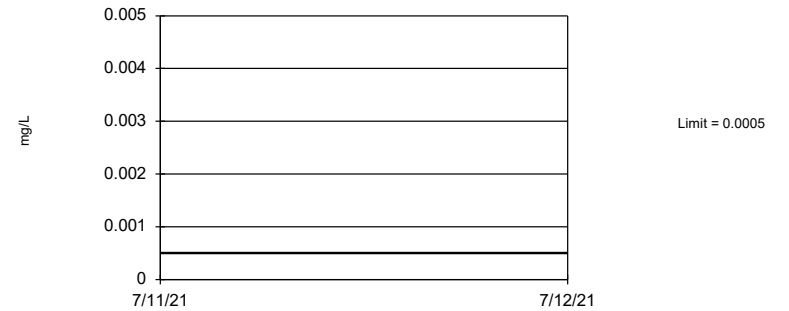
### Tolerance Limit Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Lithium Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

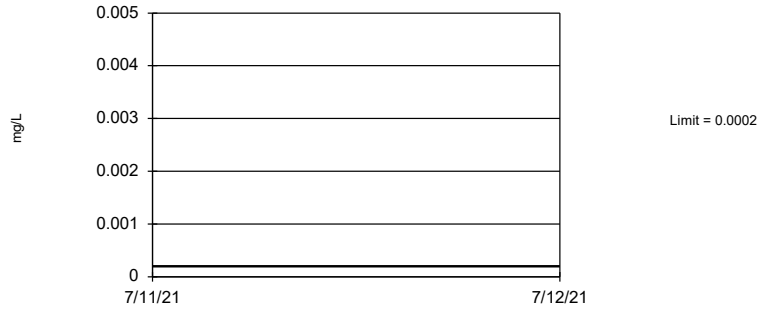
### Tolerance Limit Interwell Non-parametric



NP test selected by user. All background values were censored; limit is most recent reporting limit. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Mercury Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

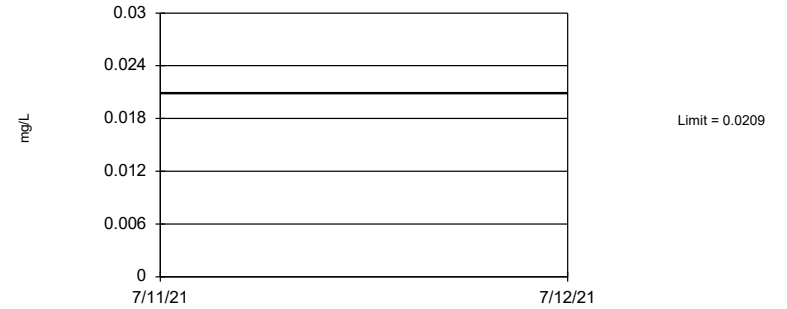
Tolerance Limit  
Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 97.92% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Molybdenum Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

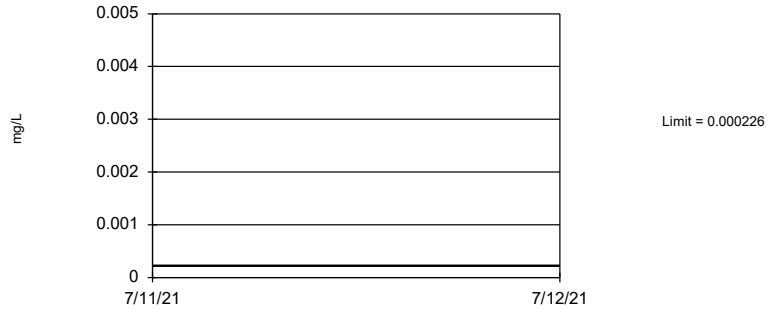
Tolerance Limit  
Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 60.42% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Selenium Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

Tolerance Limit  
Interwell Non-parametric



NP test selected by user. Limit is highest of 96 background values. 96.88% NDs. 95.51% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007269.

Constituent: Thallium Analysis Run 11/16/2021 10:57 AM View: UTLs  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF



FIGURE J.

| <b>GORGAS CCR LANDFILL GWPS</b> |              |                   |             |
|---------------------------------|--------------|-------------------|-------------|
| <b>Analyte</b>                  | <b>Units</b> | <b>Background</b> | <b>GWPS</b> |
| Antimony                        | mg/L         | 0.00143           | 0.006       |
| Arsenic                         | mg/L         | 0.005             | 0.01        |
| Barium                          | mg/L         | 0.0165            | 2           |
| Beryllium                       | mg/L         | 0.0121            | 0.004       |
| Cadmium                         | mg/L         | 0.00598           | 0.005       |
| Chromium                        | mg/L         | 0.0105            | 0.1         |
| Cobalt                          | mg/L         | 0.49              | 0.49        |
| Combined Radium-226/228         | pCi/L        | 1.47              | 5           |
| Fluoride                        | mg/L         | 0.63              | 4           |
| Lead                            | mg/L         | 0.00108           | 0.015       |
| Lithium                         | mg/L         | 0.419             | 0.419       |
| Mercury                         | mg/L         | 0.0005            | 0.002       |
| Molybdenum                      | mg/L         | 0.0002            | 0.1         |
| Selenium                        | mg/L         | 0.0209            | 0.05        |
| Thallium                        | mg/L         | 0.000226          | 0.002       |

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.
4. GWPS established during second semi-annual sampling event in 2021.

FIGURE K.

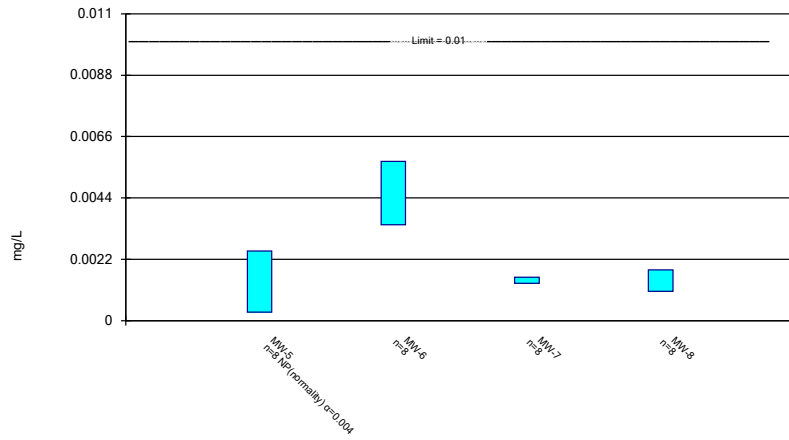
# Confidence Intervals - All Results (No Significant)

Plant Gorgas    Client: Southern Company    Data: Gorgas CCR LF    Printed 11/16/2021, 11:02 AM

| Constituent                       | Well | Upper Lim. | Lower Lim. | Compliance | Sig. | N | Mean      | Std. Dev.  | %NDs | ND Adj. | Transform | Alpha | Method         |
|-----------------------------------|------|------------|------------|------------|------|---|-----------|------------|------|---------|-----------|-------|----------------|
| Arsenic (mg/L)                    | MW-5 | 0.0025     | 0.000309   | 0.01       | No   | 8 | 0.001741  | 0.0009299  | 50   | None    | No        | 0.004 | NP (normality) |
| Arsenic (mg/L)                    | MW-6 | 0.005713   | 0.003434   | 0.01       | No   | 8 | 0.004574  | 0.001075   | 0    | None    | No        | 0.01  | Param.         |
| Arsenic (mg/L)                    | MW-7 | 0.001559   | 0.001339   | 0.01       | No   | 8 | 0.001449  | 0.0001038  | 0    | None    | No        | 0.01  | Param.         |
| Arsenic (mg/L)                    | MW-8 | 0.001824   | 0.001051   | 0.01       | No   | 8 | 0.001438  | 0.0003642  | 0    | None    | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-5 | 0.01328    | 0.01052    | 2          | No   | 8 | 0.0119    | 0.001301   | 0    | None    | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-6 | 0.01521    | 0.01261    | 2          | No   | 8 | 0.01391   | 0.001225   | 0    | None    | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-7 | 0.01472    | 0.01196    | 2          | No   | 8 | 0.01334   | 0.001303   | 0    | None    | No        | 0.01  | Param.         |
| Barium (mg/L)                     | MW-8 | 0.0143     | 0.0122     | 2          | No   | 8 | 0.0135    | 0.0008018  | 0    | None    | No        | 0.004 | NP (normality) |
| Beryllium (mg/L)                  | MW-6 | 0.001015   | 0.00048    | 0.004      | No   | 8 | 0.0008775 | 0.0002073  | 62.5 | None    | No        | 0.004 | NP (NDs)       |
| Cadmium (mg/L)                    | MW-6 | 0.00204    | 0.000203   | 0.005      | No   | 8 | 0.0005616 | 0.0006455  | 62.5 | None    | No        | 0.004 | NP (NDs)       |
| Cobalt (mg/L)                     | MW-5 | 0.005      | 0.00102    | 0.49       | No   | 8 | 0.004036  | 0.001786   | 75   | None    | No        | 0.004 | NP (NDs)       |
| Cobalt (mg/L)                     | MW-6 | 0.3021     | 0.0258     | 0.49       | No   | 8 | 0.1556    | 0.1565     | 0    | None    | sqrt(x)   | 0.01  | Param.         |
| Cobalt (mg/L)                     | MW-7 | 0.005712   | 0.002663   | 0.49       | No   | 8 | 0.004187  | 0.001438   | 12.5 | None    | No        | 0.01  | Param.         |
| Cobalt (mg/L)                     | MW-8 | 0.008493   | 0.005549   | 0.49       | No   | 8 | 0.007021  | 0.001389   | 0    | None    | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-5 | 0.7821     | 0.5192     | 5          | No   | 8 | 0.6506    | 0.124      | 0    | None    | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-6 | 1.606      | 0.5355     | 5          | No   | 8 | 1.071     | 0.5048     | 0    | None    | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-7 | 0.6249     | 0.1729     | 5          | No   | 8 | 0.3989    | 0.2132     | 0    | None    | No        | 0.01  | Param.         |
| Combined Radium 226 + 228 (pCi/L) | MW-8 | 0.8997     | 0.2834     | 5          | No   | 8 | 0.5816    | 0.3549     | 0    | None    | x^(1/3)   | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-5 | 0.3325     | 0.236      | 4          | No   | 8 | 0.2843    | 0.04549    | 0    | None    | No        | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-6 | 0.1388     | 0.1217     | 4          | No   | 8 | 0.1303    | 0.008031   | 0    | None    | No        | 0.01  | Param.         |
| Fluoride, total (mg/L)            | MW-7 | 0.286      | 0.153      | 4          | No   | 8 | 0.1943    | 0.03989    | 0    | None    | No        | 0.004 | NP (normality) |
| Fluoride, total (mg/L)            | MW-8 | 0.262      | 0.189      | 4          | No   | 8 | 0.2074    | 0.02372    | 0    | None    | No        | 0.004 | NP (normality) |
| Lead (mg/L)                       | MW-8 | 0.000203   | 0.00009    | 0.015      | No   | 8 | 0.0001889 | 0.00003995 | 87.5 | None    | No        | 0.004 | NP (NDs)       |
| Lithium (mg/L)                    | MW-5 | 0.1277     | 0.0993     | 0.419      | No   | 8 | 0.1135    | 0.01341    | 0    | None    | No        | 0.01  | Param.         |
| Lithium (mg/L)                    | MW-6 | 0.2668     | 0.1421     | 0.419      | No   | 8 | 0.2024    | 0.07349    | 0    | None    | x^2       | 0.01  | Param.         |
| Lithium (mg/L)                    | MW-7 | 0.1334     | 0.1051     | 0.419      | No   | 8 | 0.1193    | 0.01332    | 0    | None    | No        | 0.01  | Param.         |
| Lithium (mg/L)                    | MW-8 | 0.1812     | 0.1478     | 0.419      | No   | 8 | 0.1645    | 0.01579    | 0    | None    | No        | 0.01  | Param.         |
| Molybdenum (mg/L)                 | MW-5 | 0.01       | 0.00126    | 0.1        | No   | 8 | 0.007832  | 0.004014   | 75   | None    | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-6 | 0.01       | 0.00007    | 0.1        | No   | 8 | 0.007544  | 0.004547   | 75   | None    | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-7 | 0.01       | 0.00086    | 0.1        | No   | 8 | 0.007741  | 0.004183   | 75   | None    | No        | 0.004 | NP (NDs)       |
| Molybdenum (mg/L)                 | MW-8 | 0.0129     | 0.00033    | 0.1        | No   | 8 | 0.009154  | 0.003707   | 75   | None    | No        | 0.004 | NP (NDs)       |
| Selenium (mg/L)                   | MW-5 | 0.01       | 0.00178    | 0.05       | No   | 8 | 0.008014  | 0.003681   | 75   | None    | No        | 0.004 | NP (NDs)       |

### Parametric and Non-Parametric (NP) Confidence Interval

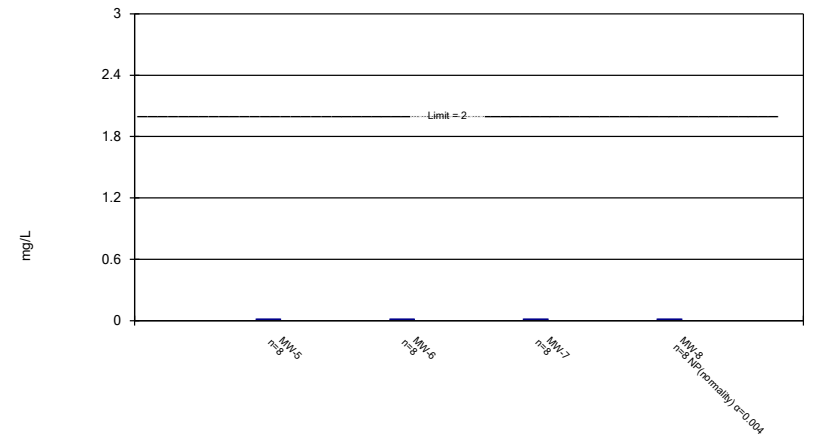
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Parametric and Non-Parametric (NP) Confidence Interval

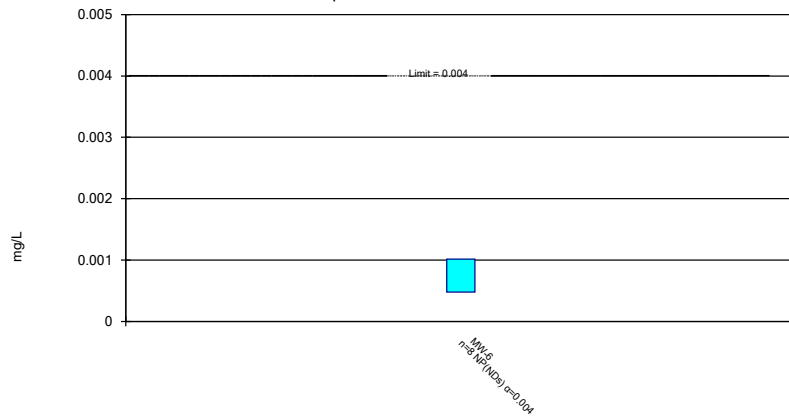
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Non-Parametric Confidence Interval

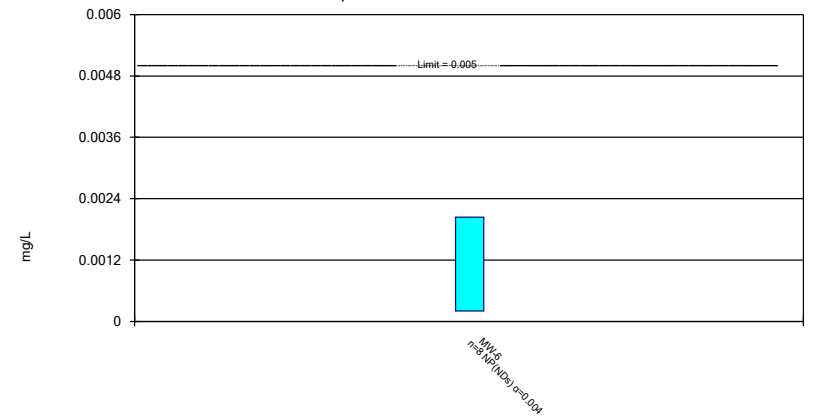
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Non-Parametric Confidence Interval

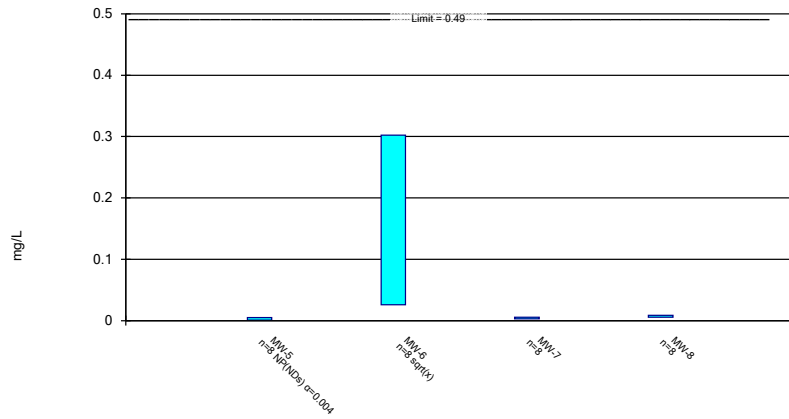
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Parametric and Non-Parametric (NP) Confidence Interval

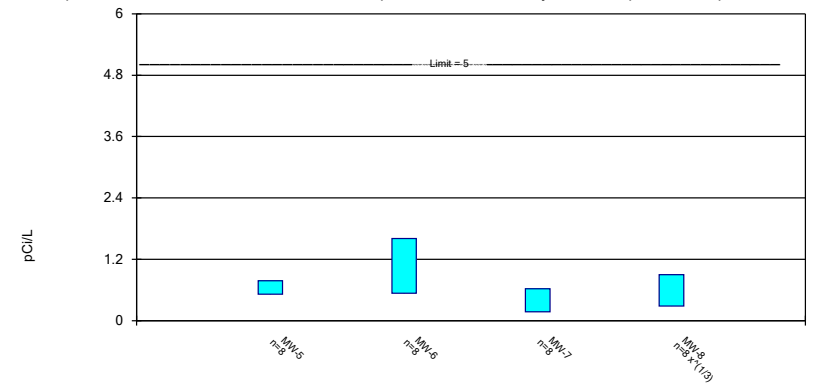
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Parametric Confidence Interval

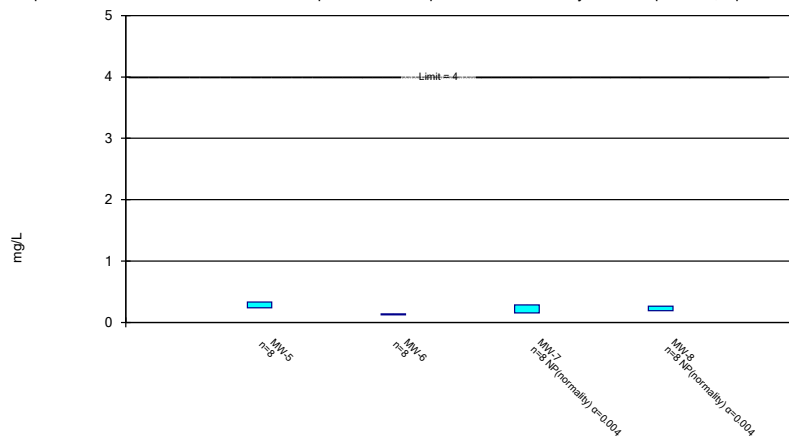
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Parametric and Non-Parametric (NP) Confidence Interval

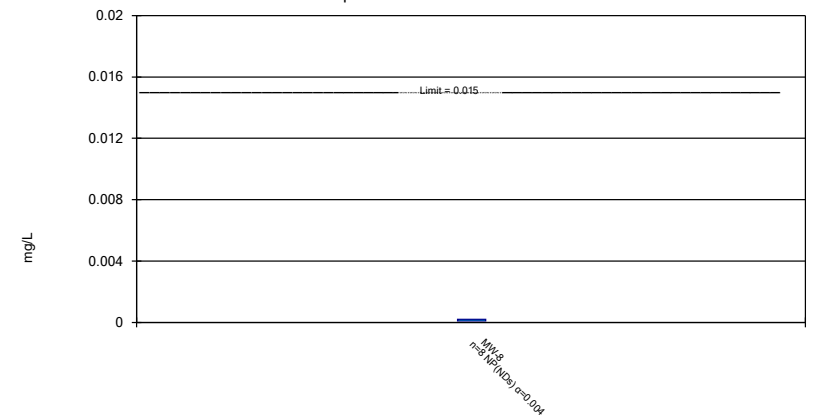
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride, total Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Non-Parametric Confidence Interval

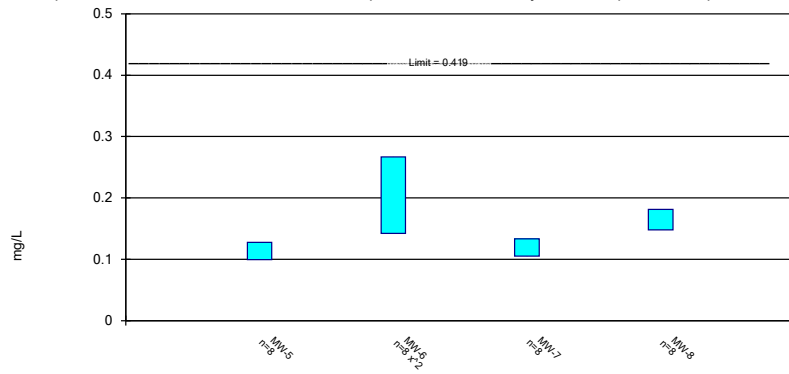
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
 Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Parametric Confidence Interval

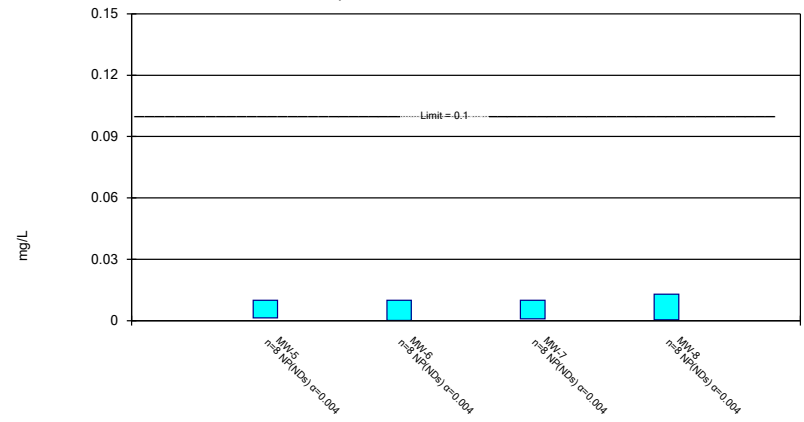
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Non-Parametric Confidence Interval

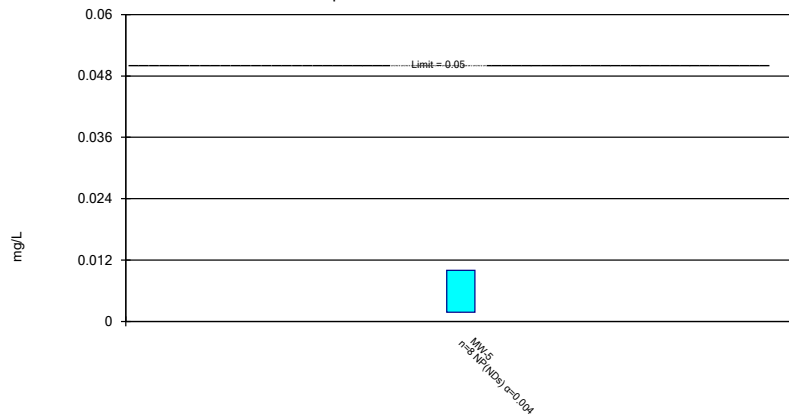
Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

### Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Selenium Analysis Run 11/16/2021 11:00 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5        | MW-6        | MW-7        | MW-8        |
|------------|-------------|-------------|-------------|-------------|
| 5/23/2018  | <0.005      | 0.0058      | 0.00155 (J) | 0.00157 (J) |
| 11/20/2018 | <0.005      | 0.00542     | 0.00133 (J) | 0.00173 (J) |
| 5/14/2019  | 0.00153 (J) |             |             |             |
| 5/15/2019  |             | 0.00383 (J) | 0.00138 (J) | 0.00136 (J) |
| 10/8/2019  |             |             | 0.00145 (J) |             |
| 10/9/2019  |             |             |             | 0.00142 (J) |
| 10/10/2019 | <0.005      | 0.00473 (J) |             |             |
| 4/7/2020   | 0.00163 (J) |             |             |             |
| 4/8/2020   |             | 0.00232 (J) | 0.00136 (J) | 0.00102 (J) |
| 7/14/2020  | <0.005      | 0.0048 (J)  | 0.00147 (J) |             |
| 7/15/2020  |             |             |             | 0.00212 (J) |
| 2/23/2021  | 0.000309    | 0.00494     | 0.00141     | 0.00117     |
| 7/20/2021  |             | 0.00475     | 0.00164     | 0.00111     |
| 7/21/2021  | 0.00046     |             |             |             |
| Mean       | 0.001741    | 0.004574    | 0.001449    | 0.001438    |
| Std. Dev.  | 0.0009299   | 0.001075    | 0.0001038   | 0.0003642   |
| Upper Lim. | 0.0025      | 0.005713    | 0.001559    | 0.001824    |
| Lower Lim. | 0.000309    | 0.003434    | 0.001339    | 0.001051    |



# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5     | MW-6     | MW-7     | MW-8      |
|------------|----------|----------|----------|-----------|
| 5/23/2018  | 0.0138   | 0.0145   | 0.0135   | 0.0137    |
| 11/20/2018 | 0.0105   | 0.0127   | 0.0116   | 0.0123    |
| 5/14/2019  | 0.0111   |          |          |           |
| 5/15/2019  |          | 0.0121   | 0.0114   | 0.0122    |
| 10/8/2019  |          |          | 0.0145   |           |
| 10/9/2019  |          |          |          | 0.0137    |
| 10/10/2019 | 0.0105   | 0.0152   |          |           |
| 4/7/2020   | 0.0137   |          |          |           |
| 4/8/2020   |          | 0.0128   | 0.0127   | 0.0137    |
| 7/14/2020  | 0.0124   | 0.0154   | 0.0148   |           |
| 7/15/2020  |          |          |          | 0.0143    |
| 2/23/2021  | 0.0116   | 0.0143   | 0.014    | 0.014     |
| 7/20/2021  |          | 0.0143   | 0.0142   | 0.0141    |
| 7/21/2021  | 0.0116   |          |          |           |
| Mean       | 0.0119   | 0.01391  | 0.01334  | 0.0135    |
| Std. Dev.  | 0.001301 | 0.001225 | 0.001303 | 0.0008018 |
| Upper Lim. | 0.01328  | 0.01521  | 0.01472  | 0.0143    |
| Lower Lim. | 0.01052  | 0.01261  | 0.01196  | 0.0122    |

# Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-6         |
|------------|--------------|
| 5/23/2018  | <0.001015    |
| 11/20/2018 | <0.001015    |
| 5/15/2019  | 0.000677 (J) |
| 10/10/2019 | <0.001015    |
| 4/8/2020   | 0.000788 (J) |
| 7/14/2020  | <0.001015    |
| 2/23/2021  | <0.001015    |
| 7/20/2021  | 0.00048 (J)  |
| Mean       | 0.0008775    |
| Std. Dev.  | 0.0002073    |
| Upper Lim. | 0.001015     |
| Lower Lim. | 0.00048      |

# Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-6         |
|------------|--------------|
| 5/23/2018  | <0.000203    |
| 11/20/2018 | <0.000203    |
| 5/15/2019  | 0.000858 (J) |
| 10/10/2019 | <0.000203    |
| 4/8/2020   | 0.00204      |
| 7/14/2020  | <0.000203    |
| 2/23/2021  | <0.000203    |
| 7/20/2021  | 0.00058      |
| Mean       | 0.0005616    |
| Std. Dev.  | 0.0006455    |
| Upper Lim. | 0.00204      |
| Lower Lim. | 0.000203     |

# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5     | MW-6   | MW-7        | MW-8        |
|------------|----------|--------|-------------|-------------|
| 5/23/2018  | <0.005   | 0.0409 | <0.005      | 0.00466 (J) |
| 11/20/2018 | <0.005   | 0.0327 | 0.00306 (J) | 0.00551     |
| 5/14/2019  | <0.005   |        |             |             |
| 5/15/2019  |          | 0.265  | 0.00234 (J) | 0.00643     |
| 10/8/2019  |          |        | 0.00408 (J) |             |
| 10/9/2019  |          |        |             | 0.00864     |
| 10/10/2019 | <0.005   | 0.0425 |             |             |
| 4/7/2020   | <0.005   |        |             |             |
| 4/8/2020   |          | 0.479  | 0.00394 (J) | 0.00762     |
| 7/14/2020  | <0.005   | 0.0916 | 0.00653     |             |
| 7/15/2020  |          |        |             | 0.00821     |
| 2/23/2021  | 0.00102  | 0.0771 | 0.00294     | 0.00796     |
| 7/20/2021  |          | 0.216  | 0.00561     | 0.00714     |
| 7/21/2021  | 0.00127  |        |             |             |
| Mean       | 0.004036 | 0.1556 | 0.004187    | 0.007021    |
| Std. Dev.  | 0.001786 | 0.1565 | 0.001438    | 0.001389    |
| Upper Lim. | 0.005    | 0.3021 | 0.005712    | 0.008493    |
| Lower Lim. | 0.00102  | 0.0258 | 0.002663    | 0.005549    |

# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5      | MW-6      | MW-7       | MW-8      |
|------------|-----------|-----------|------------|-----------|
| 5/23/2018  | 0.543     | 0.918     | 0.0192 (U) | 0.377 (U) |
| 11/20/2018 | 0.687     | 1.15      | 0.494      | 0.28 (U)  |
| 5/14/2019  | 0.663     |           |            |           |
| 5/15/2019  |           | 1.56      | 0.61       | 0.697     |
| 10/8/2019  |           |           | 0.345 (U)  |           |
| 10/9/2019  |           |           |            | 0.416 (U) |
| 10/10/2019 | 0.811 (U) | 1.71      |            |           |
| 4/7/2020   | 0.48 (U)  |           |            |           |
| 4/8/2020   |           | 0.179 (U) | 0.237 (U)  | 1.38 (U)  |
| 7/14/2020  | 0.521     | 0.578     | 0.434      |           |
| 7/15/2020  |           |           |            | 0.398 (U) |
| 2/23/2021  | 0.71 (U)  | 1.15 (U)  | 0.696 (U)  | 0.685 (U) |
| 7/20/2021  |           | 1.32      | 0.356 (U)  | 0.42 (U)  |
| 7/21/2021  | 0.79 (U)  |           |            |           |
| Mean       | 0.6506    | 1.071     | 0.3989     | 0.5816    |
| Std. Dev.  | 0.124     | 0.5048    | 0.2132     | 0.3549    |
| Upper Lim. | 0.7821    | 1.606     | 0.6249     | 0.8997    |
| Lower Lim. | 0.5192    | 0.5355    | 0.1729     | 0.2834    |

# Confidence Interval

Constituent: Fluoride, total (mg/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5    | MW-6     | MW-7    | MW-8    |
|------------|---------|----------|---------|---------|
| 2/14/2018  |         | 0.13     |         |         |
| 5/23/2018  | 0.29    | 0.13     | 0.18    | 0.21    |
| 11/20/2018 | 0.32    | 0.14     | 0.19    | 0.21    |
| 5/14/2019  | 0.22    |          |         |         |
| 5/15/2019  |         | 0.133    | 0.169   | 0.192   |
| 10/8/2019  |         |          | 0.183   |         |
| 10/9/2019  |         |          |         | 0.189   |
| 10/10/2019 | 0.338   | 0.124    |         |         |
| 4/7/2020   | 0.225   |          |         |         |
| 4/8/2020   |         | <0.1 (o) | 0.153   | 0.192   |
| 7/14/2020  | 0.263   | 0.115    | 0.193   |         |
| 7/15/2020  |         |          |         | 0.196   |
| 2/23/2021  | 0.287   | 0.139    | 0.2     | 0.208   |
| 7/20/2021  |         | 0.131    | 0.286   | 0.262   |
| 7/21/2021  | 0.331   |          |         |         |
| Mean       | 0.2843  | 0.1303   | 0.1943  | 0.2074  |
| Std. Dev.  | 0.04549 | 0.008031 | 0.03989 | 0.02372 |
| Upper Lim. | 0.3325  | 0.1388   | 0.286   | 0.262   |
| Lower Lim. | 0.236   | 0.1217   | 0.153   | 0.189   |

# Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-8      |
|------------|-----------|
| 5/23/2018  | <0.000203 |
| 11/20/2018 | <0.000203 |
| 5/15/2019  | <0.000203 |
| 10/9/2019  | <0.000203 |
| 4/8/2020   | <0.000203 |
| 7/15/2020  | <0.000203 |
| 2/23/2021  | <0.000203 |
| 7/20/2021  | 9E-05 (J) |
| Mean       | 0.0001889 |
| Std. Dev.  | 3.995E-05 |
| Upper Lim. | 0.000203  |
| Lower Lim. | 9E-05     |

# Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV

Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5    | MW-6    | MW-7    | MW-8    |
|------------|---------|---------|---------|---------|
| 5/23/2018  | 0.103   | 0.266   | 0.129   | 0.194   |
| 11/20/2018 | 0.102   | 0.245   | 0.12    | 0.181   |
| 5/14/2019  | 0.116   |         |         |         |
| 5/15/2019  |         | 0.152   | 0.127   | 0.16    |
| 10/8/2019  |         |         | 0.131   |         |
| 10/9/2019  |         |         |         | 0.163   |
| 10/10/2019 | 0.0981  | 0.251   |         |         |
| 4/7/2020   | 0.133   |         |         |         |
| 4/8/2020   |         | 0.0489  | 0.117   | 0.149   |
| 7/14/2020  | 0.11    | 0.223   | 0.103   |         |
| 7/15/2020  |         |         |         | 0.152   |
| 2/23/2021  | 0.133   | 0.253   | 0.131   | 0.166   |
| 7/20/2021  |         | 0.18    | 0.096   | 0.151   |
| 7/21/2021  | 0.113   |         |         |         |
| Mean       | 0.1135  | 0.2024  | 0.1193  | 0.1645  |
| Std. Dev.  | 0.01341 | 0.07349 | 0.01332 | 0.01579 |
| Upper Lim. | 0.1277  | 0.2668  | 0.1334  | 0.1812  |
| Lower Lim. | 0.0993  | 0.1421  | 0.1051  | 0.1478  |



# Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5     | MW-6      | MW-7     | MW-8     |
|------------|----------|-----------|----------|----------|
| 5/23/2018  | <0.01    | <0.01     | <0.01    | <0.01    |
| 11/20/2018 | <0.01    | <0.01     | <0.01    | <0.01    |
| 5/14/2019  | <0.01    |           |          |          |
| 5/15/2019  |          | <0.01     | <0.01    | <0.01    |
| 10/8/2019  |          |           | <0.01    |          |
| 10/9/2019  |          |           |          | <0.01    |
| 10/10/2019 | <0.01    | <0.01     |          |          |
| 4/7/2020   | <0.01    |           |          |          |
| 4/8/2020   |          | <0.01     | <0.01    | <0.01    |
| 7/14/2020  | <0.01    | <0.01     | <0.01    |          |
| 7/15/2020  |          |           |          | <0.01    |
| 2/23/2021  | 0.0014   | 0.000285  | 0.00107  | 0.0129   |
| 7/20/2021  |          | 7E-05 (J) | 0.00086  | 0.00033  |
| 7/21/2021  | 0.00126  |           |          |          |
| Mean       | 0.007832 | 0.007544  | 0.007741 | 0.009154 |
| Std. Dev.  | 0.004014 | 0.004547  | 0.004183 | 0.003707 |
| Upper Lim. | 0.01     | 0.01      | 0.01     | 0.0129   |
| Lower Lim. | 0.00126  | 7E-05     | 0.00086  | 0.00033  |

# Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/16/2021 11:02 AM View: Appendix IV  
Plant Gorgas Client: Southern Company Data: Gorgas CCR LF

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|            | MW-5     |
|------------|----------|
| 5/23/2018  | <0.01    |
| 11/20/2018 | <0.01    |
| 5/14/2019  | <0.01    |
| 10/10/2019 | <0.01    |
| 4/7/2020   | <0.01    |
| 7/14/2020  | <0.01    |
| 2/23/2021  | 0.00233  |
| 7/21/2021  | 0.00178  |
| Mean       | 0.008014 |
| Std. Dev.  | 0.003681 |
| Upper Lim. | 0.01     |
| Lower Lim. | 0.00178  |